Design and Implementation of The Tracer Study System at PTKI

Mayreyna Nurwardani, Moh. Khoerul Anwar, Lindra Darnella, Annisa Mufti Allifa

Universitas Islam Negeri Sunan Kalijaga Yogyakarta

Email: mayreynanurwardani1@gmail.com

Abstract

This research aims to (1) provide an academic basis for the Indonesian Ministry of Religion's DIKTIS and PTKI to formulate policies related to the importance of alumni trace research; (2) provide a manual for the implementation of tracer studies for PTKIN and PTKI so that the implementation of tracer studies is standardized; and (3) establishing a tracer studies system for PTKI, so that tracer studies can be carried out effectively, easily, efficiently and sustainably. Tracer study is useful for knowing the distribution and monitoring of potential alumni of a university, in this case PTKI and PTKIN. Methods of carrying out this research include; making the design of the tracer study system, testing the tracer study system, and disseminating the tracer studies system. The results of this study are the renewal of the tracer study system belonging to PTN.X and the availability of guidebooks related to the importance of tracer studies and implementation guidelines.

Keywords: Design, PTKI, Tracer Study.

Abstrak

Tujuan dari penelitian ini adalah; (1) memberikan landasan akademik bagi DIKTIS Kemenag RI dan PTKI untuk merumuskan kebijakan terkait pentingnya penelitian jejak alumni; (2) menyediakan buku pedoman pelaksanaan tracer studies bagi PTKIN dan PTKI agar pelaksanaan tracer studies terstandar; dan (3) membuat sistem tracer studies untuk PTKI, sehingga tracer studies dapat dilaksanakan secara efektif, mudah, efisien dan berkelanjutan. Tracer study berguna untuk mengetahui persebaran dan pemantauan terhadap potensi alumni sebuah perguruan tinggi, dalam hal ini PTKI dan PTKIN. Metode pelaksanaan penelitian ini meliputi; pembuatan rancang bangun sistem tracer study, uji coba sistem tracer study, dan diseminasi sistem tracer studies. Hasil penelitian ini adalah adanya pembaruan sistem tracer study milik UIN Sunan Kalijaga dan

tersedianya buku pedoman terkait pentingnya tracer study serta pedoman pelaksanaan.

Kata Kunci: PTKI, Rancang Bangun, Tracer Study.

INTRODUCTION

Information technology has rapidly changed and developed, so it shifts various aspects of life, including the academic environment (Primasari, 2018). Information System is a set of procedures that can be used to provide information to everyone. Substantially, an information system is designed to present information by adding a data file to the information system model (Fitriani & Hairah, 2017).

Further, the influence of alumni is significantly important for an educational institution (Pennington, 2011). It is due to the existence of professional and personal relationships between alumni and institutions that can open opportunities for governments, companies, foundations, and other important (Primasari, 2018), so it can be said that the quality of a university can be seen from the quality of its alumni.

The conditions, roles, and contributions of alumni as they enter society are significant to be traced and recorded to measure the success of higher education institutions. Information collection related to alumni is called tracer study (Nasuha & Siahaan, 2016). This research is based on the circular letter of the Directorate General of Learning and Student Affairs Number 471/B/SE/2017 concerning the implementation of tracer studies at the tertiary level. Alumni Tracer Study is a process of collecting data and information about alumni spreading across various regions and is useful for knowing alumni activities after graduation (Sayuti, 2020). Additionally, it is to measure the relevance of

educational goals and processes to the current conditions of Alumni (Wicaksono et al., 2017). Tracer study is beneficial for (1) obtaining important information, such as alumni feedback for improvement, system development, and management of higher education, including facilities, teaching and learning patterns, processes, and services; (2) evaluating materials to determine the relevance of higher education to work (hard skills, soft skills, internal/external factors, competency and contribution); (3) feedback in ensuring the quality of higher education or determining national education policy; (4) assisting universities in the accreditation process, both nationally and internationally; (5) providing important input and data for the company's Human Resources (HRD) regarding the characteristics of alumni/graduates; (6) providing empirical evidence regarding alumni related to employment, early career, the relevance of alumni work to higher education, etc; (7) information to students, parents, lecturers, educational administration, and education actors regarding alumni/graduates (*https://tracer.itb.ac.id/id/tangan/tangan-tracer-study*)

Tracer study activities enable an educational institution to track the condition of the graduates. Then, based on the obtained information, various policies and actions can be taken that are beneficial for graduates and the development of the institution (Rahayu & Supriyono, 2021). Tracer study should be conducted by institutions that bridge between universities and the business and industry sectors. A tracer study is necessary conducted institutionally and structurally with appropriate methodology to obtain measurable, accurate, and comparable results (Cahyo Nugroho et al., 2018). According to (Santoso et al., 2019), there were four problems with tracer study in Indonesia, such as (1) lack of awareness, knowledge, and support from universities; (3) weak systems,

methodology, planning, and implementation; (2) only focusing on accreditation requirements; (4) not providing evaluations that are useful for development of higher education institutions. These four problems are challenges that must be found for solutions, especially by Islamic Religious Universities and DIKTIS of the Ministry of Religion of the Republic of Indonesia.

Minimally, three issues must be solved as a solution to this problem. *First,* it provides education to universities about the benefits and necessity of implementing tracer study as both an effort to obtain important information on the development of higher education and evaluation material for the education system that has been implemented, as well as an effort to fulfill accreditation documents of higher education. *Second*, it prepares human resources and systems and determines methods that enable tracer study to be easily and sustainably conducted. Human resources, systems, and methods support the success or failure of implementing tracer study, for example, to obtain continuous data and a high response rate.

For example, in the latest accreditation provisions, it is stated that the number of respondents must be minimally 20% of the studied population. *Third*, it is necessary to establish an institution to support tracer study. Tracer study is a research that must be conducted annually, with a relatively long-term implementation, such as 12 months (Schomburg, 2003)and large costs. Based on the results of mini research conducted by the Career center at PTN. X in Yogyakarta in 2018, it can be concluded that almost all PTKIs did not have an institution that specifically managed tracer study.

Based on the background of this problem, the strategic function of this research is to support DIKTIS and PTKI policies in Indonesia to improve

continuously the alumni quality of higher education. The purpose of this research is (1) to provide an academic framework for DIKTIS of the Ministry of Religion of the Republic of Indonesia and PTKI to formulate policies regarding the importance of tracer study research; (2) to procure a guidebook for implementing tracer study for PTKIN and PTKI so that the implementation of tracer study is standardized; and (3) to create a tracer study system for PTKI so that tracer study can be conducted effectively, easily, efficiently, and sustainably.

METHOD

A. *Manufacturing Design of Tracer Study System*

System manufacturing was a crucial stage because it was related to the adaptation and adoption of the latest technology to facilitate the implementation of tracer study. Activities that were conducted in this process included:

1. FGD of menus formation of the tracer study system. At this stage, an analysis of the tracer study system that has been conducted by 3 other State Universities in Indonesia was conducted.

2. FGD with the IT team to realize the menus in the system. Ideas for the first FGD were discussed with the IT team to be translated into the program.

3. FGD of design and construction of the tracer studies system. In this stage, the IT team submitted the design that had been manufactured.
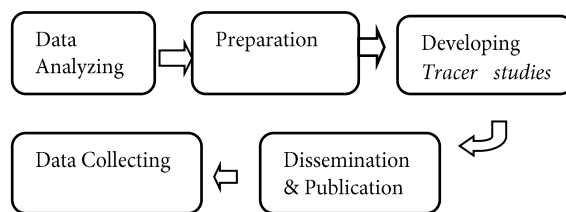
B. *Tracer Study System Trial*

The respondents for this research were alumni of PTN X in Yogyakarta, enrolled in 2011. Respondents were determined using an entry cohort system (incoming group) rather than an entry cohort (outgoing group), usually conducted. Based on ITB Career Center at PTN Y in West Java experience, the entry cohort method was excellent for supporting tracer study as population research, which was highly significant in increasing the number of response rates. This determination was based on the Ministerial Regulation of Research, Technology, and Higher Education that a tracer study was conducted on alumni after two years of graduation. The data search for respondents was focused on two methods, such as requesting data from the Database at PTN. X in Yogyakarta and study programs of UIN Sunan Kalijaga. Furthermore, the implementation of this trial was explained through 3 issues, such as design, subject, and tracking method and instruments.

Design. The taken measure was to determine the concept and survey instrument; data collection and recording; as well as data analysis and reporting. *Subject.* The Kalijaga *tracer study* was a population research so that the respondents were all graduates, who graduated in a certain year, not a sampling. Therefore, the Kalijaga tracer study tried to reach as many alumni as possible to fill out the online questionnaire. *Tracking method.* The initial formula carried out by Career center at PTN.X in Yogyakarta was to collect the alumni database from the Academic and Student Affairs Bureau and double-check by the faculty team by completing the email address and contact number of each alumni.

Instrument. Implementation of the Tracer study used a questionnaire instrument to obtain and collect data. The questionnaire currently used was an online questionnaire.

C. *Dissemination of Tracer Study System*

There were three stages to be conducted. First, it printed the manual of the tracer study system. In this way, the tracer study system could be known and used by PTKI. Second, workshops on tracer study in three regions in Indonesia, such as Lombok, Makassar, and Cirebon, were held. Third, it was the dissemination of the tracer study program to members of ICSAN (Islamic Career Center and Tracer Studies Network). ICSAN was formed to facilitate PTKI to establish a student career center and conduct tracer study. Typically, this activity was conducted over 9 months, with a roadmap of the tracer study implementation as follows.

Chart 1. Roadmap of Tracer Study Implementation

RESULTS

At the system design stage, the researcher conducted interviews with stakeholders and participant observation by directly involved in the tracer study process so that it could directly know what had to be provided in the system that had to be manufactured. After carrying out the activities above, the researcher

concluded that some points that the system had to cover were (1) adding, changing, and deleting administrator and alumni accounts; (2) adding, changing, and deleting Faculty and Study Program data; (3) adding, changing, and deleting alumni volunteers to invite other alumni to become members (users) and fill out questionnaires; and (4) adding, changing, and deleting questionnaires.

After knowing the system requirements, at this stage, the researcher started to design the flow of the chart of the system, it was a notice of the administration processes for each category of the pages. After determining the system's administration processes, the next stage was to create a database and determine the relationships between database tables. Later on, this database was used to store the data entered into the system. Subsequently, the researcher *coded* using programming languages, such as HTML, PHP, CSS, and JavaScript, so that the information system of the tracer study could be produced and relevant for the use of PTN.X in Yogyakarta.

The next stage was testing which was intended to ensure that the system that would be used had minimal errors and confirm that the output was by the demanded results. At the testing stage, the tracer study system was tested by the researcher and a team of experts. During the testing process, there were several inputs given to researchers, as seen in the following figure.

After the information system had been tested by a researcher and a team of experts, the following stage was the launching of the system to be used by users and it was possible to add menus or content to the system according to the needs that occurred after the testing process. Also, maintenance was carried out because some errors were detected after the system was used by the user, so the

system had to be automatically repaired immediately. The maintenance process was conducted by evaluating this system every time, so if there were some contents/menus that required changes, deletion, or addition, the researcher could perform them promptly. Additionally, an online information system was vulnerable to being hacked by other irresponsible parties, so the researcher had to always control this system from hackers.

DISCUSSION

In the last 10 years, many studies have been conducted on higher education alumni, both in Indonesia and abroad. For instance, the National Commission for Further and Higher Education, Malta (2016) conducted a tracer study on higher education alumni in Malta. The Social Research Center (2017) conducted "The 2016 Employer Satisfaction Survey Methodology Report" in Australia and Chenicheri Sid Nair and Patricie Mertova (2009) posted the results of the research entitled "Quality Assurance in Education Conducting of A Graduate Employer Survey: A Monash University Experience".

In Indonesia, the implementation of the tracer study in higher education was generally conducted by universities under the Ministry of Research, Technology, and Higher Education. The experience of universities under DIKTI in organizing tracer study was significantly important as an input for creating and formulating systems, tools, and implementation of a unique tracer study for PTKIN and PTKI.

This study regarding the implementation of the tracer study was also conducted by PTN.X in Yogyakarta, both at university and study program levels. In general, the tracer study performed by PTN.X in Yogyakarta still required

improvement and refinement by the rules of the tracer study. At PTN.X in Yogyakarta, it was similar to other PTKIs in Indonesia. The workshop on tracer study organized by Career Center at PTN. X in Yogyakarta was attended by 168 participants from more than 40 PTKIs throughout Indonesia. It was discovered that the general implementation of the tracer study at PTKI required improvements and development by applicable rules.

Specifically, some obstacles occurring in the implementation of this tracer study were lower response rates, effective data collection methods, research questions, and misassumptions about the tracer study. For example, the tracer study was only conducted to complete accreditation data. These conditions encouraged the need for an initiative to create a tracer study system so that PTKI could perform tracer study easily, effectively, efficiently, and sustainably.

CONCLUSION

Based on several explanations and findings above, it can be concluded that the Tracer Study in PTKIN is significantly important. However, several constraints are still disturbed, such as lower response rates, ineffective data collection methods, research questions, and misassumptions regarding tracer study. The fact can be seen from this research that the tracer study has been conducted only to satisfy accreditation data. Therefore PTN.X in Yogyakarta has created a design for a tracer study system that is easy, effective, efficient, and sustainable. Consequently, in the future, the design of this tracer study system can be used.

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