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Along with the development of culture and civilization that always undergo changes, it is a high time to extract the thoughts to get enlightenment of the intersection between science, technology, knowledge, culture, and humanities. This is the result of interdisciplinary knit among different fields in life and science that cause human beings to interact with each other in

their respective mode, channel, and media to create a discourse.

Please click [here](#) for the conference website.

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The head of state university of Surabaya, the honorable speakers, keynote speakers, distinguished guests, ladies and gentlemen, I am greatly honored and pleased to welcome you all to Surabaya, city of heroes of Indonesia country, on behalf of the International conference on STEACH 2018. We are indeed honored to have you here with us.

We have about 150 participants from abroad and within Indonesia gathered here today, they are from numbers of lecturers, teachers, graduated students,

researchers, and practitioners involved in six different interdisciplinary fields (Science, Technology, Education, Arts, Culture and Humanity), making our forum a truly Indonesian congress initiative.

The international conference on STEACH 2018 is organized by The Graduate School of State University of Surabaya to interpret the thoughts and to manifest the insights into fruitful discussion which bridges the development of the six issues in this multicultural world in an international conference on Science, Technology, Education, Arts, Culture and Humanity (STEAACH). The theme of the STEACH 2018 Conference is "Interdisciplinary Challenges for Humanity Education in Digital Era".

The organizing committee has done a fantastic work preparing our conference and I would like to thank them for their energy, competence and professionalism during the organization process. For sure, the success I anticipate to this conference will certainly be the result of the effective collaboration between the organizing committee with delegates from Graduate School of State university of Surabaya.

I would like to express special thanks to:

H. Bambang Soesatyo, S.E., M.BA. (House of Representatives of Indonesia)

Prof. Wu Jungqi (from Central China Normal University)

Neo Peng Fu, Ph.D (from Nanyang Technological University)

Lourdes T. Nepomuceno, Ph.D (from The University of Philippines)

Nadi Suprpto, Ph.D (from Universitas Negeri Surabaya)

As the keynote speakers, addressing their perspectives on a broad-ranging set of topics.

Finally, I would like to extend our gratitude to our many sponsors for supporting many of the events associated with STEACH 2018, especially to Wyndham Surabaya Hotel for hosting the conference, adding to it also by its

location nestled in the heart of the second largest city of Indonesia, Surabaya.

Once again, welcome to Surabaya, welcome to the International Conference on STEACH 2018. I do believe that STEACH 2018 will be a productive conference for everyone.

Chairman of Committee

Dr. Ali Mustofa, M.Pd

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Dynamism of Open-Ended Problem Solving: Study on Junior High School Students Behavior Based on Keirsey Personality Type

Linda Devi Fitriana, Yusuf Fuad, Abdul Haris Rosyidi

Problem solving becomes one of several competencies which forms the heart of the mathematics literate. Reviewing the process, it cannot only be explained linearly. There is a great chance that steps will be taken again. This study addresses the dynamism of open-ended problem solving shown by junior high...

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Study of the Contribution of Entrepreneurial Insights and Industrial Work Practices to Work Readiness by Student Graduates in Vocational High Schools

Khusnul Qotimah, Ismet Basuki, Supari Muslim

Vocational high schools are expected to prepare students to be productive people, able to work independently in accordance with their expertise competencies. The mission of the vocational high school is to prepare prospective skilled workers and mid-level professionals in their fields. But the reality...

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Development of Motion and Mobility Teaching Materials

Based on Blended Learning for Master Students of Special Education Program

Endang Pudjiastuti Sartinah, Sri Joeda Andajani

The aim of this research was to produce prototypes of products development of motion and mobility based on blended learning for master students special education program at the Graduate School of Universitas Negeri Surabaya. This development research used ADDDEM model design (Analyze, Design, Develop,...

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The Effectiveness of 7E Learning Model to Improve Scientific Literacy

Fitri Mur Fatimah, Nur Fitria Anggrisia

Scientific literacy is one of the competencies that students must possess to face challenges in the 21st century. Scientific literacy is a skill to understand the surrounding natural and social phenomena and be able to make scientifically correct decisions to live more comfortable and better. Students...

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Revisiting the Focus of Indonesian Higher Education: A Proposition toward Arts and Design as Promoted College Majors

Pranakusuma Sudhana, Ali Abdulbaqi Ameen AL Awadhi

Education has been an important service industry for many countries due to its economic contributions and roles in developing human capital. Deriving from preceding assertion, nations across the world have spent significant amount of their financial resources in the sector. Unfortunately, research in...

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Argumentation in Covariational Reasoning: Middle School Student's Solving Covariation Problem with Different Cognitive Style

K. Fitria Santoso, Mega Teguh Budiarto, Raden Sulaiman

The aim of this research is to describe the process of covariational reasoning and how to build argumentation in solving covariation problems for middle school students who had verbal and visual cognitive style. This qualitative descriptive research investigated the differences in covariational reasoning...

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Evaluation of the Problem-Based Learning Effectiveness in the Course of Physics Curriculum Analysis

Dian Artha Kusumaningtyas, Eko Nursulistiyo, Dwi Sulisworo

In physics learning in higher education, lecturers see that there is a gap between teaching knowledge and expected competencies. This study aims to evaluate the application of problem-based learning or PBL in the learning process in higher education. PBL implementation is supposed to be a solution to...

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Socio-scientific issues in gadget: interactive multimedia to increase z-generation scientific literacy

Wahono Widodo, Suryanti, Elok Sudiby, Dhita A P Sari

Indonesian student scientific literacy needs to be improved. Middle school students today are millennial (generation Z) who cannot be separated from gadget in almost all of their daily activities. This study aims to find alternative ways to improve Z generation science literacy by utilizing gadget, namely...

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A Case Study of Therapeutic Process Autistic Children As Performing Art In Indonesia

Muchammad Bayu Tejo Sampurno

Children with autism are children who have communication problems that make them isolated from their environment. Art, has flexibility in the delivery of communication through the symbols that are in it. This makes art appear as one of the media communication options for children with autism. In its...

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Aesthetic Dimensions and Enchantment of Education in Weweh Culture in East Java

Anggun Setiawan

This study discusse the culture of weweh in east java and aims to reveal the enchantment beauty of a culture that is able to provide character education for childern. Weweh is culture of charity to relative and neighbours when approaching the Eid al-Fitr as a from gratitude for the prosperity and sense...

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Cooperation Between The Public and Private Sectors in Providing Internships for Students of Education Electrical Engineering

Puput Wanarti Rusimamto, Muklas Samani, Ekohariadi, Joko

Industrial Practices (PI) or internships are not only important for students in order to achieve their level of competence, but also important for apprentice partner companies in order to obtain potential employment candidates. Asked questions: 1) How was the implementation of the S1 Electrical Engineering...

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Implementation of Joyful Learning Approach in Providing Learning Motivation for Elementary School Student

Rizki Widyawulandari, Sarwanto, Mintasih Indriayu

Cognitive development is an important aspect that is directly related to the

learning process. Students in elementary schools have concrete operational development skills where they begin to solve concrete problems in logical mode and are able to clarify and understand causal relationships. However,...

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Text of Cyber Related Crime in Indonesia: Semiotics Roland Barthes Study

Mimas Ardhianti, Bambang Yulianto, Suhartono

Purpose of this study aims to examine the signs in cyber text that related crime. This semiotic study refers to the sign in the cyber text related crime. The signs that exist in life in the people include crimes of defamation and insults on social media so that some cases of cyber related crime in Indonesia...

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Implementation of ARIAS Learning Models on Thematic Learning for Elementary School Students

Salvina Wahyu Prameswari, Suharno, Sarwanto

The purpose of this research is to describe the ARIAS learning model in thematic learning for elementary school students. The application of innovative learning models in student learning process are very important. The fact that there are many teachers who still do not understand how to optimize the...

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The Application of Outdoor Learning Method as a Means of Knowing the Environment

Maharani Nimasayu Hendraswaeri, Siti Sutarmi Fadhilah, Peduk Rintayati

Outdoor learning is a learning method that can be used by teachers in teaching to students. With outdoor learning, students can get to know the environment and can also make learning more interesting because activities are usually done in the classroom. Outdoor learning helps students to get know more...

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Improve Critical Thinking Ability and Mathematical Representation of Junior High School Students Through Soft-skill Based Metacognitive Approaches

Luluk Faridah, Aulatun Nasikhah

The purpose of this research is to find out differences in critical thinking skills and mathematical representations between students taught with a soft skills-based metacognitive approach with students taught with conventional approaches. The research method used is true experimental design with pretest-posttest...

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The Implementation of Ice and Snow Enrichment Book to Students' Openness Personalit

Slamet Maulana

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Implementation of Chapter II Article 3 in Government Education and Culture Regulation No. 23 of 2016 (Study in Bekasi Regency)

Slamet Maulana, Hanna Ade Ningtiyas

The purpose of this research to study about implementation of Chapter II Article 3 concerning Scope of Assessment of Students in Government Education and Culture Regulation No. 23 of 2016 concerning Educational Assessment Standards in Bekasi Regency. This research method using juridical-empirical where...

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Mobile learning infusion through enhancing teachers' perception: Case study in eastern of Indonesia

Dwi Sulisworo, Dian Artha Kusumaningtyas, Eko Nursulistiyo, Trikinasih Handayani

Information technology penetration in Indonesia is relatively high. People have used this technology widely in many activities, but its use is still relatively low in education; including the use of mobile learning. One reason is that the teacher's perception is still low regarding the benefits of this...

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Critical Thinking of Pre-service Teachers in Generalizing Mathematical Idea on the Topic of Set

Abdul Haris Rosyidi, Shofan Fiangga, Tatag Yuli Eko Siswono

It is undeniable that the ability of critical thinking is important as mentioned in 21st century skills. Teachers, as the main educator at school, are required to think critically in every decision while they are teaching a mathematical topic. However, a number of empirical field observation have pointed...

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Ideological and Hegemonic Implicatures of Japanese Male Registers Used by Japanese Young Women Speakers: Gender Based Analysis and Its Implication in Pedagogical Domain

Subandi, Ali Mustofa

Gender based register is one of the special characteristics of Japanese language by which its use is regulated based on the social norms and rules of Japanese society. Compliance and violation of the use of gender language is an indicator of the assessment of the level and quality of the life of the...

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Developing Training And Coaching Model To Improve Director's Performance In Education Institution (Research And Development In Al Ibroh Foundation Gresik)

Shobikhul Qisom

This research aims to: (1) find out the process of developing training and coaching model to improve Director's performance of Education Foundation, (2) know the implementation process of training and coaching model trials for Education Foundation Director to improve their performance based on the results...

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Effects Concentration, Arm Muscle Strength, And Wrist Flexibility On The Accuracy Of Forehand Drives And Backhand Drives

Arif Setiawan, Miftakhul Jannah, Wijono

Abstract— This study aims to prove the direct and indirect effects of psychological and physical factors, namely concentration, arm muscle

strength, and wrist flexibility on the accuracy of the forehand drive and backhand drive in school tennis extracurricular activities. This study uses quantitative...

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The Postcolonial Subject Vis A Vis Magic Realism. Some Cases From Indonesian Novels And Its Pedagogical Contribution To The Teaching Of Literature

Aprinus Salam

As postcolonial subjects, Indonesian novelists have diverse and layered discursive experiences. In the history of Indonesian literature, there was a textual dominance of magism (in classic literature) and realism (in modern literature). Over time, Indonesian literature became influenced by what has been...

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Internal Quality Assurance System, Iso 9001:2015 And Organizational Performance In One Continuum-A Case Study In The Postgraduate State University Of Surabaya

Meini Sondang Sumbawati, Hariyati, Unit Three Kartini

Internal quality assurance system in postgraduate has become a global issue. This research investigated the implementation of internal quality assurance system and ISO 9001:2015in postgraduate programmes State University Of

Surabaya. Quantitative methodology was employed using a questionnaire based on...

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Internationalization of Higher Education in the ASEAN Region: Is the HEI in the state of “Becoming internationalized or Being internationalized?”

Lourdes Tanhueco-Nepomuceno

Empirical studies on internationalization of HEIs in the ASEAN countries exist, but are small in scale and are dependent quantitative methods or are limited in perspectives. Therefore, there is a need for a study to examine the role of the selected HEIs in the ASEAN region in managing campus internationalization....

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Abstract— Industrial Practices (PI) or internships are not only important for students in order to achieve their level of competence, but also important for apprentice partner companies in order to obtain potential employment candidates. Asked questions: 1) How was the implementation of the S1 Electrical Engineering Education industry practice, the Faculty of Engineering UNESA? 2) How is partnership management planning with the business and industry world? To reveal the implementation of an internship at the UNESA Electrical Engineering Education Study Program was carried out through research with an expose facto approach. The research was carried out in the Department of Electrical Engineering and in the Industry where the internship students. The results of the study are 1) The implementation of internship or industrial practice of Electrical Engineering Education S1 students, the Faculty of Engineering UNESA is in accordance with the industrial practice manual issued by the UNESA Faculty of Engineering, but the implementation of PI monitoring and evaluation needs to be improved. 2) Planning the management of partnerships with the business and industry world for students of Electrical Engineering Education students has been well established and has spread to private industry, government and state-owned enterprises (BUMN).

Keywords—*internship, public and private sector cooperation, partnership, business world and industry.*

I. INTRODUCTION

Law of the Republic of Indonesia [7] concerning Higher Education, Article 5 (a) explains that the aim of higher education is to develop the potential of students to become people who have faith and fear God Almighty, noble, healthy, knowledgeable, capable, creative, independent, skilled, competent, and cultured for the benefit of the nation. College graduates are expected to be able to apply, develop, create science and technology and/or art.

By referring to the aim of higher education as described above, the Basic Framework of Study Program Curriculum [4] consists of: (1) Basic Framework of S-1 Education Curriculum there are courses on Innovative Learning I with a load of 3 credits managed by Faculty / Study Program, 1 credit internship in field (Internship 1) and Innovative Learning II with a load of 3 credits managed by faculty/Study Program, 1 credit internship in the field (Internship 2); (2) Basic Curriculum Framework for Non-Education Undergraduate Study Programs are Field Work Practice (PKL) courses with a load of 3 credits managed by the Faculty/Study Program, internships in institutions/business/relevant industries; and (3) The basic framework of the D-3 Study Program curriculum contains courses on Field Work Practices (PKL) with a load of 4 credits managed by the Faculty/study program, internships in institutions/business/relevant industries.

In line with Chanapai's research [1] that the public and private sectors consider partnerships important. Job performance of people with undergraduate education is at low and medium levels. The right model of cooperation between public and private policies and management as PPP must be utilized to form new models of institutions. The results of Vertakova's research [9] say that one of the promising development directions is the application of broader public-private partnership practices in additional professional education organizations in state-owned schools that consider business interests. This work must be done extensively at the regional and sectoral level. This makes it possible to consider the specific features of certain PPP projects and to ensure their effectiveness and feasibility. While the results of the Negrut et al. [5] in Romania, where students and companies consider that apprenticeship is very important for human resource training. In general, internships provide benefits to both parties, namely: (1)

students have the opportunity to apply theoretical knowledge in order to obtain practical skills; (2) students have the opportunity in the recruitment process; (3) companies have the opportunity to assess, monitor and train potential employees; and (4) students can help companies in case of staff shortages (caused by holidays), or staff overload for a certain period.

Based on the results of the research described above, that apprenticeship in a company is an important program in the higher education environment. Internships are not only important for students in order to achieve their level of competence, but also important for apprentice partner companies in order to obtain potential employment candidates. Considering the importance of an internship program in higher education, it is necessary to ask questions: 1) How to describe the implementation of an apprenticeship for Electrical Engineering S1 students, Faculty of Engineering UNESA? 2) How to describe partnership management planning with the business and industry world?

II. LITERATURE REVIEW

A. *Public Private Partnership*

According to Noor [6] Public Private Partnership (PPP) is a form of agreement between the public sector (Government) and the private sector (Private) to hold public service facilities bound by agreements, divided into several forms depending on contracts and risk sharing. In Indonesia PPP is known as Government Cooperation with Business Entity (PPP), PPP is defined as cooperation between the Government and Business Entity in the Provision of Infrastructure aimed at the public interest by referring to the specifications previously set by the Minister/Head of Institution/Regional Head/BUMN/BUMD, which partly or wholly uses the resources of the Business Entity by paying attention to the sharing of risks among the parties. Government and private partnerships have actually been known since the New Order era, such as on toll roads and electricity, but began to be developed in 1998 after the monetary crisis.

Meanwhile, according to Waluyo [11] that educational institutions have a big role for the development of science and innovation, as well as providing solutions for society, business, and government. The academic world requires synergy with business entities and governments to participate in running development programs. The synergy model of three parties which includes education providers, businesses and government to improve economic dynamics and sustainability is often referred to as triple helix. These three elements have a strategic role to develop policies that are the result of interaction between elements of society, not policies that are born solely from the government. Triple helix can create private roles and community participation in the transformation of education.

One of the government's efforts to expand access and quality of education is to collaborate with the private sector,

which is often referred to as a Public Private Partnership (PPP) program. Partnerships between the government and the private sector are expected to improve the quality of education and know the skills needed by the business world [3]. This program opens opportunities for the private sector to participate in expanding access to education and at the same time becoming a bridge to reduce the gap between educational institutions and the business world.

B. *Internship*

ChanLin [2] said that student internship opportunities provide valuable authentic learning experiences to engage students in solving work problems. The work assignment of the internship also challenges students to obtain the required knowledge about the specific context. Throughout the internship period, students work with workers in order to develop skills to complete certain tasks. Thus, the internship opportunity encourages an authentic learning experience by giving students the opportunity to integrate knowledge with practical experience in the field.

Trejo [8] said that The Polytechnic University of Santa Rosa Jauregui (UPSRJ) is a Mexican public institution where the Industrial Metrology Engineering undergraduate program (IMEUP) was recently started. The curriculum program develops the skills needed to enjoy a successful career in metrology. To achieve this goal, the program includes two part-time internships as a fundamental part of student academic training. Before students graduate, they must complete a full 600-hour off-campus internship that employs metrologists. This industry experience is carried out in real life professional metrology environments such as research centers, testing or calibration laboratories. One important aspect is that many students get jobs as a result of their internship. Note UPSRJ shows that 80% of university students get jobs as a result of their internships in this industry. This allows better integration of graduates into society.

In the Guidebook for Industrial Practices, Faculty of Engineering UNESA [10], Industrial Practices are taken within a period of 1 (one) to 6 (six) months. In general, the implementation of industrial practices is carried out at the end of semester holidays and students have taken prerequisite courses that have been determined in the curriculum of each study program. The scope of the material for Industrial Practice is in the fields of work or business fields chosen by students in accordance with the study program. The schedule and time allocation used for Industrial Practices depend on the opportunities available in the industry and the readiness of students participating in industrial practice programs.

C. *Bachelor Degree in Electrical Engineering Education*

The Department of Electrical Engineering, Faculty of Engineering UNESA has 3 (three) study programs (study programs), that are the Electrical Engineering Study Program (PTE), the Electrical Engineering S1 (TE) study program and the Electrical Engineering D3 (TL) study program. After completing his education, a graduate of Electrical Engineering Education is expected to be able to:

(1) act as a vocational teacher in the Field of Electrical Power, Aerospace Engineering, Electronics and Telecommunications Engineering and (2) work in the electrical industry, electronics and telecommunications. Information from the site <https://forlap.ristekdikti.go.id/> that the number of lecturers in the S1 PTE study program UNESA the number of lecturers is 13, but the total number of lecturers in the Electrical Engineering department is 29, which is an addition from the Electrical Engineering Study Program 8 and from Electrical Engineering D3 Study Program 8. The number of students is 374 in the even semester of 2017, while there are additional 39 new students of 2018 S1 PTE.

III. RESEARCH METHOD

To reveal the implementation of PI or internship at PTE FT UNESA conducted through research with an expose facto approach. The study was conducted in the Department of Electrical Engineering. The research was conducted in odd and even semester 2017/2018 academic year. Students who were made the research subject were 130 students of S1 Electrical Engineering Education study program. The number of supervisors and examiners was 21 lecturers and 16 lecturers, and the number of industries where 32 students were PIs.

Data collection was carried out using documentation, observation and interview methods. Documentation methods were carried out to obtain documentation which included the JTE FT UNESA Industrial Practice Handbook, PI monitoring and evaluation, Industrial Practice Reports, results of industrial practice exams, single sign on (SSO) sites for UNESA and FORLAP DIKTI sites. The observation method is used to obtain an overview of the atmosphere and work description of the Industrial practice coordinator and PI lecturer. The interview method was conducted to obtain data to complete the data obtained through documentation and observation methods. The interview method was conducted to PI coordinators, PI supervisors, PI examiners, and students who programed PI courses. Data that has been collected is then analyzed using descriptive data analysis techniques.

IV. RESULT AND DISCUSSION

The number of students carrying out PIs in the 2017/2018 academic year which was started in September 2017 to February 2018 was 130 students of S1 Electrical Engineering (PTE) study programs.

A. Suitability of PI Students with general requirements

The general requirements of PI students are: 1) graduating from college ≥ 6 semesters, $SKS \geq 120$, and $GPA \geq 2.0$, 2) programming PI courses online, 3) providing transportation and accommodation costs, and 4) following debriefing. Table 1 shows the suitability of implementing PI Une PTE FT students with the general requirements of PI.

TABLE 1. SUITABILITY OF PI IMPLEMENTATION OF FT UNESA PTE STUDENTS WITH PI GENERAL REQUIREMENTS

General requirements	Suitability (%)
	S1 PTE Study Program Students
SKS $S1 \geq 120$ SKS	100
IPK $\geq 2,0$	100
Program at KRS Online	100
Following debriefing	91,7
Provide Transport	100
Average total	97,9

Based on some of the descriptions above and Table 1 shows students who carry out PI have met the general requirements of 97.9%. General requirements that are not fulfilled are attendance at the time of debriefing. There were 11 (8.3%) of 130 students who were late at the time of debriefing because they were conducting a survey of the PI's place.

B. Suitability of Industrial Areas PI Place with Student Skills

PI implementation of PTE Study Program students in government companies, State Owned Enterprises (BUMN) and 32 Private Industries spread across Surabaya, Sidoarjo, Pasuruan, Madiun, Gresik, Mojokerto, Tuban, Bojonegoro, and Jombang. Of the 32 companies and industries including 12 state-owned enterprises, 6 government and private companies 14. The percentage of industries managed by state-owned enterprises, government and the private sector is shown in Figure 1.

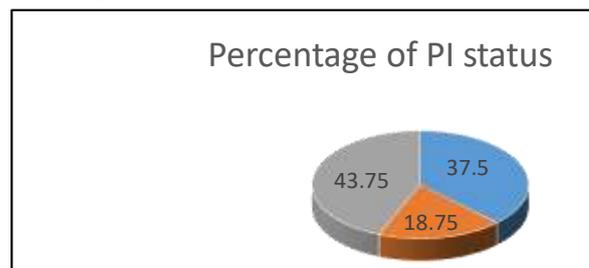


Figure 1. Percentage of industry managed by BUMN, government and private sector

Of the 32 industries, 28 (85.71%) industries in the field were in the area of expertise of students, 2 (7.14%) industries were not in accordance with the field of expertise, and 2 (7.14%) industries were not in accordance with the field of student expertise. Lack of conformity in 2 industries, namely PT INKA Madiun and PT Yesindo Sejahtera, because when PI 9 (6.92%) undergraduate PTE-Elkom students were placed in an electrical panel. Nonconformities occur in 2 industries, namely RRI and PT Sasa Inti. At RRI, 1 student came out because he felt that he was not in accordance with his field, namely TTL, so moving to PT AMZ took the field of Regulatory Engineering. While at PT Sasa Inti, 2 students with communication electronics were placed in regulatory techniques. So a total of 3 students (2.31%) are not in accordance with their fields. The lack of conformity and discrepancy in the industrial sector with the field of expertise of students is due to the implementation of

PI, the placement of students is not in accordance with the initial agreement, and not in accordance with the needs of the industry, as well as differences in perceptions of the industry. The suitability of the industrial sector and expertise areas of PI students is shown in Figure 2.

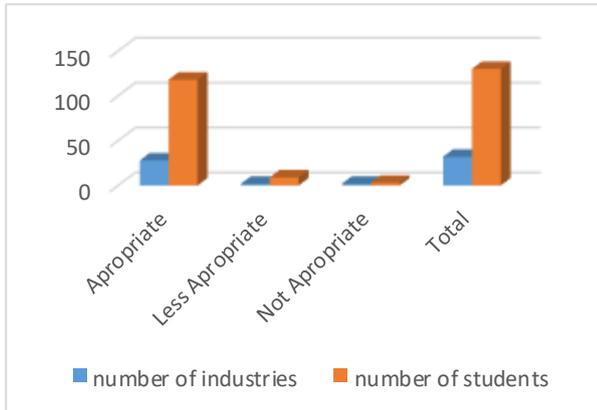


Figure 2. Suitability of Industrial Sector and Expertise Field of PI Students

C. Mechanism of Implementation of PI in JTE UNESA

Students who have PI programs are given a briefing by the PI coordinator of each Study Program at the end of each odd semester. Debriefing uses the method of presentation, question and answer, discussion, and assignment. The debriefing material contains a summary of the PI Guide and development/innovation material from the PI coordinator team, including: 1) the scope and pattern of PI implementation, 2) description of PI material, 3) PI implementation procedures, 4) preparation of reports and evaluations of PI, 4) SOP PI JTE (development/innovation PI coordinator team), 5) PI management system, and special preparation.

Special preparations include: 1) report to the PI coordinator with a study result card (KHS), study plan card (KRS), and PI proposal, 2) submit a cover letter from the Dean of FT to the industry in the case of PI application, 3) ask and or waiting for the willingness of the industry, 4) submitting a reply from the industry to the faculty and PI coordinator, 5) submitting the supervisor, 6) downloading and filling in the format of the appointment of the mentor at <http://223.25.108.50/> and requesting approval from the supervisor, this is a development/innovation of the PI coordinator team, 7) filling in the file format monitor the progress of the PI in the PI coordinator, 8) consultation with the PI adviser on the PI report title topic plan.

The question and answer method was conducted after the presentation by the PI coordinator followed by the assignment method, students in groups held discussions and workshops on drafting the PI proposal. The results of the draft proposal are corrected and completed and refined for further use as PI proposals.

Based on some of the descriptions above, it shows that the debriefing material for students before implementing a PI is in accordance with the provisions in the PI Guidebook. Mentoring methods, presentations, question and answer, workshops, and assignments. Development and innovation related to debriefing are carried out by the coordinator at the time of debriefing by taking into account and considering efficiency, technological development and information relating to the management system and implementation of the PI.

D. Monitoring and Evaluation of Industrial Practices

The PI implementation of each study program is regulated by the PI coordinator. The main task of the PI coordinator is to regulate the administration of licensing and submission of PI administration, the mechanism for implementing PIs, guidance, monitoring and evaluation of PI implementation.

PI monitoring is carried out once a year and is part of the department's work program. The purpose of Monitoring is to see the development and input/criticism/suggestions from users on the internship being carried out. Because the users are part of the study program stakeholders in the process of receiving internships or employees. Some criticisms and suggestions are input for the study program to improve in terms of curriculum, behavior and competence. In addition, it was also discussed in relation to the plan of cooperation for placement of internship students for the next few years. The monitoring mechanism is carried out by assigning several supervisors to monitor the company or industry where the student is conducting industrial practice, but not all industries are visited because of the limited cost factor.

After doing PI, students are expected to be able to improve their skills and abilities in applying the theories obtained in lectures to implementation practices in industry or companies, so that students better understand the field of work that has been practiced. To measure and provide an assessment of the success of students in carrying out PI activities, an evaluation was conducted by industry/company supervisors, supervisors and examiners. Industry/company advisors provide an assessment of the aspects of knowledge, skills, personality of the students which are detailed into: quality of work performance, discipline/obedience, responsibility, honesty, cooperation, and creativity. The supervisor is responsible for examining and examining student PI reports, while the examiner is tasked with examining the student PI report [10].

Based on some of the descriptions above shows that monitoring and evaluation of PI implementation is still not good. In the future, a breakthrough must be made by the Head of Department, Head of Study Program and PI coordinator by improving and utilizing the budget for monitoring and evaluating the implementation of PI in an efficient, effective and programmed manner.

V. CONCLUSION

The conclusions of the results and the discussion are: 1) Implementation of an internship or industrial practice of Electrical Engineering Education undergraduate students, the Faculty of Engineering UNESA is in accordance with the industrial practice manual issued by the UNESA Faculty of Engineering, but the implementation of PI monitoring and evaluation needs to be improved. 2) Planning the management of partnerships with the business and industry world for students of Electrical Engineering Education students has been well established and has spread to private industry, government and BUMN.

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