

TRACER STUDY REPORT
PULCHOWK CAMPUS, INSTITUTE OF ENGINEERING
TRIBHUVAN UNIVERSITY

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EXECUTIVE SUMMARY

Pulchowk Campus is the pioneer in starting engineering education in Nepal. At present, it is one of the constituent campuses of TU having the status of Central Campus. It is situated at Pulchowk, at the heart of the Lalitpur Metropolitan City, which is in close proximity to most of the government offices and other research institutions. Pulchowk Campus offered diploma level (intermediate level with three years duration) courses in various engineering disciplines since 1973 (2030 BS) which were phased out. Currently, Pulchowk Campus has been offering Bachelor's Degree courses in 8 disciplines and Master of Science courses in 23 engineering disciplines. First PhD intake was in 1997 (2054), but regular PhD admissions in various disciplines have been started from 2011. It is evident that the Pulchowk Campus is playing a crucial role in the preparation of qualified human resources in the engineering sector, which are needed for national development. A large number of scholars have already graduated from the campus since its inception in 1997 and have been contributing for the betterment of the nation as well as in international countries.

It is thus important to conduct the tracer study of the graduates and get information regarding their contribution in the society and in their work-field. Pulchowk campus has begun tracing their graduates and collecting the data since July, 2020. The present study is the first ever tracer study carried out by Pulchowk Campus however, the study will continue in the future and more data will be collected and the sincere advice that we get from our graduates will be taken into account seriously to enhance the quality education being offered by the campus. The campus will use the suggestions/advice to mitigate shortcomings that are working to hinder the quality education of the campus.

The main objective of this tracer study was to figure out the employment status of the graduates of 2017 from the campus and understand the needs of the market, the status of the quality of the engineering education offered at the campus and to enhance the employability and efficiency of graduates to meet their professional requirements.

ACRONYMS/ABBREVIATIONS

HEIs - Higher Education Institutions

BE - Bachelor of Engineering

BCE - Bachelor of Civil Engineering

BAE - Bachelor of Architecture

BCT - Bachelor of Computer Engineering

BME - Bachelor of Mechanical Engineering

BEL - Bachelor of Electrical Engineering

BEX - Bachelor of Electronics Engineering

BAS - Bachelor of Aerospace Engineering

SNID – Social Network Identity Document

1. INTRODUCTION

1.1 Background

Tracer studies are commonly becoming a recognizable practice worldwide. Graduate tracer studies involve identification and follow-up of graduates from higher education institutions worldwide spurred by the need to give careful consideration to how graduates view their experiences they underwent during their degree study and their transition to the job market. If universities are to improve their teaching and training of graduates the precedence should be to learn and garner improvements from graduates' nuanced experiences. Trace study helps to incorporate effective improvements into institutional programs of HEIs by collecting and analyzing information on graduate's study experiences, professional and personal careers. Such studies can be used to collect data on the employment situation of the most recent graduates in order to obtain indicators for their professional performance.

This tracer study is carried out to assess the quality of the academic programs of Pulchowk Campus. The Alumni in all the disciplines of Bachelor Programs offered by Pulchowk Campus were traced. The main objective of the study was to understand the interface between the programs offered by the campus and the employment prospects of the graduates. Understanding this interface is of crucial importance as it provides necessary inputs for restructuring the curricula and revamping the entire programs to make them job market oriented.

1.2 Objective of the study

Following are the objectives of this study:

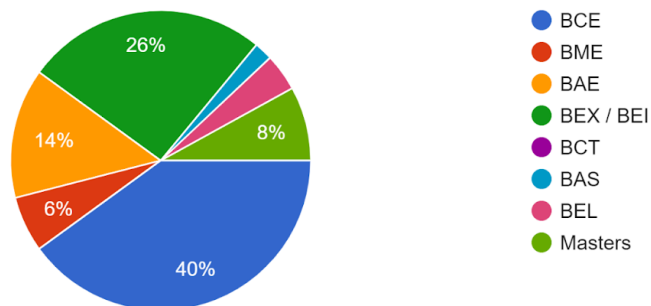
- To determine the employability and the status of employment of graduates from Pulchowk Campus in the year 2023.
- To get sincere feedback from our graduates about their experiences they had during their Bachelors study period in the campus.
- To determine a relationship between their present occupation and the course they finished in their bachelor's study.
- To identify the cooperating industries/academic institutions that employed graduates from Pulchowk Campus.
- To overcome the shortcomings that graduate students indicate in the data collection.

1.3 Data collection - Instruments and approach

Data collection for the Tracer study was done by survey method. We conducted a series of discussions and conversations both formal and informal to substantiate the data collection from our graduates. The format of the questionnaire was obtained from the website of the University Grants Commission, Nepal. A committee of 8 members was formed for preparing the tracer study report. Each questionnaire was discussed thoroughly with equal emphasis and additional questions were added to get sincere suggestions/recommendations from our graduates. The population of this tracer study constituted the students from all the disciplines of Bachelor of Engineering programs provided in Pulchowk campus.

All possible efforts were made to collect questionnaires filled with sincere responses using all forms of communication system such as emails, phone calls, and social media like Facebook and Twitter, regular posts and through other ways like personal contact. Questionnaires were also provided on the website of campus. The total number of responses collected were 50. Figure 1 shows the number of graduate participants (both male and female) from different bachelor/master programs.

Program completed
50 responses



1.4 Scope and Limitations of the Study

The scope of this study is wide since it intends to gather data from graduates working not only in Nepal but also from other South Asian countries, Europe, United States of America and Australia. This study was carried out to know our alumni about their whereabouts and their current position as graduates from Pulchowk campus. This is an attempt to bring sincere opinion/advice from our graduates during their study period on the actual campus environment and teaching-learning activities carried out here such that necessary actions/corrections could be done in the institution for the betterment of students and overall campus as a whole. A substantial number of data from females-12% were collected. This information could be of immense use for gender analyses on various aspects of educational research at the campus and also the professional advancements of our graduates.

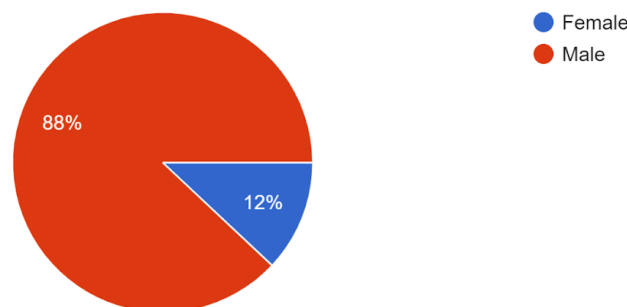
The time for data collection/questionnaires was only 1 month. Data collection was a challenge as most of the graduates have either changed their contact or address but however, all possible efforts were made to collect the questionnaire using all forms of communications system such as emails, phone calls, and social media like Facebook and Twitter, regular posts and through other ways like personal contact.

2. DATA PRESENTATION AND ANALYSIS

2.1. Profile of Respondents

Pulchowk Campus offers a vast array of academic degrees, both Bachelors and Masters. In 2016 there were 7 Bachelor's programs namely, Bachelor in Civil Engineering (BCE), Bachelors in Architecture (BAE), Bachelors in AeroSpace Engineering (BAS), Bachelors in Computer Engineering (BCT), Bachelor in Mechanical Engineering (BME), Bachelor in Electrical Engineering (BEL) and Bachelors in Electronics and Communication Engineering (BEX). These graduate degrees were the main focus in the study. Graph represents that 20% of respondents were female whereas 80% of the respondents were male graduates.

Gender
50 responses



Amongst the seven different bachelor programs, the highest number of respondents were from BCE (40%) whereas, the lowest number of respondents were from BES (2 %). Table 2 shows the participants/respondents on the current tracer study from different streams of BE programs.

Table 2. Course taken by the respondents

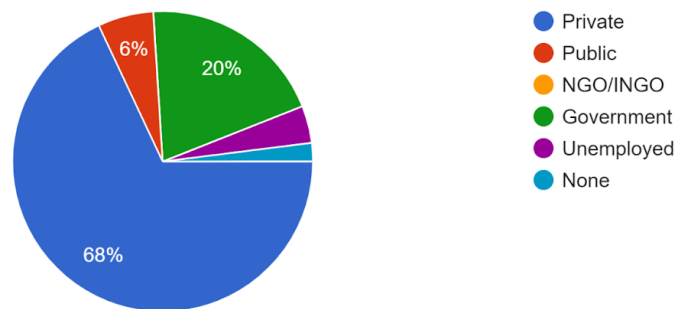
Program Completed	Frequency	Percent
BAE	7	14 %
BCE	20	40 %
BAS	1	2 %
BEL	2	4 %
BEX/BEI	13	26 %
BME	3	6 %
Masters	4	8 %
Total	50	100%

2.2. Employment and further study status of the respondents/graduates

Knowing the employment status of our graduates is one of the most important aspect of this tracer study. Campus will be recognized and evaluated based on the acceptance of its graduates in different organizations both nationally and internationally. It gives us immense pleasure to know that the majority, 94% of our graduates are employed in some form of organizations but at the same time 6% of our graduates are unemployed. Apart from this, 68% graduates are employed in the private sector. Of the total respondents, 10-graduates are currently working in the government sector.

Type of Organization

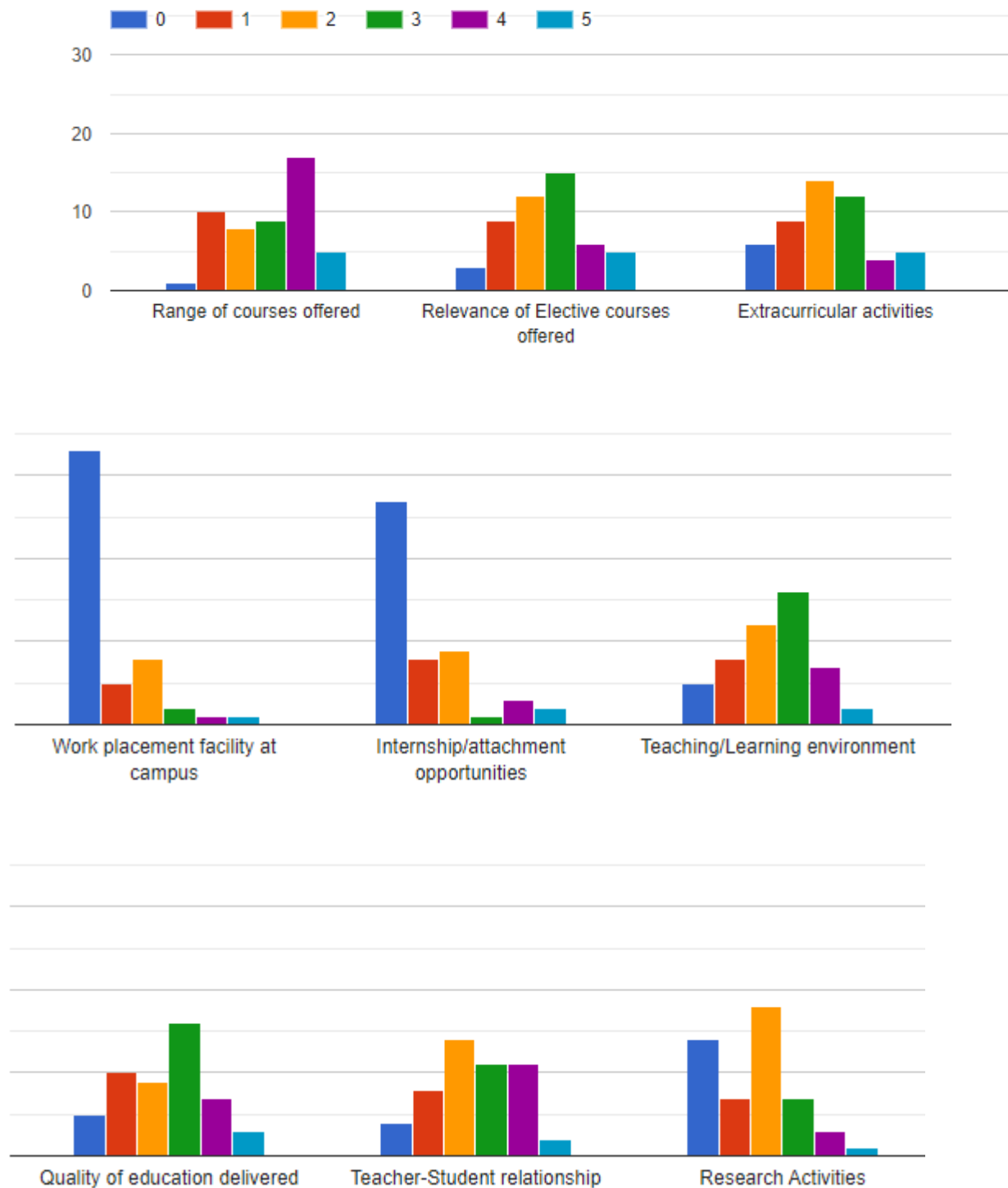
50 responses



2.3 Strength and Weakness of Campus

The current tracer study focused on getting sincere advice from our graduates regarding the major strength and weakness of the campus to get insight on what efforts can really be done by the campus to uplift its standard and provide quality education to the society. A chart of responses obtained based on the questionnaires provided is given below.

Which of the following best represents the major strength and weaknesses of Pulchowk Campus?



It can be seen that out of the 50 respondents, 92% of graduates responded that the work placement facility at Pulchowk campus is very weak. 80% graduates are unsatisfied with the research activity work in the campus. Also, 88% responded that the internship/attachment opportunity in the campus is not well established/poor. Most Graduates have responded with fair/good status to teaching/learning environment, range of courses offered in the campus, relevance of the elective courses, extra-curricular activities, quality of education delivered, teacher-student relationship, educational field visits, library and lab facilities, sports; canteen and other basic facilities like drinking water, internet facilities and number of toilets.

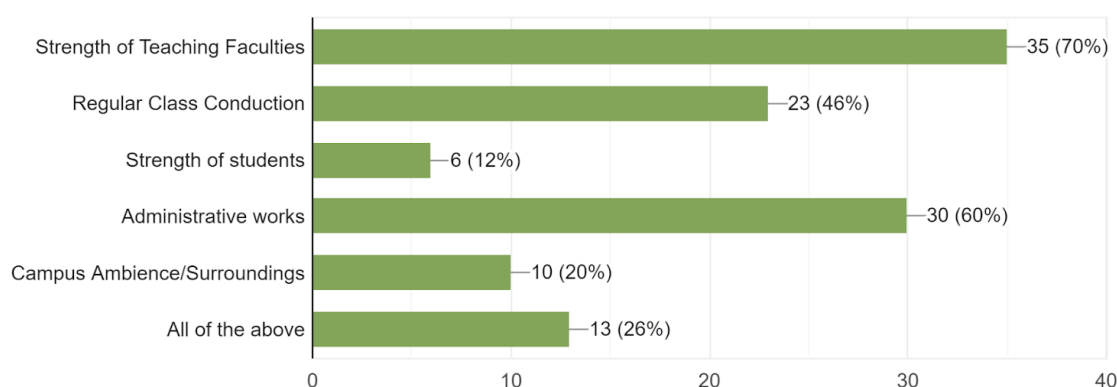
The results obtained give us insight that Pulchowk campus needs to create opportunities for students for their work placement/internship in the industry. Also a strong student based research activity should be developed to uplift the teaching-learning environment in the campus.

2.4. Graduates opinion on possible improving factors for teaching-learning environment

The teaching-learning environment in the Campus is the most important aspect that governs the development of the institution as well as create positive impact in the society. This study was also concentrated on finding out the lacking/shortcomings on the campus such that necessary actions could be taken to improve the teaching-learning environment on the campus. Different options were provided to the graduates where they could select multiple options on the question provided.

In your opinion on which aspect/s should Pulchowk Campus improve for better teaching-learning environment?

50 responses



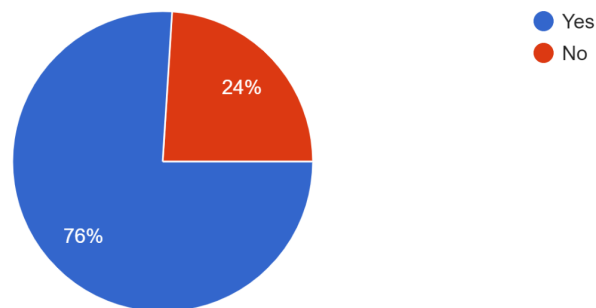
The opinion from the students is presented on the chart above. The result shows that there are many rooms for improvement by the campus to improve/strengthen the teaching-learning environment.

2.5. Relevancy of program completed

It was worth getting feedback from the graduates about the relevancy of the bachelor program they have completed on their current status of professional work/internship or study. Out of 110 respondents, 76% of graduates responded that their current job/study was relevant whereas 24% of the respondents did not find the program relevant to the current job/study. This question gave us an insight that most of our graduates are working under the same field as of their bachelor degree program.

Is your current job/study relevant to the program you have completed?

50 responses

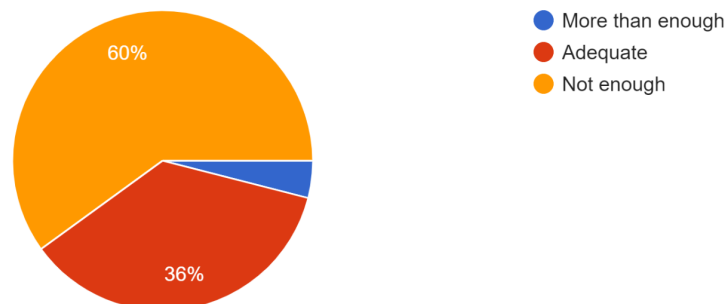


2.6. Adequacy of knowledge gained by the graduates

This tracer study gave us insight on the adequacy of knowledge gained by our graduates during their Bachelor level study for their self development/promotions and smooth day to day working on their current employing organizations. Of the total respondents, 36% of graduates responded unanimously to “Adequate” while only 4% of graduates responded that the knowledge they gained was insufficient. On the contrary, 60% of graduates responded “Not Enough”.

Does the knowledge you gained from the courses offered during your study level enough for your current job?

50 responses

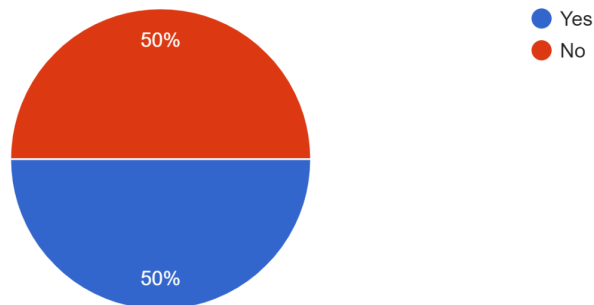


2.7. Will to pursue further study at Pulchowk Campus

The questionnaire on finding out interest of our graduates on pursuing higher studies on Pulchowk campus itself was given in order to get an insight on what our graduates really think about our ongoing masters program on different departments of the campus. It was found that 50% of our graduates were willing to pursue their further studies at Pulchowk Campus whereas 50% were not interested.

Would you be willing to pursue your further study at Pulchowk Campus?

50 responses



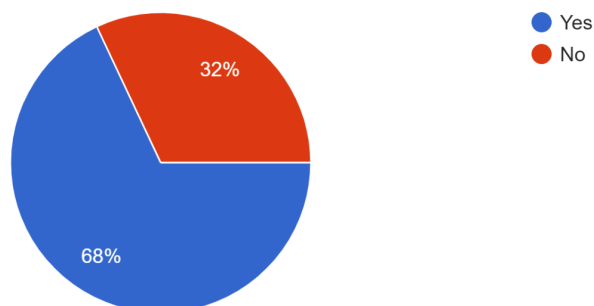
2.8. Advantage to our graduates as an Alumni on their current professional work

To find out if our graduates were given a slight advantage based on their degree from Pulchowk campus some of the questions were given on the survey.

2.8.1. Were you valued being our Alumni

In your personal experience, have you ever observed any such situation, where other people have valued/ranked you as a special one because of your Pulchowk Campus Alumnus status?

50 responses

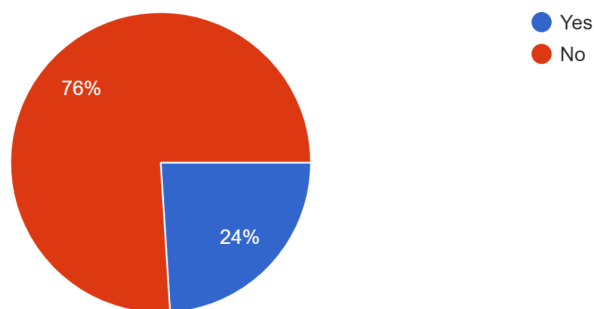


The pie chart above shows that 68% of respondents found that they had a slight advantage being an alumni of Pulchowk Campus whereas 32% of respondents never had such advantage.

2.8.2 Were you promoted based on your degree?

It was worth finding out if our graduates were given advantage on their work promotions based on the degree they obtained from Pulchowk campus. This question gave us an insight on the importance of our degree in the competitive market. Out of the total respondents 24% of our graduates replied that they were given advantage on their work promotions while 76% replied that they were not given any advantage.

Were you promoted based on the degree you gained from Pulchowk Campus?
50 responses

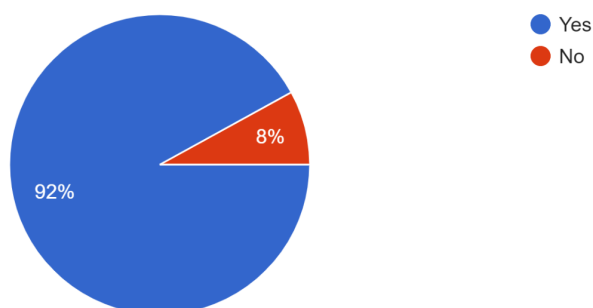


2.9 Graduates will to help/support as an Alumni

Its always satisfying and relieving when one can contribute to the institution that has given so much for them in their personal and professional life. A question was added such as to know the graduates will to help/support the campus. This was crucial data that could help us gather resource persons not just in monetary perspective but also in the capacity as a facilitator, researcher for overcoming the lacking of the institution and improving the teaching-learning environment. 92% of the graduates answered that they were willing to provide their valuable help/support to Pulchowk Campus as Alumni when required whereas 8% answered with No.

Would you be willing to provide your valuable help/support to Pulchowk Campus as Alumni when required?

50 responses



3. MAJOR FINDINGS.

3.1 Employment and further study status of the Graduates

Out of 50 graduates, 34-graduates (68%) had full time jobs in a private organization, 10-graduates (20%) are working on government organizations and 3-graduates(6%) are employed on public organizations while 6-graduates are currently unemployed.

3.2 Issues related to the quality and relevance of programs

Out of 50 participants, 76% of graduates considered that the bachelor programs they have studied are highly relevant to their current study/job. About 24% of graduates said that the quality of education delivered, and the range of courses offered including electives are good on campus.

3.3 Programs contribution to graduates professional and personal development

76% of our graduates responded that they had a slight advantage as Alumni of Pulchowk campus in their professional life. About 24% of our graduates were given advantage on their work promotion based on the degree of our campus.

3.4 Issues related to teaching-learning, teacher-student relationship and quality of education delivered

Of the 110 graduates, 50% graduates find that the teaching learning environment is good in the campus while 20% are satisfied. Similarly, 48% graduates said teacher-student relations in the campus are good while 26% find it satisfactory. With respect to the quality of education delivered in the campus, 52% of graduates find it good while 20% find it satisfactory.

4. IMPLICATIONS TO INSTITUTIONAL REFORM

The findings of this tracer study suggested that the campus needs to develop ways to facilitate graduates from different degree programs for their work placement as well as internship opportunities. Apart from that, the campus should exercise and implement academic research activities for the bachelor degree students in both national and international level. Apart from that, the study indicated that the knowledge gained by the bachelor degree students from different engineering stream is found insufficient for their further works/studies and hence, necessary actions should be taken to include curriculum that is industry/market oriented and that will be helpful on a broad spectrum for graduate's professional development and for higher level studies.

5. CONCLUSION AND RECOMMENDATIONS

This tracer study concludes that our graduates are highly utilized in the industry as majority of the graduates are either job holders or pursuing higher education both in national and international companies/universities. The bachelor degree obtained by the graduates is highly relevant to their current status of work/study. Graduates from pulchowk campus are given slight advantages in their professional life and higher education this is because of the well-established and reputation of the campus in both national and international level. The campus has good academic practices with strong relationship between teacher and student. Also, the teaching-learning environment and the quality of education delivered to the students in the campus is good/fair. The facilities provided to the students in the campus like library, laboratory, internet and sports are good while there is room for improvement when it comes to facilities like canteen, urinals and drinking water.

Considering the findings from the tracer study, it is recommended that the campus should develop good academic research activities for the students. Apart from that, the campus should develop strong ties with the industry and other universities both in national and international level to facilitate graduates from different degree programs for their work placement/higher education as well as internship opportunities. It is also recommended that the campus should work on developing better curriculum for bachelor degree programs that meets up the requirements of the current industry/market along with broad roadmap for obtaining higher educational degrees in national as well as international universities.

ANNEX

Tracer Study Questionnaire



Dear Graduates,

Pulchowk Campus is establishing a system for tracing our graduates and keeping records on their work status, further studies, and various activities that they have been involved in after their graduation. In addition, the campus is interested in getting comments and feedback from our graduates which will be taken into account as sincere advice and inputs for better future planning and provide further educational needs to enhance the quality education being offered by the campus. The results of this tracer study will only be presented in summary form and individual responses will be kept strictly confidential. We would, therefore, highly appreciate you for completing the following questionnaire at your earliest convenience.

Thank you for your kind cooperation and support.

A. PERSONAL INFORMATION

Description (optional)

Full Name *

Short answer text

Permanent Address *

Short answer text

Current Address *

- ☐ Same as Permanent Address
- ☐ Foreign Country
- ☐ Other...

Gender *

- ☐ Female
- ☐ Male
- ☐ Other...

Date of Birth

Month, day, year



Program completed *

- ☐ BCE
- ☐ BME
- ☐ BAE
- ☐ BEX / BEI
- ☐ BCT
- ☐ BAS
- ☐ BEL
- ☐ Masters

Enrolled Year *

Short answer text

Passed year

Short answer text

Phone number *

Short answer text

Email Address *

Short answer text

Electronic Social Network Id

Description (optional)

Facebook / Instagram ID:

Short answer text

Other ID:

Short answer text

A.1. Foreign Residence



Description (optional)

Name of country where you are currently residing. *

Short answer text

Do you think that the degree you earned from Pulchowk Campus is recognized and valued in the community you are currently residing in? *

☐ Yes

☐ No

B. Employment Information



Description (optional)

Name of Organization

Short answer text

Type of Organization *

- ☐ Private
- ☐ Public
- ☐ NGO/INGO
- ☐ Government
- ☐ Other...

Your organization's address

Short answer text

Employment Type *

- ☐ Full Time
- ☐ Part Time

Current Designation

Short answer text

Job Appointment Date

Month, day, year



In Case of Self Employment

Description (optional)

Starting Year

Short answer text

Type of Work/Profession

Short answer text

Name of your own company:

Short answer text

$$\begin{array}{cc} \times & \vdots \\ \times & \vdots \end{array}$$

Which of the following best represents the major strength and weaknesses of Pulchowk Campus?

Excellent = 5, Very Good = 4, Good = 3, Satisfactory = 2, Weak = 1, Very Weak = 0

[illegible]

Which of the following are the good aspects of Pulchowk Campus? *

- ☐ Strength of Teaching Faculties
- ☐ Regular Class Conduction
- ☐ Strength of students
- ☐ Administrative works
- ☐ Campus Ambience/Surroundings
- ☐ All of the above
- ☐ None of the above

In your opinion on which aspect/s should Pulchowk Campus improve for better teaching-learning environment? *

- ☐ Strength of Teaching Faculties
- ☐ Regular Class Conduction
- ☐ Strength of students
- ☐ Administrative works
- ☐ Campus Ambience/Surroundings
- ☐ All of the above

Is your current job/study relevant to the program you have completed? *

☐ Yes

☐ No

Does the knowledge you gained from the courses offered during your study level enough for your current job? *

☐ More than enough

☐ Adequate

☐ Not enough

Would you be willing to pursue your further study at Pulchowk Campus? *

☐ Yes

☐ No

D. Others



Description (optional)

Were you promoted based on the degree you gained from Pulchowk Campus? *

☐ Yes

☐ No

In your personal experience, have you ever observed any such situation, where other people have valued/ranked you as a special one because of your Pulchowk Campus Alumnus status? *

☐ Yes

☐ No

If Pursuing Higher study:

Description (optional)

Enrollment Year

Short answer text

Program

Short answer text

Level

Short answer text

Campus/University, Address

Short answer text

Would you be willing to provide your valuable help/support to Pulchowk Campus as Alumni when required? *

☐ Yes

☐ No

Which of the following help/support would you be willing to provide to Pulchowk Campus as Alumni when required? *

☐ Contribute in the capacity as a resource person

☐ Work as a facilitator in bringing industrial collaboration to Pulchowk Campus

☐ Be part of new initiatives(Scholarships/Awards, Research etc.) that require collective funding

☐ Other...

Contact Address/s of your friend/s, who graduated in the same year:

Note: Please provide contact address of your colleges whom you know from your batch. This will help us to effectively complete this tracer study. (Eg: 1. Name, contact no., email id, social network id)

Long answer text