Competencies of Higher Education Graduates: A Case of Universitas Kristen Indonesia

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by
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To Bram

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Abstract

This dissertation investigated higher education graduate competencies, acquired during their study period and required at work as perceived by the graduates themselves. This study also investigated whether graduates of professional, semi-professional, and non-professional study programs acquired different levels of competencies during their studies and compared the gaps among the three groups of graduates. The case study is Universitas Kristen Indonesia graduates of graduation years 2001, 2003, and 2005, from the Faculties of Engineering, Economics and English, representing professional, semi-professional and non-professional study programs respectively.

The 6 study programs involved were mechanical engineering, civil engineering, and electrical engineering which are categorized as professional graduates; management and accounting study programs which are categorized as semi professional graduates, and English which is categorized as non professional graduates.

Tracer study was employed in tracing the graduates, mapping their competencies and measuring competency gaps acquired during studies and required at work. There are 32 questions about competencies in the questionnaire which were grouped into three, i.e. (1) Knowledge (general knowledge, knowledge of their study background or discipline, knowledge of other fields or disciplines, English, and computer operation (for office)); (2) personal competencies or “personal attributes” (creativity, problem solving ability, learning ability, working under pressure, time management, fitness to work, working independently, analytical ability, ability to take responsibility, initiative, loyalty and integrity, ability to present ideas/product/report, planning coordinating. and execution, ability to document ideas and information, ability to write reports, memos, documents, and continuous learning ability); and (3) interpersonal competencies or "people skills" (working with other people/ team working, negotiation, tolerance, adaptability, assertiveness, persistence, appreciating different points of views, understanding of the system values in the society, leadership, and communication skills).

The graduates stated that competencies are very important in workplaces but their competency acquisition during study period was low compared to what was required at work. Technical competencies or field-related competencies were sufficient but not personal or interpersonal competencies.

Gaps between competency acquisition during studies and requirement at work in professional, semi-professional, as well as non-professional study graduates were from -0.2 to -1.6. In general, the graduates stated that the institution did not equip them with necessary competencies--especially those which were rated high for workplace--that were valuable to get employed.

Compared to the semi-professional and the non-professional graduates, the gaps of knowledge, personal and interpersonal competencies of the professional graduates were the widest. Competency gaps between acquisition and requirement among the non-professional graduates were the narrowest. The more professional the study program, the broader the gaps between acquisition and requirement of competencies.

Zusammenfassung

Im Rahmen dieser Dissertation sollen die selbstwahrgenommenen Kompetenzen von Hochschulabsolventen untersucht werden, die sie im Laufe ihrer Studienzeit erworben haben, sowie jene, die ihnen am Arbeitsplatz abverlangt werden. Des Weiteren soll der Frage nachgegangen werden, ob Absolventen von beruflichen, semi-beruflichen und nicht-beruflichen Studiengängen verschiedene Kompetenzgrade während des Studiums erworben haben, wobei die Kompetenzlücken der drei Gruppen vergleichend gegenübergestellt werden sollen. Dabei sollen Daten von der Universitas Kristen Indonesia der Jahrgänge 2001, 2003 und 2005, von technischen, wirtschaftlichen und englischen Fakultäten, welche entsprechend als berufliche, semi-berufliche und nicht-berufliche Studiengänge, aufgefasst werden.

Die sechs sich beteiligenden Studiengänge sind Maschinenbau, Bauingenieurwesen und Elektrotechnik, deren Absolventen als berufliche kategorisiert sind; die Verwaltungs- und Buchhaltungsstudiengang als semi-berufliche und Englisch als nicht-berufliche.

Es wurde eine Absolventenbefragung durchgeführt, um die Laufbahnentwicklung der Absolventen nachvollziehen zu können, die Kompetenzen zu ermitteln und die Diskrepanz zwischen den Kompetenzen zu ermitteln, die sie im Studium erworben haben verglichen und denen, die sie bei der Arbeit benötigen.

Im Fragebogen sind insgesamt 32 Fragen über Kompetenzen enthalten, die in drei Gruppen eingeteilt wurden: (1) Wissen (Allgemeinwissen, Wissen über ihren akademischen Hintergrund oder Studienbereich, Wissen über andere Fächer oder Studienbereiche, Englisch und EDV-Kenntnisse (beruflich)); (2) persönliche Kompetenzen bzw. "persönliche Eigenschaften" (Kreativität, Problemlösungsfähigkeit, Lernfähigkeit, unter Druck Arbeiten, Zeitmanagement, Arbeitstauglichkeit, selbstständig Arbeiten, analytische Fähigkeiten, Verantwortlichkeit, Initiative, Loyalität und Integrität, die Fähigkeit, Ideen/Produkte/Berichte zu präsentieren, planen, koordinieren und auszuführen, die Fähigkeit, Ideen und Informationen zu dokumentieren, die Fähigkeit, Berichte, Memos, Dokumente zu schreiben, und die kontinuierliche Lernfähigkeit); sowie (3) soziale Kompetenzen bzw. der "Umgang mit Menschen"/Teamarbeit, Verhandlungsgeschick, Toleranz, Anpassungsfähigkeit, Durchsetzungsvermögen, Beharrlichkeit, die Wertschätzung unterschiedlicher Standpunkte, Verständnis der Werte in der Gesellschaft, Führungsfähigkeit und Kommunikationsfähigkeit).

Die Absolventen schätzen es als sehr wichtig ein, am Arbeitsplatz über diese Kompetenzen zu verfügen, während sie den tatsächlichen Kompetenzerwerb im Studium verglichen zu den späteren Anforderungen im Beruf jedoch für sehr gering halten. Die technischen Kompetenzen oder fachbezogenen Kompetenzen wurden als ausreichend beurteilt, nicht aber die persönlichen oder sozialen Kompetenzen.

Die Lücken zwischen dem Kompetenzerwerb während des Studiums und den Kompetenzanforderungen im Rahmen der Arbeitsstelle sowohl in beruflichen, semi-beruflichen, als auch nicht- beruflichen Studiengänge der Absolventen waren von -0,2 bis -1,6. Insgesamt sind die Absolventen der Meinung, dass sie seitens ihrer Institution nicht mit den für eine höhere Position benötigten Kompetenzen ausgestattet worden sind.

Im Vergleich zu den semi-beruflichen und nicht-beruflichen Absolventen sind die Lücken im Bereich des Wissens, sowie der persönlichen und sozialen Kompetenzen bei den Absolventen der beruflichen Studiengänge am größten. Die Diskrepanz der Kompetenzen zwischen Erwerb und Anforderung ist unter den nicht-beruflichen Absolventen am kleinsten. Je beruflicher das Studium ist, desto größer ist die Diskrepanz zwischen Erwerb und Anforderung von Kompetenzen.

Chapter 1

Introduction

1.1. Graduate Competencies and the Labour Market

The issue of higher education graduates' competencies has attracted people's attention and is widely discussed for the past 3 decades by employers and academicians alike, in Indonesia and in international communities. Employers are said to have become more demanding of their prospective employees. Not only should they hold higher education credentials, but they also have to possess certain competencies that will guarantee good job performance.

Employers, aside from being demanding, also 'blame' higher education institutions for not producing graduates without competencies. A civil engineer may have a credential in civil engineering but does not possess other competencies which are equally important as his/her credential. Competencies such as English, computer operation, communication skills, and team work have proven to be as equally important as the credentials. Employers who have to spend extra money to train the graduates before they can actually work insist that higher education take responsibility of producing graduates that are not ready to work or fit into the work environment.

In the competitive world of work nowadays not every graduate is lucky enough to get a job of his/her dream or related to his/her field of study. Many are forced to accept a job offer which is not even related to their field of study. An electrical engineer working in a bank, for example, needs to possess good communication skills because most of the time he/she needs to communicate with customers or other parties. Many people now work in the service sector or the service industry, in fact more than 40% work in this sector in Indonesia. Job competencies then become more important because in this kind of industry, fewer people use their study-related competencies.

Higher education institutions must prepare their graduates with certain competencies that will enable them to cope with job requirements during the 4 years training so that graduates are better prepared for work as Connor (in Henkel and Little, 1999: 97) comments "…higher education should be providing more in a way of 'skills for work' and giving more emphasis to 'employability' in undergraduate studies".

Training their new employees (fresh graduates most likely) to acquire certain competencies before their job placements then becomes important to narrow down the gap between the graduates' competencies and employers' requirements. If graduates were prepared for work, employers argue, then they would not have to spend more money on the training. This is also emphasized by Harvey (2003), employers are apparently no longer able or willing to pay the period of

adjustment for a graduate to become effective in the workplace and that higher education programmes are expected to better prepare graduates for workplace culture.

> Growing numbers of students completing secondary education demands for social mobility, the needs of industrial and post-industrial society, the needs of industrial and post-industrial societies, and the emphasis on obtaining diplomas and degrees have all contributed to the demand for higher education. In many countries, including some developing countries, a university degree is a requirement for a middle-class occupation. (Altbach, 1999: 121)

In the Indonesian situation, Dhanani (2004: 9) observes one of the paradoxes concerning employment and unemployment, i.e. "senior secondary school leavers and university graduates formed an increasingly large proportion of the openly unemployed, 60% of the total in 1997.

The demand for education remains strong, and the private education schools and universities have 'mushroomed'. The demand of tertiary education is increasing because the people expect that with the expenditure they spend on higher education, they expect to get more in the return of investment, for example, a successful career path, a handsome salary, and many others. In reality, however, a higher education diploma does not guarantee a good career, better employment or good income as competition in the labour market gets more severe with hundreds of thousands of higher education graduates go to the labour market competing for lesser jobs. Still "a degree from a postsecondary educational institution is

increasingly seen as a necessity for economic success" (Altbach, 1999: 107) and it is also seen as important for social mobility (Altbach, 1999: 108).

The more educated people go to the labour market, the more severe the competition for higher education graduates and only those who can meet the requirement can get employment of their dream, or if they don't, then they have to settle for any jobs available for them.

An example of a job advertisement in an Indonesia newspaper below will give a picture of the competencies an employer requires in recruitment:

> *…Sarjana[1] of various background, English proficiency, both oral and written, other foreign language an advantage, able to work in a team, able to work under pressure, meeting deadlines, …*

The advertisement states clearly that the vacant positions were for *sarjana* degree holders, regardless of field of studies, and in addition to the qualification, other competencies, such as English proficiency, other foreign language--if any, the ability to work with other people (team working) and time-framed assignments (work under pressure and meeting deadlines) were also required in order to apply for the job.

What is competency? It is a managerial concept first used in management (Holmes and Hooper, 2000: 248). In explaining the concept, Holmes and Hooper use 'core competence' which means the centre of development of business strategy to match needs, wants, desires, preferences, and buying patterns with the capabilities of the

[1] Sarjana: an Indonesian title for undergraduate degree (equivalent to Bachelor's degree)

company, based on the skills and resources available to the business. It is also used in other fields of study.

This managerial concept is later used in many disciplines. Competency is also referred to many other terms, such as *skill--generic and core skills*, *transferable and no-transferable skills*, *key qualification.* They all have different concepts but all related to learning outcomes which support further learning, employment, personal development and socialization (Holmes and Hooper, 2000: 247). Steward (in Holmes and Hooper, 2000: 249) adds the definition of the concept as "facilitating the empowerment of people, through learning how to acquire information (data), turn it into knowledge (useful, assessed, applied, ordered structured information) and apply it to solve problems. Further, Sirca, et al (2004) state that "*to be competent means that an individual has to be qualified and efficient member of an organization as well as a member of the knowledge society.*" And that in a knowledge-based society, there are three important factors which are interdependent in shaping the competency of the graduates: (1) producers of the graduates (HEIs), (2) suppliers of competencies (the graduates), and (3) the users of the competencies (companies and other organizations). In the labour market, competency is frequently associated with 'skills and 'qualifications'.

In responding to the issue of graduates' competencies, Brennan, Kogan and Teichler (1996) and Brodjonegoro (2002)) agree that the function of higher education has shifted and a higher education institution is no longer the sole place

to seek knowledge rather as a provision of qualified manpower and produce knowledge. In addition to that, Mace (1992) emphasizes that the motive of the people's spending money in higher education is an investment for future economic benefits and because it involves people's capital investment, accountability ought to take place. The people demand that higher education institutions be responsible for the money that they have invested, in this case, the product: graduates (Brodjonegoro, 2002).

1.2. Tracer Study as Means of Mapping Labour Market Signal

As part of its responsibility to the people, higher education institutions must do what industries do after the launching of the products: after sales service. The service that higher education institutions offer should not stop at the graduation but continue even after the graduates leave the institutions. Graduates' activities after higher education training become part of the responsibility of higher education institutions. Graduates' whereabouts must be followed in order to see whether they easily move in their transition period or whether they easily fit to the job. Whether or not the graduates manage to find a job of their preference to a certain extent depends on their previous activities or trainings.

Higher education institutions must not keep distance with the labour market but rather draw it closer to get necessary information by capturing the signals from the labour market. Who else can give such better information than the former

students who have experiences in the labour market and direct observation of it? This does not necessarily mean that employer's survey is less important, but tracer studies are very important to get feedback, not only from the graduates themselves.

Why does feedback matter? Feedback means the process in which part of the output of a system is returned to its input in order to regulate its further output or response to an inquiry or experiment. So when the graduates provide feedback to the alma mater where they once gained knowledge, they will either have good or bad impressions, Several years after the graduation, after having an experience of competing in the labour market and in the workplaces, the graduates will be able to provide different points of view of the performance of higher education institutions where they once took the advantage of gaining knowledge and help higher education institutions better understand their after study experience--the labour market. Both the feedback of the service of the alma mater, and the picture of the labour market, will help improve higher education institution service to the communities.

Teichler (1996) states that feedback from the graduates can be obtained by carrying out tracer studies (or also called alumni surveys or graduate surveys as means of tracing the graduates and their activities after they are graduated). Tracer studies can also be used to map the situation in the labour market as perceived by the graduates. In doing so, higher education institutions prepare not

only graduates searching for jobs after they complete their studies, but also help them design curricula that link higher education to the demand of labour market.

Graduates must be aware of what is expected of them by the labour market. This is actually the same requirement of what is expected of them during their studies. The difference now lies in the market with various demands, where competencies of the graduates are at stake. Brennan, Kogan, and Teichler (1996) map the relationship between higher education and work and argue that higher education institutions should address certain issues concerning the capabilities of the graduates in the work places. Then a tracer study will collect information about, for example, (1) whether curriculum meets demand of the market, (2) how ready the graduates are to compete for the jobs on the labour market, (3) whether students are aware of the competencies required by the labour market, and (4) university's response to the changing society.

The link between higher education and work can be further investigated to provide information for curriculum development, for example. By carrying out a tracer study of the graduates, higher education institutions perform accountability as their duty as knowledge providers whose products are acknowledged by the society.

1.3. Research Questions

The relationship between higher education and work has been a debatable issue from the past four decades (Teichler, 2007: 1). Research has been carried out in order to provide better picture of the relationships. The complaints of the users of the graduates are, among others, the discrepancy between demands of the market and supply of higher education institutions, i.e. the competencies that the HE graduates obtain and the requirement of the market.

This research, therefore, will investigate:

> *What are higher education graduates' competencies and how do higher education graduates perceive competencies as required by the employers of the graduates in relation to higher education institutions' provision of competencies?*

The central research question above will serve as the ground to explore subsequent research questions that will lead to the process and analysis of the thesis.

In order to get a better understanding of the different concepts of the competencies of higher education graduates in general, this thesis will first of all explore different theories that define competencies:

1. *What are the concepts of competencies of higher education graduates in existing research literature?*

With the concept and definitions of competencies above, this thesis will explore theories and research findings of what constitute competencies of higher education graduates. In the Indonesian context, competencies have long been existing but not yet been defined completely. This debate will serve as an introduction to the question frequently raised by employers:

2. *How do higher education institutions respond to the employers' requirements of competencies of their graduates?*

In searching for the answer to the above question, a theoretical perspective of labour market and workplaces, in general--international context, and in Indonesian context will be explored. The theoretical background of the study will be used to explain the case study carried out for this analysis and therefore the following questions will help the researcher in analysing the case study:

3. *Do professional, semi profession, and non professional graduates have different level of competencies and what strategies do they have to meet the requirements of the labour market or their employers?*

4. *What shortcomings of competencies do professional, semi profession, and non professional graduates have and how do employers see this?*

1.4. Research Strategy

While the first and second questions will be explored by literature study, the third and the fourth questions will be discussed based on the results of a tracer study carried out among the graduates of Universitas Kristen Indonesia, Jakarta, years of graduations 2001, 2003, and 2005.

1.4.1 Target respondents

The target respondents are 1463 graduates of Universitas Kristen Indonesia (UKI) from three Faculties: (1) Faculty of Engineering, (2) Faculty of Economics, and (3) Faculty of Letters. Six study programs of the selected faculties are involved in the survey: (1) Electrical Engineering, (2) Mechanical Engineering, (3) Civil Engineering; (4) Management, (5) Accounting, and (6) English, graduation years of 2001, 2003, and 2005.

The selection is based on whether the study programs lead to professional or non professional degree. The Faculty of Engineering is considered professional school that leads the graduates to gain professional careers in their respective fields; the Faculty of Economics belongs to semi-professional since its graduates can both

enter professional fields of their program or other fields close or not at all related to study programs; the Faculty of Letters belongs to the non-professional program with diverse career prospects since the mastery of the language—English-- is their tool to enter labour market.

1.4.2 Questionnaire Design

The questionnaire for this survey is based on standardized questionnaires that were developed by the INCHER (International Centre of Higher Education Research) of the University of Kassel, Germany, i.e. the *Reflex* (Research into Employment and professional Flexibility) and and *CHEERS* (Careers after Higher Education: a European Research Study) projects.

Questions are designed to cover themes of the activities during studies and after graduation in order to find the relations between higher education and work and with special emphasis to competences. Themes addressed in the questionnaires cover the following:

1. Background of respondents before they enrolled;
2. Information on courses and other activities during their studies;
3. Transition period: from study time to employment;
4. Current activities and work;
5. Competencies;
6. Additional courses and further studies;

7. Relationship between higher education and work;
8. Work orientation and job satisfaction;
9. Socio-biographic data;
10. Retrospective assessment of the studies.

1.5. Structure of the Dissertation

This dissertation is divided into 6 chapters. Chapter 2 will discuss theories of competencies, as perceived by higher education and the labour market in Indonesia, the changing labour market and the theory behind tracer studies to map the whereabouts of the graduates. The higher education system in Indonesia will also be described in this chapter. Chapter 3 discusses higher education system in Indonesia, from the history of establishment of higher education system in Indonesia to the present time. Types of higher education institutions and credentials are also discussed in this chapter. This will also be an introduction to the case study of the thesis. Chapter 4 discusses the case study, which is Universitas Kristen Indonesian (UKI) and the methodology used for UKI alumni survey in an attempt to map the graduates' competencies at work. Results and discussion of tracer study will be discussed in chapter 5. Finally, chapter 6 is the summary and conclusion.

Chapter 2

Review of Selected Literature: Higher Education Graduates' Competencies and the Labour Market

Every year the number of higher education graduates seeking employment in the labour market in Indonesia increases. With the diplomas they earn, higher education graduates look forward to getting jobs of their choices and, possibly, build a career. However, the reality that they find in the labour market is not as expected because, as industries claim, higher education graduates do not have additional values that make them more qualified, meet certain requirements for the job or they are not prepared for the workplace. Unlike high school leavers, higher education graduates, the so called educated manpower, supposedly prove that they are more capable of handling certain responsibilities in the targeted jobs compared to jobseekers with lower credentials, otherwise, people might ask why pay more for higher education if the future employment is not secured? In other words, by investing in higher education, people expect to get better job, thus, a better future.

A personnel manager of a multi-national manufacturer confirmed that the degree alone cannot guarantee either a job or a career, "the fact that they have that degree

basically confirms they are people who think in a certain way and have certain abilities, so the next stage is a number of key competencies." (Harvey, 2000: 7).

This chapter will discuss higher education graduates' competencies and the labour market and will be divided into two major themes (a) concepts of competencies and (b) tracer study as a means of mapping labour market signal.

In discussing the concepts of competencies, various literature studies in international as well as in Indonesian contexts will be discussed to get a better understanding of different ideas of competencies by various authors. Competencies perceived by graduates and required by employers will also be discussed to get a clearer understanding of the concepts.

In addition the concept of 'soft skills' will be highlighted because in Indonesia, this term is widely discussed in the past few years. The graduates' inability to perform in work or to compete in the labour market was due to lacking these particular skills. Like technical skills, soft skills are as important as technical skills and contribute significantly to the successful job performance. In conclusion this sub chapter will describe what comprise competencies.

The second sub chapter will discuss the tracer study as a means of mapping the labour market. It is used to see the relationship between higher education and the world of work, in this case, graduates' competencies and the requirement of the labour market. Indonesian experience in conducting tracer studies and limitation

of the studies will also be presented to give a clearer picture and for further research.

2.1. In Search of Competencies: Concept, Debate and Perceptions of Graduate Competencies

Competence or competency (pl.: competencies) is a concept that is frequently used in the past decade in Indonesia. Almost in every job advertisement in the media, the concept denotes as a requirement and readers are getting more familiar with it. The term written in the advertisement is simply understood as the capacity of a person in handling certain assignment.

The term increasingly attracted people's attention and use of the term broadened, not only in work context but also in the context of education. In the curriculum, the term appears and is understood as the ability to demonstrate some skills required. From the elementary school to higher education, the concept appears in the core curricula and is used in the Ministerial decrees.

According to the Australian National Centre for Vocational Education Research (NCVER), there are actually different terms used in different countries which might slightly differ in description but refer to similar concept, such as, core skills, key skills, common skills (UK), essential skills (New Zealand), key competencies, employability skills, work place know-how (Australia), basic skills, necessary skills, generic skills (US), critical enabling skills (Singapore), transferable skills

(France), key qualifications (Germany), trans-disciplinary goals (Switzerland) and process independent qualifications (Denmark). However, for the purpose of this study, the words 'competency ' [sg.] and 'competencies' [plu.] will be used.

2.1.1 Concept of competencies

Competency is the term for the ability to act specifically (Kellermann, 2007). In Indonesia the word is simply adopted to *kompetensi* (competency) and in the KUBI (Complete Dictionary of Indonesian Language, 2001) it is described as:

> "(N) *kewenangan (kekuasaan) untuk menentukan (memutuskan sesuatu); (Ling.) kemampuan menguasai gramatika suatu bahasa secara abstrak atau bathiniah* (the capacity (authority) to determine (to decide something); (in Linguistics) it is the capacity of a language grammar in an abstract or internal way)."

While the first deals with performance or act of a person in the scope of his/her authority, the second deals with what is not seen but personal capacity that one possesses. The second description is especially highlighted as an introduction to the later discussion of a theory of linguistics by Noam Chomsky.

In the Longman English Dictionary[2], the word competency is described as follows,

> "(1) [uncountable] also competence, the ability to do something well [≠ incompetence], Professional/linguistic/technical etc competence; (3) [countable] also competency formal BE a skill needed to do a particular job."

[2] http://www.ldoceonline.com/dictionary/competence

Both dictionaries do not differ in their use of the word 'competence' and 'competency' or discuss whether the two have different meaning. They both mean the ability/abilities or capacity of a person to do something.

The definition of competency is somehow vague since different authors in different countries use different terms describing 'competency' and their understandings of the concept vary. However, the writer will try to define the term in order to get a better understanding.

The Trainer's Dictionary: HRD Terms, Abbreviations, and Acronyms, HRD Press (in Bassi, 1973) describes competencies as areas of personal capability that enable people to perform successfully in their jobs by achieving outcomes or completing tasks effectively. A competency can be knowledge, skills, attitudes, values, or personal characteristics. The competencies required for successful performance may or may not be expressed formally by an employer. White (1959) and McClelland (1976) associate competency with superior performance (in Delamare-Le Deist and Winterton, 2005).

Dewulf (in Van Loo and Sameijn, 2004: 334) defines the concept of competency as "integrated knowledge, skills and attitude that can be used at work to perform, which means producing output that support organizational goals."

Competency stems from learning and cognitive theoretical science and it emphasizes the individual perspective, and the concept of competency is frequently associated with 'skill' or 'qualification' although in the labour market

perspective the term qualification is more appropriate (Van Loo and Semeijn, 2004: 333). In the human resource perspective, competency refers "to the potential (behaviour) of people in their working environment and at the same time to the discipline that is specialized in the use of relevant knowledge with respect to this issue" (Van Loo and Semeijn, 2004: 334). Hartle, furthermore, describes competency as a characteristic of an individual that has been shown to drive superior job performance but divides it into visible competencies, such as knowledge and skills, and underlying elements of competencies, such as motives and traits (in Delamare-Le Deist and Winterton, 2005; also see Spencer and Spencer, 1996).

Woodruffe (in Winterton et al, 2005) offers the clearest statement by contrasting areas of competency, defined as aspects of the job which an individual can perform, with competency referring to a person's behaviour and underpinning competent performance.

Delamare-Le Deist and Winterton (2005: 29), however, explain that 'competency' is different to 'competence'. The term 'competence' refers to functional areas and 'competency' to behavioural areas, but they said although the two words have different meaning, the usage of the term is not consistent. Some authors use 'competency' when referring to occupational competence and some has tried to establish coherent terminology which is to date has little impact.

Although there is also a debate as to the scope of competency and what makes it differ from other various terms, this chapter will narrow its discussion to the term competency that Bridges (1993) refers to as generic skills or competencies which are often used to refer particularly to "a higher order skills which are believed to underpin a wide range of competency exercised in a variety of social settings and/or across a range of occupation." The author argues about previous idea about the language of 'skills' which implies "something relatively routinisable, low in cognitive content, something typically learned through rehearsal" (Bridges, 1993: 44), and described that skills embraces both activities with a relatively low, though still significant, level of cognitive content and activities with a high level of cognitive content, such as chairing a discussion, negotiating a contract, etc. (Bridges, 1993: 44). In addition to Bridges' concept of competency, Paul Attewell (1990) clarifies that "skill is the ability to do something, but the word also connotes a dimension of increasing ability. Thus, while skill is synonymous with competency, it also evokes images of expertise, mastery, and excellence." (Evers, et al, 1998).

Despite the different concepts that the above authors define, there are two theories concerning competency that would be discussed for the purpose of a more clear definition of the term. The first is Chomsky's theory of competency and performance in which he describes how competency of a language affects the performance in language proficiency (Chomsky, 1965) and the second is Spencer

and Spencer's competency model in which competencies are described as characteristics of people and indicate "ways of behaving and thinking, generalizing across situations and enduring for a reasonably long period of time" (Spencer and Spencer, 1993: 9).

Noam Chomsky, a transformational linguist who introduced the concept of generative grammar as theory of linguistic competency, divides competencies into two: deep and surface structures and it is the deep that dictates the surface. Deep structure is the 'competency' and surface structure is the 'performance'. In language education, as Chomsky argues, the generative grammar is a system of rules that in some explicit and well-defined way assigns structural descriptions to sentences. It is because every speaker has mastered and internalized generative grammar that expresses his knowledge of language (Chomsky, 1966: 8). In his book, "Aspects of the Theory of Syntax", Chomsky explains that linguistic theory is:

> "...concerned primarily with an ideal speaker-listener in a completely homogenous community who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random and characteristic) in applying his knowledge of the language in actual performance (Chomsky, 1966: 3)

In order to study the actual linguistic performance, Chomsky (1966: 3) further states that one must consider the interaction of a variety of factors, of which the underlying competency of the speaker-hearer. Surface structure is the sentence,

verb, noun phrase, and others which serve as labels and deep structure is the abstract representation of grammatical relations and syntactic organization (Chomsky, 1966: 37). How competency influences performance, Chomsky further clarifies that to perform the language, not only that the grammar rules govern the performance but also the way the words are put in a sentence and the meaningfulness of it. Until learners know how to use grammatical resources for sending meaningful messages in real life situations, they cannot be said to know a language. It is essential that they know what varieties of language are used in specific situations. In short, the performance of a language relies on the competency.

This theory also proves to be right when it comes to music. Competency is the ideal language user's knowledge of grammatical rules and performance is the actual realization of the knowledge in utterances. Competency lies within oneself and performance is the surface structure.

Chomsky clearly defines competency to performance and describes linguistic competency as a universal, inherited, modularized ability to acquire the mother tongue, distinguished this from performance (ability to understand and use the language). Chomsky's model of linguistic competency and performance has influenced similar models of numerical competency, spatial competency and other areas of domain-specific knowledge (Winterton et al, 2005). Furthermore Overton (in Winterton et al, 2005) modified the competency-performance model by

introducing moderating variables such as cognitive style, memory capacity, familiarity with the task situation, and other individual difference variables.

When Chomsky made it clear that it is the competency that determines performance and it is only when one possesses certain competencies that one can actually perform. The difference is that Chomsky's competency is the deep structure and cannot be seen and the performance or the surface structure or what can be seen is the demonstration or manifestation of the competencies one possesses. To be well performed, one needs to possess certain competencies that will dictate the successful performance. So job competencies are demonstrated in the job performance.

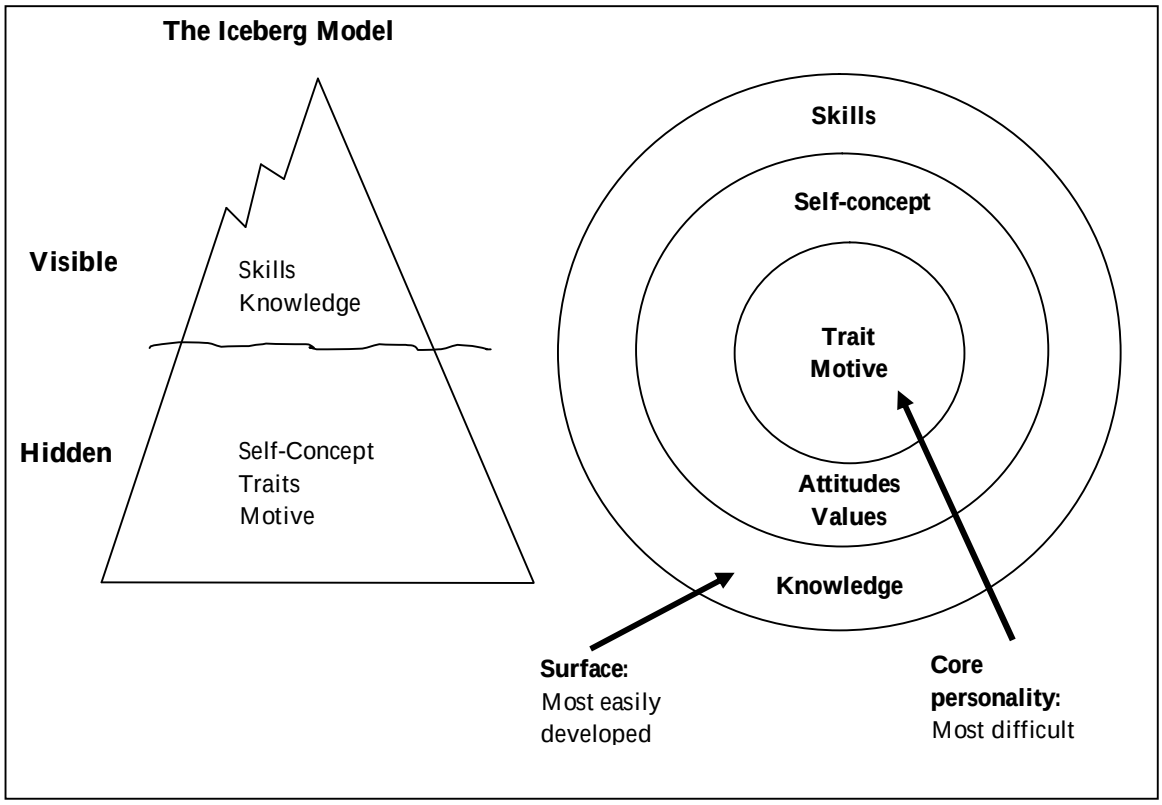
Similarly, Spencer and Spencer's theory of competencies emphasizes that the superior job performance was driven by underlying competencies (Spencer and Spencer, 1993). Compared to Chomsky who only talked about the competencies being the deep structure that dictate the performance or the surface structure, Spencer and Spencer further divided the competencies into layers and characteristics to explain why certain competencies are easily developed and why others are not.

There are two layers of competencies, the visible and the hidden competencies, that contribute to successful job performance. Spencer and Spencer (1993: 13) divide the competency into several types of characteristics as follows:

1. Motives which drive, direct, and select behaviour towards certain actions or goals and away from others;
2. Traits. A physical characteristics and consistent responses to situations or information;
3. Self Concept. A person's attitudes, values, or self-image;
4. Knowledge. Information that a person has in specific content areas;
5. Skills. The ability to perform a certain physical or mental task.

The above five characteristics were grouped into two layers of competency: central and surface competence. The central is hidden and is considered hard to develop and the surface is visible and most easily developed. The hidden are self concept, trait and motive while the visible is skill and knowledge. If the surface layer is relatively easy to improve through certain trainings, the hidden is more difficult to develop since they are intact, deeper into one's personality. However, the third characteristic, i.e. self concept, although belongs to hidden competency, can still be changed or developed with more time and difficulties. The visible layer that Spencer and Spencer describe as most easily developed, i.e. skills and knowledge, is the hidden capacity that dictates a person in performing a task. The hidden and visible layers of competencies are described in the following pictures:

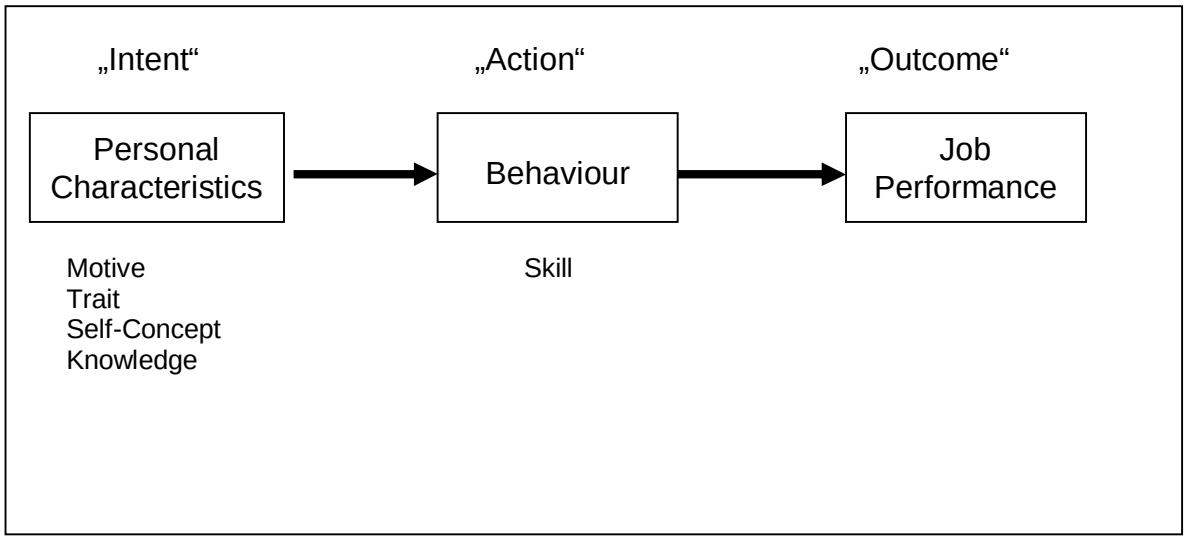
Figure 1: Spencer and Spencer's Central and Surface Competencies



Spencer and Spencer (1993: 9) defined competency "an underlying characteristic of an individual that is causality related to criterion-referenced effective and/or superior performance in a job or situation." This contributes to a different performance of a person in a certain task which is assigned to her/him. This provides a clearer idea of why skills and knowledge are considered trainable and can contribute to development of competencies of a person.

Going deeper into the competencies, Spencer and Spencer (1993) predict job-performance outcomes as described below:

Figure 2: Spencer and Spencer's Competency causal model



(Spencer and Spencer, 2006: 9)

Job performance defined by Spencer and Spencer is somehow similar to Chomsky's performance. There is a causal relationship between the three (Figure 2). The personal characteristics, such as motive, traits, self-concept and knowledge, drive behaviour to produce certain skills required to achieve a certain job performance, which is the outcome of the competencies, the "intent".

The intent is the competency that determines the action-- the skills -- and it results in job performance. To sum up, Spencer and Spencer conclude that competency dictates performance.

It is not arguable that education is responsible for shaping a person to be qualified for the work after completing his/her education, from the elementary, secondary and to --finally and the most important phase in-- higher education. Relating the concept of core competence in economic and managerial concept to that of higher

education institutions, Steward (as quoted in Holmes and Hooper, 2000) states that "core competence of higher education institutions is to empower people, through learning how to acquire information, turn it into knowledge (useful, assessed, applied, ordered structured information) and apply that knowledge to solve problems skills".

Today's challenge of graduate employment is believed to be more difficult because the number of educated labour is increasing. The massification of higher education that produces graduates with various experiences and background is the reason of the increasing number of graduates seeking job in the labour market. An academic degree may help someone to get a job but with the growing demand of industry for graduates with competencies, only selected graduates capable of handling tasks beyond their academic skills can successfully find their preferred jobs.

2.1.2 Competencies perceived by higher education in Indonesia

> The primary role of higher education is increasingly to transform students by enhancing their knowledge, skills, attitudes and abilities while simultaneously empowering them as lifelong critical, reflective learners. (Harvey, 2000: 3)

There has been a great concern about university graduates lacking competencies in the labour market, as claimed by employers in Indonesia. More higher education graduates in the labour market have increased competitiveness among

the jobseekers. Harvey (2000) said that a degree was indicative of a level of knowledge and intellectual ability but with the rapid change of the world and the vast changing in the organization or industry, a degree alone is not enough.

Higher education graduates cannot relate the knowledge they have to the workplace situation or in other words, they cannot put their knowledge and skills into practice. Technical skills are important but will not give graduates wider occupational range. Bennett et al (1999: 72) reported that employers stated that "the common denominator of highly qualified manpower will… be the ability think, learn and adapt"

In Indonesian education system, the term *kompetensi* (competency) is used in all levels of higher education system, from the primary to the higher education levels. The term, as it is widely understood, refers to the skill(s) that the students will achieve when they complete a course. The objective of the course is, therefore, designed to achieve such skills.

In elementary or high school curriculum, each course is designed to achieve standard competencies and basic competencies, the former is also known as general competencies and the latter specific competencies. Before the current new curriculum design was introduced, the terms were known as general objectives and specific objectives. For example, in language learning, the skills to be achieved cover listening, speaking, reading and writing. General objectives describe in

which areas of skills the course is designed and the specific objectives describe certain areas in each skill to be achieved.

As for the Indonesian setting, it is proven true that higher education is challenged to produce qualified graduates that will fit either in national or international labour markets and higher education institutions are responsible for producing quality graduates.

The Ministry of National Education released the Decree of the Minister of National Education Number 232/U/2000, about Guidelines on Curriculum Design in Higher Education and Student Evaluation. This decree consists of the guidelines that higher education institutions should follow concerning curriculum design and evaluation.

Chapter 2, article 2 of the decree describes what a *Sarjana* program is and it is aimed at preparing graduates with the following qualifications:

(a) To possess the basic science and skills in certain expertise so he/she is able to find, understand, explain and solve problems in the area of his/her expertise;

(b) To be able to apply his/her scientific knowledge and skills in their productive activities and services to the community with attitude and behaviour which is agreeable to the norms of the society;

(c) To be able to show a good attitude and behaviour in his/her workplace and among the community;

(d) To be able to keep up with the advancement of science, technology, and/or arts in the area of his/her expertise.

Aside from the basic knowledge and skills that a graduate should possess, in the Decree of the Minister of National Education No. 045/U/2002, about Core Curriculum of Higher Education, it is stated that a graduate should also possess three competencies, i.e., core competency, supporting competencies, and other special competencies that are related to the core competency. Curriculum of higher education is designed to provide students with certain competencies that are related to their fields of study during the study, which take approximately 4 years, and afterwards they are expected to be able to practice their competencies in their designated workplaces. What competencies are provided by the universities? The minister of national education decree No. 045/U/2002, about Core Curriculum in Higher Education dictates the design of the core curriculum of a study program, in the level of Diploma Program (Non degree program), *Sarjana*, graduate and post-graduate programs. Core curriculum of a study program should help students achieve certain competencies during their study period and upon completion of studies, they must be able to demonstrate those competencies.

In the decree, competency itself is defined as "a set of intelligent and responsible acts possessed by a person as a requirement of the society to be deemed that he/she is capable when performing a certain kind of task."

The decree also dictates the following elements of competencies in article 2:

"(1) Competencies that students will gain in each study program cover:

(a) core competency;

(b) supporting competency; and

(c) other competencies that are related to the core competency.

Concerning the three competencies, the decree also states that the curriculum of a program should be designed in order that the graduates possess the five elements of competencies as follows (article 2):

(a) foundation of personalities;

(b) mastery of science and skills;

(c) ability to work;

(d) attitude and conduct at work according to the level of expertise based on the mastery of science and skills; and

(e) understanding of the norms in the community where he/she works."

To achieve the five elements of competencies above, in article 3 of the decree, the core curriculum of a study program serves as the basis of achievement of those competencies and that supporting competencies and other special competencies which are in accordance with the core competencies are to be designed by respective study programs. This guideline will hopefully increase competitiveness among higher education institutions.

The core curriculum, according to the decree, is a characteristic of a study program. In order to accomplish the goals, the design of the core curriculum may be an agreement between the academe, professional communities, and employers.

In implementing the decree at the institutional level, however, higher education institutions tend to focus on the core competence of a study program. Examples from many institutions across the country, that are available online, show that most of them focus only to the subject-related competencies or field specific competencies. Only a number of institutions describe a comprehensive description of core competencies, supporting competencies and other competencies that are closely related to the core competencies and also other competencies which are sufficient to the workplaces.

One good example of the implementation of the decree comes from the Industrial Engineering study program of Andalas University in West Sumatera, Indonesia, which divides competencies as guided by the No. 045/U/2002 decree.

In their curriculum, it is stated that upon completion of study program, the graduates, academic years 2008-2013, will possess 5 core competencies, 4 supporting competencies and 3 other competencies as follows[3]:

"Graduates of Industrial Engineering study program will possess the following core competencies:

[3] http://industri.unand.ac.id/index.php/kurikulum/kompetensi

1. The ability to identify, formulate, and solve problems concerning planning and fixing integral system, that comprises human, material, information, tools and energy in a creative way by using analytical, computational and/or experimental main tools;
2. The ability to implement the results of problem solving and possess a wide horizon so he/she is able to comprehend the impact on social and environment context both locally and globally;
3. The ability to adapt to new analytical tools and techniques that are needed in practicing his/her profession in industrial engineering;
4. The ability to communicate and work in a team effectively; and
5. The ability to understand and be responsive to professional ethics and responsibilities.

The supporting competencies of the graduates are as follows:

1. The ability to use IT in in conducting, identifying, formulating, and solving problems concerning planning and fixing integral system, that comprises human, material, information, tools and energy in a creative way by using analytical, computational and/or experimental main tools;
2. The ability to apply entrepreneurship and intrapreneurship in building and developing industry;
3. The ability to actively use technology-based tools to manage small and medium industries;

4. The ability to build tools as IT-based problem solving.

Other competencies are the following:

1. The ability to use tools as problem solving methods in mining industry;
2. The ability to use tools as problem solving methods in Portland cement industry;
3. The ability to use tools as problem solving methods in palm oil industry."

The curriculum of the study program is therefore designed to assist students achieve the above mentioned competencies.

The curriculum accommodates not only field specific competencies, also known as technical skills or hard skills but also other competencies which are not field-specific, also known as 'employability skills' or 'soft skills.' It is hoped that graduates of the above mentioned study program possess both field-related skills and 'soft skills.'

2.1.3 Soft skills

For the past few years, higher education in Indonesia has discussed soft skills intensively in many seminars and workshops in institutional level as well as in national level. Soft skills are claimed to be of particular importance in the working environment and they are keys to success. It will be ideal if a graduate possesses

not only technical skills (hard skills) but also soft skills to make him or her more 'marketable'. By equipping graduates with the soft skills, higher education institutions will hopefully not be 'blamed' or be held responsible for producing graduates without competencies or lack of working skills.

Hard skills or technical skills are defined as skills that are closely related to the field of study or an area of expertise and are not transferable (Bowles, --). For example, the ability of book keeping will be the hard skill of a graduate of management study program but not necessarily for civil engineering study program. 'Soft skills' as opposed to 'hard skills' enhance the 'hard skills' and are therefore transferable. For example, the ability to communicate effectively or the ability to negotiate is necessary for work regardless the background of study program. Both hard skills and soft skills are part of competency.

It is not the overall competencies that the graduates are lacking but only the generic competencies, something that they need aside from the competency in their own field of study: the soft skills. Soft skills and the opposite of it, the hard skills, are like two sides of a coin, in which one compliments the other. The hard skills, which are field specific, are developed through the courses offered in the curriculum while the soft skills are job-related skills, which are not necessary stated in the curriculum but is embedded to it, developed in the process of study. In their research, Hodges and Burchell (2003: 13) found that "employers want 'well rounded' graduates with a broad range of competencies. They place a great

emphasis on graduates' soft skills and their ability to deal emphatically and effectively with customer and client"

Bernthal et al (in Sailah, 2007) argues that soft skills refer to be a personal and interpersonal behaviour that will maximize job performance but not that of technical skills (hard skills). Goleman (in Crosbie, 2005) defines soft skills as emotional intelligence and that he suggests that the possession and use of soft skills contributes more to an individual's ultimate success or failure than technical skills or intelligence. This adds to further explanation of soft skills, as Sailah (2007) states that hard skills are field specific and soft skills are competencies that should be possessed by a graduate-- no matter in what professional activities he is engaged in-- such as, integrity, responsibilities, working in a team, problem solving ability, etc.

Clagett (in Bowles, --) also mentioned the skills that are mostly mentioned by employers are "knowing how to learn; competence in reading, writing, and computation; effective reading and oral communication skills; adaptability through creative thinking and problem solving; personal management with strong self-esteem and initiative; interpersonal skills; the ability to work in teams or groups; leadership effectiveness; and technology skills.

Several reports by the Harvard University, Carnegie Foundation, and the Stanford Research Institute have shown that technical skills and knowledge account that 85% of job success depends on the individual's people skills (Crosbie, 2005). Hager

et al (2000) found that "many instances were identified where workers had been able to improve and refine their soft skills with experience and practice." Further it is emphasized soft skills can also be enhanced if management employs a range of strategies to support it.

In the previous sub chapter, it is clear that the curriculum of the Industrial Engineering study program of Andalas University contains not only achievement of hard skills but also soft skills. In each competency, the graduates will possess both hard and soft skills. In the core competency, for instance, the ability to communicate and work in a team effectively and the ability to understand and be responsive to professional ethics and responsibilities belong to soft skills. The curriculum responds to the challenge of the labour market and prepares the students to achieve the soft skills needed in the workplace. Hopefully, by implementing the curriculum, the graduates are more markettable and able to easily adjust to a dynamically changing labour market.

Although widely used in Indonesia, it is interesting to note that the term 'soft skill' is maintained in its original language, i.e. English, no translation has been made so far. In every book or article that discusses soft skills, the original English term is still used, no efforts have been put to dig an Indonesian word for the term 'soft skills'.

In the neighbouring country, Malaysia, where "soft skill" gains interest as it is in Indonesia, the term is translated into Malay language as "*kemahiran insaniah*",

literally means personal competency, something that a person develops as his or her characteristics.

Similar to Indonesia, the Malaysian government in response to the challenge of the labour market set certain soft skills that a graduate should possess when they complete their trainings at higher education level. The soft skills are divided into (1) KIM (*Kemahiran Insaniah Mesti*--must have) which includes, among others, communication skills, critical thinking and problem solving, working in a team, continuous learning, entrepreneurship, professional ethics and moral, and leadership, and (2) KIT (*Kemahiran Insaniah Tambahan*--good to have). While the former is a compulsory, the latter is optional. Each institution may choose the KITs according to its needs.

For example, in Universiti Kebangsaan Malaysia, besides applying series soft skills of KIM, it also adds *kesadaran alam sekitar* (environment awareness) as the KIT. Every KIMs (and KIT) should be implemented in the curriculum and is clearly seen in every course. In addition to the curriculum, the KIMs should also be visible in the co-curricular activities to assure that all graduates possess all the abilities of selected soft skills.

Directorate General of Higher Education in Indonesia in the efforts to enhance the quality of higher education graduates launched an institutional grant program so that higher education institutions could promote the implementation of soft skills in the curriculum more effectively.

2.2. Tracer Study: Graduate Employment and Work

2.2.1 Relationship between higher education, the society, and the market

The relationship of higher education to society has changed in the 20th century and it has changed rapidly for the past three decades. Higher education institutions admit more students and therefore produce more graduates compared to a few decades ago. Having been used to govern themselves, higher education institutions have to accommodate 'outside' influences that force them to change their traditional orientations (Tynjälä et al, 2003). The existence of higher education institutions should be useful to society. Whether we like it or not, the traditional university framework slowly changes into more pragmatic framework and the society has directly and indirectly put pressure on it.

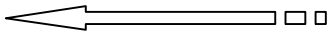
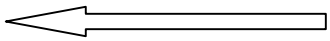
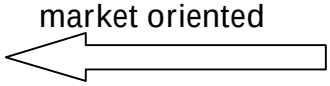
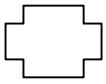
History proves that external controls to higher education, is actually, not new. Figure 3 below shows that from the medieval times, the universities had had some restrictions from the church and civil authorities, but still academics dominated. In 19th century, higher education in Europe and in Asia had state control over them. The 20th century has caused a major shift in the environment of higher education institutions in different parts of the world. External controls have gone deeper into higher education system. Not only the state but also the market (the society) has influenced higher education in Europe and Asian countries. They are regulated by the state and influenced by the society. The fact that society has put investment in higher education, or the shares that people are expected to shoulder substantial

parts of the costs of the pre-career education, should give them high remuneration for their subsequent work (Teichler, 2002).

Higher education must respond to the outside influence. The market has 'control' over higher education because it is the place where the graduates seek employment after completion of study.

> "While universities still maintain their role as the "conscience of society", more pragmatic roles have been evolving over time: universities no longer pursue knowledge for its own sake, rather they provide qualified manpower and produce knowledge." (Brodjonegoro, 2002: 3)

Figure 3: The changing relationship between higher education and external control

Relationship between higher education and external control prior to the 1990s			
Medieval times	Universitas magistrorum et scholarium	Academics-dominated 	But with some restrictions by Church and civil authorities
19th. C	European continent Asian Countries	State centric 	State
20th.C.	Most of countries in Asia and Europe	State-regulated and market oriented 	State  Market
	Higher Education		**External Control**

Adapted from Huang, Futao, 2008

Heineman et al (2007) describes the relationship between higher education and the society in the market driven countries as being sensitive to the needs of the society and that university's curricula should address contemporary social problems because if the curricula are sanitized of relevant social concerns then society will consider that university as irrelevant and irresponsible. The statement, as also implied by many authors, emphasizes the relevance of that universities should show responsibility to the society and its problems.

2.2.2 Graduate employment

Higher education was limited in size and scope only until the 1960s. The belief spread in many countries that decade that growing investment in higher education would contribute significantly to economic wealth (Teichler, 1998: 7). With the increasing demand of people wanting to pursue credentials for better or more successful careers in the future, more high school leavers continue their education to tertiary education, hoping for a better future career.

This was made possible because higher education institutions have grown in number to cater this situation. Higher education became more accessible and as a consequence the number of graduates has become superfluous. Their Higher education credentials are no longer exclusive or belong to 'the chosen few' as Teichler (2002) claims.

Surveys in various European countries shows that completion of higher education has become entry qualification to almost all high-level occupations, not only in areas such as medicine or law, but also in managerial and new professional careers (Brennan et al, 1996).

Massification of higher education happens not only in Europe but also in developing countries in Asia which began in the 1980s. And at the end of 20th century, every country in the world faces mass higher education:

> "Most countries have large academic systems that educate a growing number of young people and which require substantial resources. Even in China and India which enrolling under 5% of the age group in the post secondary education, enroll up to 5 million students. Worldwide there are more than 55 million students in post secondary education." (Altbach, 1999: 107)

In Indonesia, the condition is more or less the same. Prerequisites of certain careers, which previously did not require possession of a degree, have changed because of the superfluous number of graduates of higher education institutions. Commenting on this situation, Teichler (1999) states that this has made educated people disappointed because of the loss of the exclusiveness of higher education degree by the expansion of higher education.

Kehm (1995: 144) also noted that:

> Universities today are facing a dilemma between ideals and reality: they are expected to produce highly skilled graduates, in a relatively short time and with less money, whose characters are less important than their skills, and they are expected to turn out graduates with new key qualifications concerning more social competences.

In response to this phenomenon, Indonesian higher education system introduced the five pillars of Indonesian higher education management, i.e. quality, autonomy, accountability, accreditation, and evaluation that would help institutions in carrying their tasks to provide qualified manpower and produce knowledge (Brodjonegoro, 2002: 3). The new paradigm states clearly that graduate employment is also part of the responsibility of higher education institutions.

When the graduates search for employment, it is the market which examines whether they really meet the requirement or whether their qualifications meet their demands. Employers are selective because they need to be sure that employees they are hiring will fit into the position and can contribute significantly to the development of the organization. Harvey (2003: 1) emphasizes "What employers are looking for are flexible graduates who can add value when necessary but can also help transform the organization in the face of change." In addition to that, Dhanani (2004) states that expectations of employers vary and cannot easily be determined because of numerous factors that may influence the need for recruitment. The labour market is dynamic and its requirements change rapidly. Graduates who are ready for this challenging phase of job search will hopefully have a smooth transition and those who are not will settle for less-qualified jobs.

In Indonesia, the mass higher education programs have produced superfluous number of graduates with similar capacities since thousands of higher education

institutions open similar study programs. This brought problem to the employment market, as Nunan (1999) claims, is because they find it difficult to distinguish between the products (the graduates).

The market, which has always been dynamic, dictates certain requirements for higher education graduates whom they want to employ and the requirements have always changed, according to the needs. Therefore institutions are demanded to observe the market closely in order to easily tap information of the changing demands so that the gap between competencies acquired can be addressed accordingly.

The total number of higher education graduates (from the non-degree programs and *Sarjana* programs) amounts to 6,649,065, or around 6% of the 108,131,058, total workforce of different education background[4]. The number of graduate workforces is still divided into 49% non-degree program, and 51% degree programs.

Table 1: Number of graduates according to degree program (Non-degree and Sarjana degree) in Indonesia

Program	2003/2004		2005/2006		2006/2007	
	Total	%	Total	%	Total	%
Non-degree	205,134	30%	101,373	31%	38,079	20.5%
Sarjana	478,242	70%	222,529	69%	147,189	79.5%
Total	683,376	100%	323,902	100%	185,268	100%

(http://www.depdiknas.go.id/)

[4] http://www.nakertrans.go.id/pusdatin.html,3,42,pnaker

Table 1 shows the number of HE graduates in Indonesia in 2003/2004, 2005/2006 and 2006/2007. Although there is a significant decrease, by around 47% in 2005 and another 50% in 2006, due to prolonged economic crisis that started in 1998, it is necessary to note that the participation of higher education is still increasing and the total participation of higher education is still around 5.5% of the age cohort (above 18 years of age)[5]. The number of applicants going into higher education institutions, both state and private, were more than 600,000 in 2005, and more than 900,000 in 2008, which shows that the demand is still increasing. Altbach (1999) commenting on this issue states that "students are increasingly looking at postsecondary education as a means to better employment opportunities, enhanced income and social mobility." As a consequence, students are less interested in the intrinsic values of higher education, all they wanted is the credentials that will help them get a job.

Table 2 shows real issues of higher education graduates' capabilities and the demand of the industry. The table also shows the vast difference of what is equipped by the higher education institutions and what are demanded by the labour market. What is provided by higher education is considered "passive" knowledge, individual learning that is far remote from the actual working condition while industries require that its employees possess "active" knowledge that is applicable to working condition. In summary, the gap between the

[5] http://demography.bps.go.id/

capacities of the graduates and what are required by the labour market are the work-related competencies.

Table 2: The gap between capacities of higher education and the demand of industry

Higher Education Graduates	Demand of Industry
Only theoretical comprehension	Having the capacity of problem solving based on scientific concept
Possessing individual capacity	Possessing teamwork capacity
Learning motivation for the purpose of passing examination	Learning how to learn effectively
Grade-oriented (limited target)	Continuous improvement-oriented, with unlimited target. The completed target will be improved continuously
Learning oriented: on separate individual subject matters	Interdisciplinary integrated knowledge for problem solving in many complex industrial problems
Passive learning process; knowledge transfer system	Working is an interaction process with other people and an active digest of information
Use of technology (eg. computers) is separate from learning process	Use of technology is an integral part of the process of problem solving in industry.

(Gaspersz, 2002)

Knowledge capacity, for example. Theoretical comprehension of a specific field is not enough. Graduates must be able to implement the theory that they obtain to many situations they encounter at work. Therefore, study methodology is now directed toward problem-based learning, especially in medical field or in many other professional study programs. Another example that Gaszpers (2002) raised is the learning motivation. The graduates' learning motivation was solely for the

purpose of passing the examination, grade-oriented, while the demand from the industry is not only high GPA but also the ability to learn effectively in many kinds of work environment. In other words, continuous learning is a good learning motivation that the industry inquires of its employees.

Nunan (1999) also observes that in recruiting employees, employers may have some information about the technical competencies or field-specific competencies of a graduate but not about his or her employment-related skills. Therefore, "employers are more likely to terminate the employment of an employee or have serious difficulties with an employee because of inadequacies in employment-related skills than because of an inadequate knowledge base" (Nunan, 1999: 1-2).

Teichler (2004) lists issues most frequently addressed concerning the relationship between higher education and work, as follows, (1) Transferring knowledge to work assignments and understanding what the work tasks require to be taken up successfully (e.g. problem solving abilities), (2) Typical working styles (e.g. working under pressure, working without clearly assignments), (3) Certain values and affective competencies are relevant for work (“loyalty”, “achievement orientation”, etc), (4) Social skills (“leadership”, “team work”, etc. abilities), (5) The context in which they act and have to choose appropriate ways of action (“adaptation”, “reflection”, etc).

Concerning economic sectors, in Indonesia as it is in other agricultural countries, the highest percentage of manpower are in agricultural sectors, such as farming,

forestry, hunting, and fishery (41%), followed by trade, restaurant and hotels (20.5%), manufacturing (12.4%), and social services (12%), however the picture of higher education graduates does not comply with the above percentage.

Higher education graduates go to many kinds of economic sectors that industry offers. Table 3 below shows the economic sectors that employ the highest percentage of the graduate workforce (S1 and D3 graduates). They go to many kinds of economic sectors but the highest percentage goes into finance, insurance, real estate and business services, and social services against the total workforce from all education background of the same criteria. However, it is interesting to find out that in Indonesia, which is blessed with very fertile lands and also abundant resources in the oceans surrounding the archipelago, the total graduate workforce working in the agricultural, forestry, hunting and fishery sectors only reaches 0.15%. Higher education graduates from a prestigious agriculture institute in Indonesia even prefer working in financial sectors to those related to their fields of study.

The table, however, does not show whether this number shows the scope of their work, whether within the capacity as higher education graduates or are irrelevant to their qualification.

Table 3: Types of industry employing HE graduates (degree and non-degree) by 2006

Types of Industry	Types of Diploma				Total workforce (all education background)
	Non-degree		Sarjana degree		
	Total	%	Total	%	
Finance, insurance, real estate and business services	126.019	9.0%	398.672	28%	1.399.490
Social services	1.505.511	12.5%	2.211.682	18%	12.019.984
Electric, gas and water	12.523	7.1%	19.235	11%	174.884
Mining and quarrying	16.758	1.7%	27.128	2.7%	994.614
Transportation, storage, and communication	131.296	2.2%	150.395	2.5%	5.958.811
Construction	66.604	1.3%	128.541	2.4%	5.252.581
Manufacturing	197.351	1.6%	253.805	2.0%	12.368.729
Trade, restaurants and hotels	441.673	2.1%	347.074	1.7%	20.554.650
Agriculture, forestry, hunting, and fishery	99.858	0.24%	61.273	0.15%	41.206.474
Total	**2.597.593**	**2.6%**	**3.597.805**	**3.6%**	**99.930.217**

2.2.3 Tracer study: mapping the labour market signal

There are three major themes concerning the relationship between higher education and work as follows:

Table 4: Relationship between higher education and work

Dimension of higher education relevant to work	Linkages between higher education and work	Dimension of work relevant to higher education
➢ Quantitative and structural developments ➢ Curricula, training and socialization ➢ Educational provisions and students' options	➢ Labour market, intermediary agencies and transition ➢ Regulatory system ➢ Life-long education and work	➢ Employment ➢ Career ➢ Work tasks and requirements ➢ Profession ➢ Quality of work and employment

(Brennan et al, 1996: 2)

Tracer studies concerns with the third theme, which is the dimension of work which is relevant to higher education where it covers employment, career, work tasks and requirements, profession, and quality of work and employment.

Higher education institutions must find out how challenging the world of work is after graduation. Employment, career, work tasks and requirements, profession, and quality of work and employment of the graduates have become the responsibility of the higher education institutions because activities in higher education contribute significantly to graduates' successful activities after completing their study period.

Teichler (1998) points out several reasons why information on labour market has become more important:

1. The transition process from HE to the world of work has become more complex
2. Reinforcing or challenging the weight of educational achievement
3. Mismatch between certain fields of study and the demand for graduates of certain profiles
4. The issue of "over-education" or "under-employment"
5. The unstable employment condition of the industrialized societies.

When the above issues are correctly addressed in the sense that higher education prepares its students to get to know more about employment, then the rapid changing of the labour market might not be difficult to catch up.

If a tracer study is a tool to tap labour market signals then when will be the right time to start since there are claims that tracer study should be carried out at least 2 years after graduation or perhaps four years after graduation or perhaps after the graduation. No matter what the choice will be, each should be with a clear objective, i.e. what information would be necessary for each study.

The ordinary and usual way of tracing them is by means of questionnaire, distributed to the graduates, via mail (post) or e-mail. Questionnaire surveys should include all circumstances that graduates have experienced and had experienced in the span of time from the beginning of the job(s) search up to the time when the survey is conducted. Concerning questions, according to Brennan, et al (1996), the questionnaire at least includes, (1) employment status (whether

one is employed or not; full time or part-time employment, self-employed, etc.), (2) employment sector (whether one is employed in the public or private sector, etc.), (3) job security (provisional versus regular employment, etc.), and (4) position (salary, status or position in the company, etc.).

Aside from gathering information about job condition, a tracer study can also be used to gather information about the benefits of the curricula and all activities related to it during study period towards employment. In relation to curricula which are related to work, Brennan et al (1996) emphasizes that curricula may also have occupational preparation or they are not related to it and where occupational preparation is the goal, they might differ in the extent to which such preparation is considered to be completed.

The typical objectives of a tracer study are therefore among others:

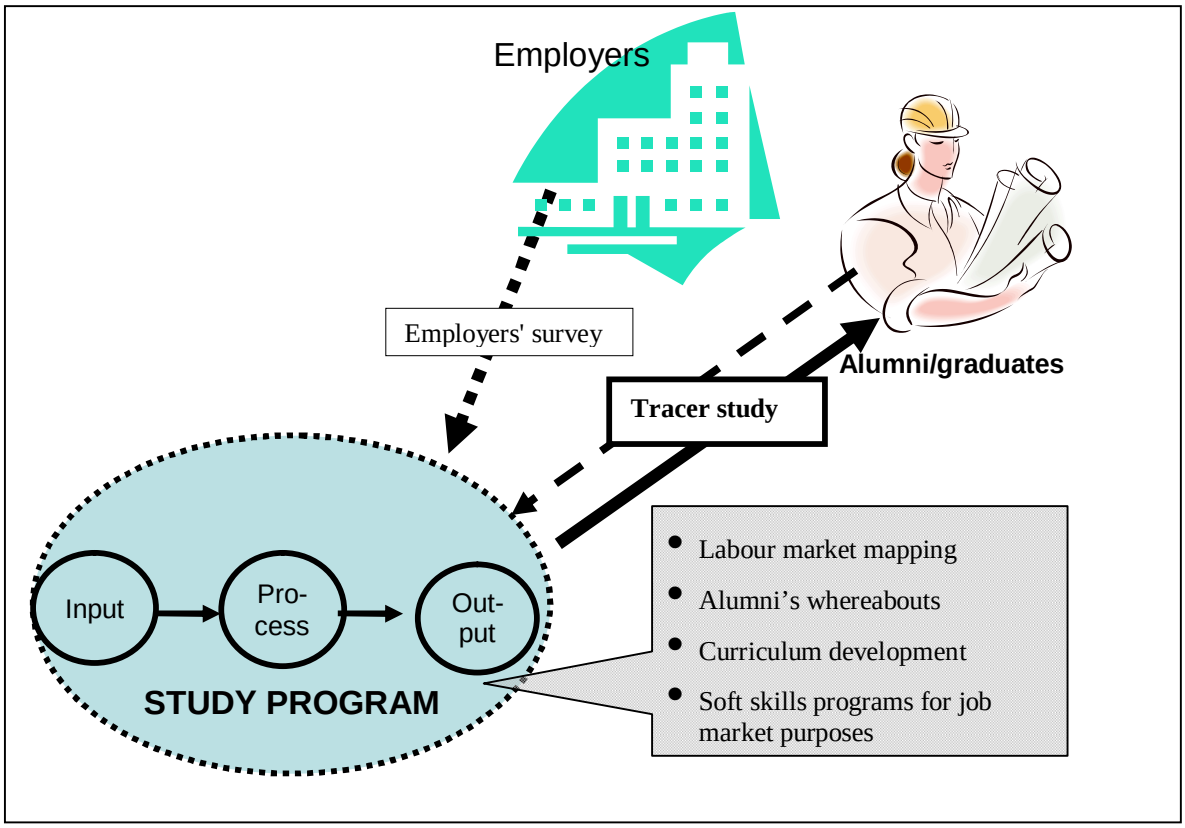
1. to get valuable information for the development of the university
2. to evaluate the relevance of higher education
3. to contribute to the accreditation process
4. to inform students, parents, lectures and administrators

(Schomburg, 2009)

Tracer studies will not give a complete or an overall picture of what labour market is all about but it will transfer the signals of its dynamic activities, through the experience of the graduates so that higher education institutions can make

necessary preparation to make the graduates more marketable as they complete their training period (Figure 4).

Figure 4: Relationship between HE and work



2.2.4 Tracer studies in Indonesia

In Indonesia, tracer studies attracted people's attention on the first accreditation of study program in 1996. It was actually an important part of the assessment and at UKI as well as in many other higher education institutions because this issue had caused a lot of debates on the necessity of carrying out such a study. Prior to the accreditation process, no attention had been given to the activities of graduates-- the former students-- because the responsibility of higher education institutions is

within the study period, not afterwards. Once a student completed his/her studies, the obligation of an institution was done.

In tracing the graduates, study programs started contacting their graduates and telephone contacts were the most possible way because of time constraints. The results of the studies were merely to answer five questions for accreditation purpose and not for public use. The data availability is not guaranteed, either.

Tracer studies have become part of study program or institutions' regular program. Aside for study program or institution's accreditation, the results of tracer studies serve many other purposes, such as constructing strategic plans, proposals for project grants, and many others. For those reasons, tracer studies have been carried out in a more methodological way.

Before the year 2000 only one institution was known to conduct tracer study with a clear objective of following up the track of the graduates: ITS (Technological Institute of 10th of November in Surabaya) which conducted tracer study with the help of INCHER--International Center for Higher Education Research--University of Kassel, Germany. The results were not widely discussed since no attention was given to it at that time.

Several higher education institutions were known to conduct tracer studies at the university or study program levels. They are University of Gadjah Mada (UGM--*Universitas Gadjah Mada*) in Yogyakarta, Bogor Agricultural University (IPB--*Institut Pertanian Bogor*), Technological Institute of 10th November Surabaya (ITS--

Institut Teknologi 10 November Surabaya) and Open University (UT--*Universitas Terbuka*). All, except IPB, conducted tracer studies at university level. At IPB, tracer studies were carried out at the Faculty of Food Science and Technology (FST).

Conducted in 2003, the UGM tracer study was aimed at seeking the relevance between the competency of the graduate and the requirements of the labour market. Indicators of quality education lie in both external and internal factors related to education. External factors were the society and employers (industry) and internal factors were the students, teachers and management of higher education institution.

The aim of the study was to identify the quality of UGM graduates, and the objectives are (1) to identify the profile of competence and skills of the graduates; (2) to see the relevance of curriculum to the labour market, especially the academic year 1994/1995[6] curriculum, and (3) to map the labour market signal and the graduate competencies needed by the employers. The target respondents were graduates who were exposed to the 1994/1995 curriculum and at the time of the survey worked in both private and public sectors and from various economic sectors. Aside from graduate survey, employer's survey was also conducted. In selecting the respondents, the survey employed a clustered randomized sample based upon the geographical division of the country, i.e., the western, central and

[6] Indonesian academic year starts in August and ends in July, so 1994/1995 refers to one academic year that started in August 1994 and ended in July 1995.

eastern clusters, each of which consisted of 25%, 50%, 25%. The questionnaire included questions concerning profile of work, orientation and job satisfaction, the relevance of studies to work, and some personal background. In-depth interviews with the employers of UGM graduates were conducted in the attempt to get a clear picture of the profile of the UGM-graduated employees.

The graduates worked in public sector (28%), private (58%), self-employed (6%), and other institutions (8%). They stated that they got information of job vacancies from the mass media and alumni organization. At the time of the survey, most of the graduates held a position as staff and only 4.5% in management position.

Concerning the relevance of the fields of study to work, respondents stated that the skills related to field of study helped them in their tasks. Soft skills became more important than field-related skills by the time they worked. The significant soft skills which were relevant for work were interpersonal skills, team-work, high self confidence, problem solving, initiative, and negotiation skills. Most of the respondents were satisfied with their job and they expected to keep their work for better career track.

The employer's survey also revealed the shortcomings of the graduates, in communication skills, entrepreneur skills, creativity, being innovative, and leadership skills. However, there are several skills that UGM-graduated employees possessed that worth mentioning, such as, diligent, and skillful. Commitment to work, loyalty and integrity were added values of UGM graduates.

In general, the labour market signaled what was expected of higher education graduates. Aside from field specific skills, it also demanded that graduates have additional values such as soft skills, managerial skills, IT skills and readiness to work.

Unlike UGM, The Faculty of Food Science and Technology (FST of IPB) carried out their tracer study in the framework of the QUE (Quality Undergraduate Education) Project[7], in order to determine (or evaluate) the fitness of the graduates in the labour market and the complex system between higher education and labour market. The study employed data collection through telephone calls and focus group discussions with food industries and selected and representative alumni. The study was aimed at mapping the competencies of FST graduates demanded by the market, and based upon that, the faculty designed an outcome-based curriculum which would prepare the students for the market.

There were 562 respondents from the year cohort of 1998, 2000, 2002, 2004, and 2005 and the response rate was 56%. The study also gathered information about the profile of the graduates, the industrial sectors where they started working or currently work, whether they worked in private or public sectors. It also gathered information about the waiting time before their first job. The study also found that the graduates filled certain positions, such as, food processor, ingredient manufacturer/supplier, academia, self employed/ consultant, etc, and had specific

[7] A grant given by Directorate General of Higher Education in Indonesia to enhance the competitiveness of undergraduate education system of Indonesia

responsibilities. The survey concluded that a FST graduate was a combination of a generalist and specialist in food technology.

The aim of ITS' tracer studies was twofold: (1) to get a profile of ITS graduates at the labour market and to see the obstacles in the workplaces and (2) curriculum development. There were 1000 respondents (around 8% of the total population) from 2003-2008 year cohorts, from 5 faculties. The methods of data gathering were through the university website, a career expo, the alumni association, and other alumni events.

The survey found that the economic sectors that the graduates worked were, among others, telecommunication, electronic manufactures, machine manufactures, and oil and gas industries, as engineers, staff, supervisors, or consultants/researchers/lecturers. “Fitness to work” according to education background was 76.6%.

Considering the gap between supply and demand of higher education graduates in the labour market, University of Indonesia (UI) started its tracer study in 2008 by employing 936 (around 5%) respondents of undergraduate program (*Sarjana* program) from 12 faculties, in 7 year cohorts. Distribution of respondents was 9% (in 2000), 10% (in 2001), 13% (in 2002), 14% (in 2003), 13% (in 2004), 18% (in 2005), and 23% (in 2006). The survey employed a questionnaire with 158 variables and the selection of respondents was based on cross-sectional sampling method. Response rate of the survey was 92%. The data was collected though multi-modal

approach (telephone, email, facsimile, or direct contact), and the respondents were asked to complete the questionnaires themselves or by interviews.

The studies found that most of the respondents worked in the private sector (50%); 23% respondents working for local and central government offices and in state-owned enterprises. 75% respondents felt that their works related to study program background. Interestingly, 50% respondents stated that they we did not want to take posts outside the capital city.

The survey also mapped competencies of the graduates and what competencies were required by the labour market. From the employer's survey, according to employers, UI graduates (1) had added values, such as discipline, responsible and capable in analytical thinking; (2) were low in adaptation, critical thinking, and real workplace adjustment; (2) lack in leadership, organization management, verbal communication, English, and team working.

Open University (UT) conducts tracer studies in both departmental and institutional levels. UT like other open universities admits every citizen who wishes to pursue their higher education from their localities and keep their work at the same time. The purpose of continuing their studies was mostly for promotion. Most of the students are teachers from all over the country. With those characteristics, UT students or graduates are not considered 'regular' students. However, as the demands of society grew, UT felt that it was time for them to conduct a tracer study to find out the whereabouts of their graduates.

Conducted in 2008, UT was concerned about the quality of its alumni and stakeholders' satisfaction after almost 24 years of existence and producing almost 400,000 graduates. The aim of the survey was, among others, to find out the profile of graduates, graduate satisfaction rate, and performance at work.

The respondents were those who did not work at the time of their study period and those who work and study at the same time. The survey was designed for graduates of the year cohorts 2002-2008. By random sampling, 4800 respondents (5%) were selected from the study programs and data was collected through questionnaire and interviews and analyzed in descriptive and qualitative analysis. The response rate was 29% with the faculty of education and teacher's training response rate amounting 25%; 60% of respondents were female.

Learning experiences in the learning centers in major cities in Indonesia, customers' satisfaction, competencies gained during studies and other benefits of studying at the UT were some of the questions in the questionnaire. In addition, employers' survey was also conducted to see the performance of UT graduates at the workplaces. Commenting on the graduates who worked and studied at the same time, employers stated that the performance achievement and cooperation at work increased significantly. However, competencies, management and behaviour of the respondents did not improve.

Despite the shortcomings of the methodology of data and information collection, tracer studies conducted UGM, IPB, UI, and UT were among the first to be

disseminated in seminars in Indonesia and abroad. Currently, UT and UI are conducting their second tracer studies, which are more comprehensive, utilizing mail and online questionnaire, involving more respondents with the assistance of INCHER, primarily for online surveys and survey methodology.

2.2.5 Limitations of tracer studies

Teichler and Lenecke (2005) acknowledge some shortcomings concerning surveys conducted on graduate employment and work, such as, (1) employment and work of graduates might change quickly, (b) some universities tend to adapt simply to presumed labour market demand, and (c) university graduates (and also employers) are not experts about the relationship between learning, knowledge and work.

From the experiences of researchers carrying out tracer studies, several obstacles in the field were also noted. As found by the UGM tracer study team, they noted that due to incomplete data of the graduates or employers, a 100% return rate of the graduates as well as employer could not be reached although random sampling method could guarantee 100%. The problem was that database of the graduates was not updated regularly. Other obstacles that surveyor found during the study in the field was that the contact persons were not well-prepared for dealing with difficulty they might encounter in the field or how to deal with non-responsive respondents.

Researchers at ITS also found that not all of the alumni were willing to become respondents of its tracer study. Response rate was also low, even though, as employed by UGM tracer study team, a random sampling method was employed. The other data that was not easy to trace was the salary or positions at work. For these cases, however, it is necessary to note that in Indonesia salary or bonuses are not public consumption, they are to be kept in secrecy and even for tracer study purpose, although the data of the study would be treated confidential. The other major obstacles that hindered institutions in conducting tracer studies were financial matter because carrying out tracer study is very costly, especially if the surveys use mailing distribution service.

The UT experience showed that in the case of an open university where the students are not considered regular, the difficulties they encountered were also tracing the graduates because during the study time, it was the students who initiated contact with the campus for their study purpose, not the other way around. Therefore when the study period was over, their relation for all practical purposes was terminated.

In spite of the several obstacles above, tracing the graduates was the most important thing. If finance was the problem, then an online survey can be employed to minimize the costly expenditure for survey. Data of graduates should be updated regularly, like that of the students. Unlike updating data of students, updating data of graduates is a little bit tricky since contact is officially finished

when they are graduated from the university. The only communication remains is when they need to legalize copies of their diploma, which is not regular or done once every several years or if the graduates do not need any legalized papers, there is no chance at all that they come back to the place where they earned their diplomas.

Chapter 3:

Higher Education System in Indonesia: History and Development

The development of higher education in Indonesia from the post-colonial era to the present day is not that long, around 65 years. During the 1980s, following the trends in many parts of the world, student enrolment in higher education expanded, as people pursuing higher education increased. This phenomenon was underlined by Altbach (2008) who commented that after 1960es, enrolment in higher education increased dramatically worldwide and much of the growth occurred in developing countries, like Indonesia.

Because of the many shortcomings that the government faced from the beginning of independence of the country, the government acknowledged the partnership of private sectors in the provision of education in the country. The number of private institutions mushroomed to cater to various purposes of people pursuing higher education degrees, which at that time, seemed to be the guarantee of a secure and better career in the future.

The history of Indonesian higher education itself dates back long before the Dutch colonial era. Before the Dutch came to West Indies (the name the country was recognized as the Dutch colony), education had already existed for the local people, but it was the Dutch higher education system which was considered to be

the origin and the basis of the current modern higher education system in Indonesia.

The development of Indonesian higher education can be divided into four stages: the pre-colonial era, the Dutch colonial period, the Japanese occupation, and the post–independence era. This division of eras follows the four stages of political eras of Indonesia (Buchori and Malik, 2004: 249). This chapter will discuss the establishment of higher education institutions in Indonesia from the pre-colonial era up to the present time--the post-independence--with the exception of Japanese occupation. The reason of excluding Japanese occupation was because the Japanese occupied Indonesia only 3.5 years and during that time there was no significant change in either primary and secondary education or higher education. The establishment of private higher education institutions and the development of Islamic schools of higher learning will also be discussed since the two play significant roles in the nation building and development of higher education in Indonesia.

3.1. Higher Education in Indonesia before Independence

The pre-colonial era was marked by local Islamic higher education in a most informal and less-structured education in which the people would first be exposed to the Koran reading and the teaching of Arabic language and later knowledge which was related to the Islamic belief, in a school known as *pesantren*. and were

taught by a *Kyai* or an *Ustad* (Koran teachers). According to Wahid (Buchori and Malik, 2004) "*Pesantren* was not structured like the modern school and they were varied from one school to another and were highly autonomous with respect to curriculum or institutional development." In *persantren*, after completing the advance level of learning, the students were expected to open *pesantrens* of their own and continue spreading the Koran teaching to the community.

Before the independence of the country, the Muhammadiyah schools were established in 1912 in Yogyakarta as a real contribution to the society in the levels of primary and secondary schools. The schools were founded by Achmad Dahlan, also the founder of Muhammadiyah Muslim organization. The establishment of Islamic higher education, however, came to realization only slightly before the independence.

Satiman Wirjosandjoyo, another Islamic scholar, in his Guidelines for the Public (Number 15/IV, 1938). expressed his concern of the situation in the colonial era and proposed an establishment of higher learning institutes on Islamic belief so that the influence of Islam would not be decreasing. Mohammad Hatta, one of the founding fathers of Indonesia, also showed his concern of the necessity of Islam as the foundation of nation building due to the fact that 90% of the population was Islam. The existence of *pesantrens* did create people with strong Islamic belief, but not perceptive of worldly issues. Therefore, they did not answer the problematic issues that the Islamic people faced.

Together with Mohammad Natsir, a renowned statesman, Mohammad Hatta then founded Islamic Higher Learning Foundation (*Badan Pengurus Sekolah Tinggi Islam*) which established Islamic School of Higher Learning (STI--*Sekolah Tinggi Islam*)--later Indonesian Islamic University (UII--*Universitas Islam Indonesia*), with four faculties, namely, Islamic education, law, economics, and pedagogy on 8 July 1946.[8] For around 350 years, under the Dutch colonial government, Indonesia was first introduced to the European higher education system following that of the colonial government as was the case of other Asian countries, such as Malaysian, the Philippines, India, Pakistan, and many other countries. They adopted European academic models and traditions, and in many cases, they are imposed by colonial rules (Altbach, 2004).

Indonesia, being a Dutch colony, was exposed to a European model of education. During the colonization era, only elementary and secondary schools existed but only a select number of people, the aristocrats most likely-- could enjoy the privilege of being educated in those schools. When high school leavers wished to pursue higher education, they had to go to the Netherlands. Therefore only select prominent scholars pursued their higher degrees in mostly law or medicine. The colonial government controlled the participation of higher learning for the indigenous people, fearing rebellion.

[8] http://www.ditpertais.net/ttgiain. asp.

The decision of the colonial government to eventually establish a higher education system in the colony was inspired by the liberal concept in Europe with its motto: *liberty*, *egality*, *and fraternity* based on humanism. So, as an act of gratitude to the colony that had brought prosper and wealth, the colonial government provided opportunity for the *bumiputera* (literally means sons of the country--terms that refers to the native Indonesians before the independence, a status lower than that of the Dutch) to participate in higher education[9].

In the early of 20th century the establishment of STOVIA (*School Tot Opleidung van Inlandsche Artsen*), a medical school to train Indians--the native Indonesian—doctors by the colonial government, marked the beginning of higher education in the colony. The school was later known as the Faculty of Medicine of *Universitas Indonesia (*or *UI*--University of Indonesia). The STOVIA was the embryo of that second oldest private university in Indonesia after the independence of the country. The university earned its national status in 1950. The first and oldest university of post-independence was the *Universitas Gajah Mada (UGM)* or the University of Gajah Mada in Yogyakarta, founded in 1949. It was formed from one of the existing Dutch private centers for higher education, comprising of colleges of Law, and Literature and Languages (Welch, 2007). Other Dutch centers of higher education in the colony were *Technische Hogeschool,* now *Institut Teknologi Bandung (ITB)* or Bandung Institute of Technology, established in Bandung, West

[9] http://www.pts.co.id/sejarah.asp

Java, in 1920, and *Landsbouwkindige Faculteit*—now *Institut Pertanian Bogor (IPB)* or the Bogor Agriculture University, established in 1941. They all later earned their national status.

The existence of the above state higher education intitutions right after the independence of the country (Indonesia gained its independence on 17 August 1945) provided more chances for more young Indonesians to pursue their tertiary education in the newly established country.

Under the Dutch colonial government, however, the facility was limited. In 1941 with the total population of around 7.5 million, only some 1,246 Indonesians pursued higher learning (Palmier, 1984). Programs offered comprising pedagogy, medicine, technology.

3.2. Higher Education Today

Responding to need of accelerating development in Indonesia, during the 1960s, and continuing to the 1980s, the government established state higher education institutions, at least one in each of the 27 provinces in Indonesia. Currently, the number of provinces has grown to 33 and the number of state universities reaches 82, comprising universities, institutes of higher learning and Islamic Schools of higher learning. The number of private higher institutions, too, has grown tremendously in 30 years.

3.2.1 *Tridarma Perguruan Tinggi* (three services of higher education)

Indonesian higher education acknowledges *Tridarma Perguruan Tinggi* (three services of higher education) as the foundation. The three services are teaching and learning, research, and community development. The three services should be balanced. Ideally, an institution, be it *akademi*, *sekolah tinggi*, or *universitas,* should carry out balanced activities of the services. In addition to that, the mandate of higher education in Indonesia is that an institution of higher learning has to be an "added value" for the society and local government where the institution is situated. The three services of higher education should help higher education institution answer the challenge of bringing prosperity to the society. This means that the institutions must develop the surrounding people (Buchori and Malik, 2004).

As the case in almost all higher education institutions in Asia, in reality, most of higher education institutions only concentrate their services on the first pillar, which is teaching and learning, as it the case in many Asian universities.

Concerning research, for a developing country like Indonesia, it is considered costly and thus least in priority. Research in universities is mostly for personal development of faculty members for the purpose of career development, to achieve professorship. The Department of National Education has urged higher education institutions to enhance research activities by providing grants for individuals as well as institutions. It also encourages higher education institutions

to gain access to overseas (research) funding agencies or local and multinational industries for research collaboration. However, until today only a small number of state universities have the privilege of this kind of cooperation.

Community development is understood as the involvement of higher education institutions in the surrounding area where it is situated. Higher education institutions share responsibility for the growth and development of their surrounding communities and they must grow with their communities. This kind of activity is also extended to communities living in less privileged or remote areas of Indonesia.

3.2.2 State and private higher education institutions

It is not debatable in the case of Indonesia, when discussing education and higher education, the role of private sectors should be mentioned as equally as the state because the private sectors are government's partner in provision of education in Indonesia.

The amount of state universities was far from sufficient to provide higher education service to Indonesia ever since the new country proclaimed its independence. It was in need of human resources and to keep up with the world development, both nation and infrastructures. Realizing the limitation to develop human resources, the new government invited private organizations and many Indonesian scholars who had the privilege to study in the Netherlands to take part

in accelerating the nation's development by establishing new schools of all levels, especially higher education institutions.

The regulation of opening private institutions of higher education marked the partnership between government and the private sectors in the provision of higher education. It is clearly mentioned in the National Education Act No. 20. Year 2003, Chapter XV, on Community Participation in Education, Article 53, as follows:

"(1) Community participation in education consists of individuals, groups, families, professional associations, private companies, and community organizations in the implementation of quality control of educational services;

(2) Community can participate as the source, executor and consumer of education outcomes;

(3) The implementation of the provisions for community participation in education, set forth in verse (1) and verse (2), shall be further stipulated by the Government Regulation."

To date Indonesia has 82 state universities, most of which are situated in the province's capital city and were named after the city, historical figures or kingdoms, or national heroes. All state universities are fully supported by the government. The four major universities that were used to hold autonomy status, namely, University of Indonesia, Bogor Agriculture University, Gadjah Mada

University, and Bandung Institute of Technology no longer retain their legal entity status because the education legal entity, No. 9/2009, which provided autonomous status to those four major state universities in Indonesia (with more state universities to come) was aborted by the Constitutional Court because it was against the 1945 Constitution of the Republic of Indonesia.

As for private higher education Institutions, it is undeniable that the fastest growing private higher education sectors are in developing and middle-income countries, including in Indonesia. Although Altbach and Levy argued that "many private institutions are for profit, with narrow aims and limited curricula." (Altbach, 2008: 12), it is worth mentioning the pioneers that promoted private higher education in Indonesia.

The first private institution in Indonesia is *Universitas Islam Indonesia* (Islamic University of Indonesia)—previously known as *Sekolah Tinggi Islam* (*STI*--Islamic School of Higher Learning), situated in Yogyakarta. However, before the establishment of STI, Islamic schools have long existed in Indonesia, even before the independence of the country. The Muhammadiyah schools, founded by Achmad Dahlan, also the founder of Muhammadiyah Muslim organization, were established in 1912 in Yogyakarta as a real contribution to the society in the levels of primary and secondary schools. However, only slightly before the independence that the establishment of Islamic higher education came to realization.

In 1949 the government of Indonesia placed the coordination of higher learning under the Department of Education, Teaching and Culture and as a consequence, UII was also taken over. The faculty of Islamic Education in particular was given a new status as Islamic Institute of Higher Learning based on Government Regulation Number 34/1950 and on 26 September 1951, the government adopted the institute as state-owned. The government, upon learning that the public interest of higher learning of Islamic belief had increased, established a branch of the institute in Jakarta in 1963. To date there are more than 500 Islamic Schools of Higher Learning, comprising 6 State Islamic Universities (UIN--*Universitas Islam Negeri*), 12 State Islamic Institutes (IAIN--*Institut Agama Islam Negeri*), 32 Islamic Schools of Higher Learning (STAIN--*Sekolah Tinggi Agama Islam Negeri*), and 461 Private Islamic Schools of Higher Learning (PTAIS--*Perguruan Tinggi Agama Islam Swasta*), with 1799 study programs. Aside from offering Islamic study programs, the schools also offered general study programs, such as, medicine, economics, science and technology, sociology and humanities, and natural sciences.[10] All institutions are coordinated under the Directorate General of Higher Education of the Directorate General of Islam of the Department of Religious Affairs. Although some of the schools are state-owned, the coordination is not under the Department of National Education but under of the Department of Religious Affairs.

[10] http://www.ditpertais.net/

Following the Department of National Education, the Department of Religious Affairs also imposes quality assurance in order to improve national competitiveness, autonomy and decentralization, and healthy organization.

The second oldest private university is the *Universitas Nasional* (National University), established in 1949, which was founded by R. Teguh Suhardjo Sastrosuwingnyo and Sutan Takdir Alisyahbana, a man of letters who shaped Bahasa Indonesia, the mother tongue. It is situated in the capital city, Jakarta.[11]

The establishment of the first private universities marked the era of involvement of private sector in tertiary education. In later years, more scholars initiated the establishment of private higher education institutions to meet the need of professionals, especially in the fields of engineering, education, and medicine.

Both private institutions had similar aim, i.e. to provide higher education service to young Indonesian high school leavers who wished to further their education at the tertiary level in non-colonial institutions (although owned by the state, young scholars presumed that the above mentioned state universities were colonial higher education institutions).

From the two state and two private higher institutions in the first decade of independence, the number grew to 135, with 53 state-owned and 80 private-owned by 1961 (Fahmi, 2007). The number of private institutions of higher

[11] http://www.unas.ac.id:1949/sejarah.do.

learning has now reached 3.017 (by the year 2010)[12] while the number of state higher education institutions is still 8213. Involvement of private sectors in higher education is still expanding because the demand of higher education is still growing. Welch (2007) described that this "dramatic growth" can be explained by the limited state capacity and spiraling demand which was due to demographic pressures and credentialism.

As a comparison of the development of higher education, the student enrolment in beginning of the 20th century was 200 native Indonesians and by the year 2003, 3.5 million in the entire institutions—universities, institutions of higher learning, academies, etc.[14] The distribution of students according to the fields is 16% in technology, 10% in science and natural sciences, and 74% in social sciences and education.[15] Private institutions open more opportunities to the fields of social sciences and education because their operational costs are considered low compared to those of natural sciences or technology.

In the effort to provide better support to private sectors, the department of national education in the master plan of distribution of higher education in Indonesia states the following general objectives:

[12] http://www.dikti.go.id/index.php?option=com_content&view=article&id=1389:jumlah-pts-naik-pesat-&catid=69:berita-terkait&Itemid=196

[13] http://www.dikti.go.id/index.php?option=com_qcontacts&view=category&catid=53&Itemid=197

[14] http://www.dikti.org

[15] http://www.dikti.go.id/Archive2007/kpptjp/5.4.htm.

(1) providing more opportunities for higher education services as an attempt to boost social mobility, increasing higher education capacity for human resource development in the national development;

(2) expanding higher education capacity in the fields that accelerate the advancement of economics, science and technology, and improvement of life quality;

(3) expanding higher education capacity geographically to develop the environment where the institution is situated and extending the capacity in building and developing higher education through developing centres; and

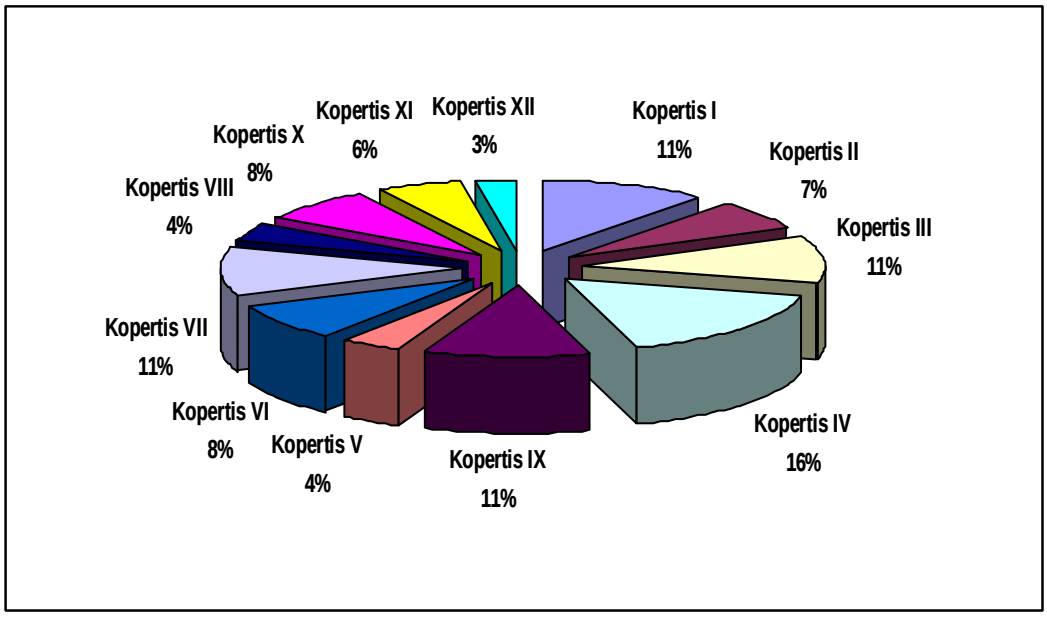
(4) expanding professional non-degree programs (diploma programs) so that the ratio between Sarjana 1 program graduates and non-degree graduates fits to the manpower pyramid.[16]

The master plan proves that the government considers private institutions as partners in education provision in Indonesia. Therefore in order to accelerate higher education provision in Indonesia, the government provides more sources as well as opportunities to private higher education institutions to expand themselves, especially in the field of natural sciences and technology to increase higher education participation rate in Indonesia and thus human resource capacity in the future.[17]

[16] http://www.dikti.go.id/Archive2007/kpptjp/5.4.htm.
[17] http://www.dikti.go.id/Archive2007/kpptjp/5.4.htm.

These institutions--which increase in number every year, are coordinated under the Coordination of Private Higher Education Institutions (Kopertis--*Koordinator Perguruan Tinggi Swasta*) which is under the Directorate General of Higher Education (DGHE), Department of National Education, in regions. There are 12 *Kopertis*es all over Indonesia but the spread of institutions is not even in every region, with Kopertis IV (West Java province). III (Jakarta), IX (North, South, South East, and Central Sulawesi provinces), I (Nangroe Aceh Darussalam and North Sumatera provinces), and VII (East Java province) as the big five (Figure 5).

Figure 5: Coordinating bodies of private higher education institutions in Indonesia



Kopertises function as coordinating bodies, an extension body of Indonesian DGHE, that provides guidelines to private institutions for their administration

documents, such as semester report. They also supervise the activities and give feedback to the institutions since they have the authority to recommend the closing of a study program to DGHE if the institutions is found to be non-compliant of semester reports and other academic activities.

3.2.3 Types of higher education institutions

Indonesia acknowledges several types of institutions, as stated in the National Education System Act:

(1) The types of higher education institutions are, academy, polytechnic, school of higher learning, and institute or university;

(2) Higher Education Institutions are obliged to carry out three services of higher education, namely, teaching and learning, research, and community service; and

(3) Higher Education Institutions may run academic, professional, and/or vocational programs.

Types of higher education institutions are as follows:

a. *Akademi* (academy) is a professional school that offers non-degree programs. Similar to *Sekolah Tinggi* which offers one field of study, this programs focus only on vocational and transferable skills. Four programs are offered in an academy: Diploma 1, 2, 3, and 4 which indicate how many years each program takes. The academy is run by the government, private sectors or

companies. Examples of *akademi* are *Akademi Bahasa Asing* (Academy of Foreign Languages) that focuses on foreign language studies and offers one or more foreign languages, with English as the most popular one; *Akademi Maritim* (Academy of Maritime) that focuses on the study of maritime; and Akademi Sekretari (Secretary Academy) which focuses on secretarial skills.

b. *Politeknik* (or polytechnic) is a professional school which offers non-degree programs in technology programs. Unlike *Akademi*, *politeknik* offers several fields of study. Established in 1980s as public institutions, with a grant from the World Bank, the number of *politeknik* mushroomed with involvement of private sector. Example of a *Politeknik* is Politeknik Negeri Jakarta (State Polytechnics of Jakarta) that offers mechanical engineering, industrial technology, business administration, etc.

c. *Sekolah Tinggi* (literally means School of Higher Learning) is an institution that offers only one field of study. A *sekolah tinggi* is usually run by private sector, ministerial department or by major companies. For example, STT (*Sekolah Tinggi Teologia*), a Christian (of protestant denomination) seminary, is run by the directorate general of Christian religious affair, ministry of religious affairs. Buddhism and Hinduism also have their religion-related schools of higher learning. Another example is STT Telkom (*Sekolah Tinggi Telkom*) or Telecommunication School of Higher Learning, an institution run by state-owned telecommunication company under the ministry of Communication

and Information. Such schools supply the need of professional labour in their respective departments. An example of a private *sekolah tinggi* is STIE Perbanas (Economics Higher Learning School of Perbanas--Indonesian Banks Association) run by consortium of national banks in Indonesia. *Sekolah Tinggi* offers non-degree to doctorate programs.

d. Institute. As the name indicates, the school is more or less similar to the previous type of school. However, it is not necessarily offering one program. For example IAIN (*Institut Agama Islam Negeri*). Is a state Islamic higher education institution run by the directorate general of Muslim religion. The institute offers Islamic based study programs. However, Institut Pertanian Bogor (Bogor Agriculture Institute)--previously a distant school of the University of Indonesia which offered agriculture study programs, retains its name although it offers various study programs of natural sciences. The *institute* offers non-degree to doctorate programs

e. *Universitas* (university). Unlike *sekolah tinggi,* no university is run by a department/ ministry due to its characteristics as a multi disciplinary and research-based institution. It offers non-degree to doctorate programs. A university offers both natural and social sciences. However, private sectors tend to offer more social sciences or humanities due to its lower costs in running the programs. In the past decade, two conglomerates also funded the establishment of universities, fully equipped with modernized facilities to

support its teaching and learning processes. They attract people's attention because they offer more specialized study programs, like visual communication design or information technology. In addition to that they have also established a modern research centre in medicine.

3.2.4 Student enrolment

Every year around 400,000 high School graduates wishing to continue their tertiary education level compete in the entrance examination to state universities. The limited number of state higher education institutions can only admit around 80,000-100.000 new students each year The less fortunate ones who fail the entrance examinations will go to alternative private institutions.

At the present time 84 state higher education institutions enroll about 100,000 new undergraduate students each year while private higher education institutions enroll about 250,000 students. The total number of students enrolling in state tertiary institutions is about 1,000,000, while there are about 2,500,000 in private universities, bringing the total number of students in tertiary institutions to about 3,500,000 or a gross enrolment rate of about 14.6% in 2004 (Tajuddin, 2005).

From Table 5 below, it is clear that the number of applicants to the state institutions was high but admission was low because of the limited number of study places. While the number of state higher institutions remains the same, the number of private institutions increases every year. The reason is more people are

interested in pursuing higher education and it is only private sectors that can provide more opportunities to them in various kinds of tertiary education institutions.

Concerning student enrolment, the growth of enrolment is also high, from the 1970s with only 206,800 students to the 1980s with 543,175; the 1990s 1,590,593; and late 1998 with 1,690,660 (Welch, 2007). The extreme was in the 80s with an increase of enrolment reached 200%, which is parallel with the vast expansion of private higher education.

The average applicants to state higher education institutions from academic years 2003/2004 to 2006/2007 was 65.6%. Except in academic year 2003/2004, the number of applicants, students, enrolment and graduates in the state as well as in private institutions tends to be stable.

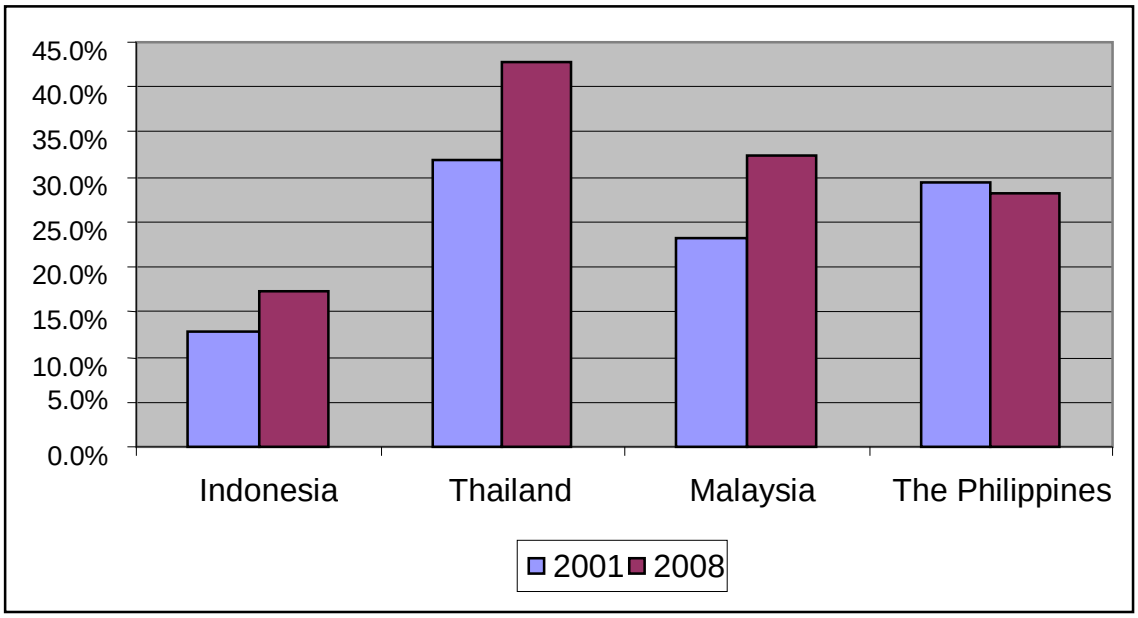
Table 5: General view of the total number of students in state and private higher education institutions in Indonesia

Academic year	HEI*	Applicants		New Students		Enrolments		Graduates	
		Σ	**%**	**Σ**	**%**	**Σ**	**%**	**Σ**	**%**
2003/2004	**State**	1,777,124	76%	722,941	64%	1,920,763	51%	494,346	72%
	Private	562,677	24%	402,343	36%	1,875,954	49%	189,030	28%
2004/2005	**State**	950,066	63%	255,693	39%	901,496	32.5%	164,144	46.5%
	Private	562,677	37.%	402,343	61%	1,875,954	67.5%	189,030	53.5%
2005/2006	**State**	898,491	59.5%	216,603	34%	718,355	27%	130,139	40%
	Private	613,318	40.5%	422,460	66%	1,973,455	73%	193,756	60%
2006/2007	**State**	995,793	64%	203,704	27.5%	825,876	32%	58,284	30%
	Private	567,557	36%	537,356	72.5%	1,757,311	68%	139,366	70%

*HEI (higher education institution)

Compared to its neighbouring countries, the Philippines or Thailand, participation of higher education in Indonesia is considered low in 2001 although the age group for higher learning is higher than the two countries (Figure 6).

Figure 6: Gross participation of higher education in several Asian countries, in 2001 and 2008



The low participation of young Indonesian in higher education in 2001 was due to the prolonged economic crises that first hit Indonesia in 1998, while Thailand, the Philippines, Malaysia were quite stable. Although for developing countries like Indonesia, education is not really a priority, the prolonged unfortunate situation had forced the people to switch their 'priority' from education to primary needs and investment in human capital was decreasing. If they pursued higher education, it was only for the degree which would hopefully give them better status in the future without considering quality and reputation of the institutions

(Brojonegoro, 2002). This also meant that selection of study programs was not considered at all as long as they pursue higher education.

In 2008 the gross participation of higher education in Indonesia was 17.25%, which means around 5% higher, but still compared to the other three countries, Thailand (42.7%), Malaysia (32.5%), and the Philippines (28.1%), Indonesia was the lowest.

The following Table 6 shows the overall picture of number of students according to faculties in the case study, i.e. economics, Letters and engineering. In general it is clear that economics leads in number. Economics has always been one of the favourite study programmes that high school leavers majoring in social studies and even science choose when they pursue higher education. In reality the faculty of economics exists in almost every university in Indonesia and its enrolment is still high up until now.

If the case study for the research is considered, the following table shows that the picture of the student enrolment in higher education in the faculties of economics, Letters, and engineering. The table also shows that the faculty of economics has the highest number of students compared to other faculties and Letters has the lowest number of students.

Table 6: General view of the number of students according to fields of study in state and private HEIs in Indonesia

Academic year	Field of Study	Applicants		New Students		Enrolment		Graduates	
		Σ	%	Σ	%	Σ	%	Σ	%
2003/2004	Economics	623,217	27%	337,143	30%	1,136,979	30%	207,930	30%
	Letters	75,023	3%	33,444	3%	103,904	3%	17,542	2.5%
	Engineering	326,710	14%	149,505	13%	566,447	15%	114,334	17%
	All fields of study	2,339,801	100%	1,125,284	100%	3,796,717	100%	683,376	100%
2004/2005									
	Economics	350,484	23%	172,278	26%	779,558	28%	86,396	24%
	Letters	50,608	3%	18,803	3%	75,145	3%	8,618	2%
	Engineering	211,433	14%	84,897	13%	400,654	14%	54,269	15%
	All fields of study	1,512,743	100%	658,036	100%	2,777,450	100%	353,174	100%
2005/2006									
	Economics	360,126	24%	174,238	27%	786,421	29%	84,222	26%
	Letters	49,974	3%	18,450	3%	73,259	3%	8,006	2.5%
	Engineering	210,581	14%	83,049	13%	396,173	15%	50,893	16%
	All fields of study	1,511,809	100%	639,063	100%	2,691,810	100%	323,895	100%
2006/2007									
	Economics	347,740	22%	219,725	30%	733,980	28%	57,115	30%
	Letters	44,836	3%	21,542	3%	73,395	3%	5,611	3%
	Engineering	189,550	12%	108,560	15%	365,014	10%	28,239	14%
	All fields of study	1,563,350	100%	741,060	100%	2,583,187	100%	197,650	100%

Looking at the increasing percentage of enrolling students in higher education, there is no doubt that the number will still be increasing. The projected 1995-2020 higher education student enrolment shows this tendency in both state and public institutions, thus expansion of higher education will still take place in Indonesia (Table 7).

Table 7: Projected higher education student enrolment 1995 - 2020 (in million).

Institution	1995	2000	2005	2010	2015	2020
Public	500	590	715	850	1,010	1,200
Private	1,400	2,200	2,900	3,600	4,200	4,700
Others	400	350	305	250	220	200
Total		3,140	3,920	4,700	5,430	6,100

(Tadjudin, 2005)

3.2.5 Programs and credentials

Indonesia acknowledges academic and professional education concerning higher education system. Before the 1990es Indonesia higher education system acknowledged the degree system from the Dutch education system. The bachelor degrees (BA--Bachelor of Arts /B.Sc--Bachelor of Science), master's degree (Drs.--*doctorandus*), and doctoral degree (Dr.) were still in practice until the late 1980s. Afterwards the SKS (*Sistem Kredit Semester*-- Credit/unit System) was introduced and the overall higher education system in Indonesia was changed. Academic titles in Indonesian education system was changed into *Sarjana 1* or *S1* (equivalent to Bachelor degree), *Sarjana 2* or *S2* (equivalent to Master's degree) and *Sarjana 3* or *S3* (equivalent to doctoral degree). Prior to this, there were only BA for graduates in arts/economics/social sciences and B.Sc for graduates in natural sciences. The current S1/S2 titles vary according to their fields of study. For example, the SH (*Sarjana Hukum*--BA in Law*),* SS (*Sarjana Sastra*--Bachelor in

Letters), S.E. (*Sarjana Ekonomi*--Bachelor in Economics), S.T. (Sarjana Teknik--Bachelor in Engineering), etc. The master's degree in Law is MH (*Magister Hukum*), in humanities is M.Hum (*Magister Humaniora*), and etc.

The degree programs are also known as academic education, thus earning academic degrees as described above. Academic education is aimed at preparing students for academic life, participating in the development and extension of science. Professional education, on the contrary, will train students in acquiring one or more skills so that they can apply it in the future. According to the Decree of the Minister of National Education No. 232/U/2000, about Guideline of Curriculum Development in Higher Education and Evaluation of Students Performance, the professional track is a non-degree or Diploma program which is divided into 1, 2, 3, and 4- year training.

In the academic programs, one is required to take 140-166 credit units to earn Bachelor Degree, 36-50 credit units to earn Master's Program, and 40-88 credit unit to earn Doctoral Program. For the professional level, one is required to take 40-50, 80-90, 110-120, and 144-160 credit units for Diploma I, II, III, and IV, respectively.

2.3.6 Quality assurance of higher education

In Indonesia with the massification of higher education, especially in the 1980es, there has been a substantial change in higher education policies, shifting the role of universities as massive education providers to producers of graduates of high

quality and competence. The concept of quality assurance was still new and it was not an easy job to introduce it since the existence of higher education institutions was never questioned. It was a new paradigm for Indonesian higher education and in response to this paradigm shift, the Directorate General of Higher Education (DGHE) of Indonesia developed the "five pillars of new paradigm in the management of higher education" that is quality, autonomy, accountability, (internal) evaluation, and accreditation (external evaluation)" (Brodjonegoro, 2002).

The earlier system of evaluation in Indonesia was meant only for private institutions as an assurance of quality that they carried out the three functions of higher education and data were updated regularly. There were three levels of "accreditation" after certain evaluation was done, namely, *disamakan* (equalized or fully accredited), *diakui* (recognized), and *terdaftar* (registered), with the first to be the highest grade and the last to be the lowest. This accreditation system was meant for faculty, not a study program as it is now. The first was awarded to faculties which were considered good enough to provide education service and equal to state institutions and thus was given the authority to conduct their own final examinations. For the purpose of quality control, final examinations for faculties with recognized and registered statuses should only be conducted in a designated state university with a coordination and supervision from the *Kopertis* (pls. see 3.2.2). Regularly the faculties would have their programs evaluated in

order to get the equalized status so they could conduct their own final examinations. So, evaluation or quality assessment was not really new to private institutions because they were supposed to report their activities and other administrative documents to the *Kopertis* every semester and had their program evaluated to get the highest status.

In implementing the new paradigm of higher education, the National Accreditation Board for Higher Education (BAN-PT) was established in 1994 and started operations in 1996. The first results of accreditation were announced in August 1998. The method used was a program accreditation method and at present about 6000 of the 11000 study programs at all levels have been reviewed. The accreditation program will help the people choose which study program met standards. Compared to the first accreditation program, in the first four-year of administering the accreditation system only 2,826 study programs or 30% of the total number of study programs were reviewed (Tadjudin, 2001). The rest were reluctant. The most reluctant study programs were from state universities which stood to their belief that state universities are the best and no assessment is needed. Commenting on that reaction, the Head of National Board of Accreditation, Tadjudin (2001), stated that it was very difficult to introduce an external evaluation like accreditation to higher education system in Indonesia. Many professors refuse the idea of accreditation because it meant involving external evaluation in the higher education system. They they believed that higher

education institutions had their own standard of quality since they claimed to produce human resource with knowledge. Stensaker (2007) emphasizes that the academics are the most difficult when encountered with the idea of quality assurance during the last 15 to 20 years. They needed time to shift from the idea of professors know best.

Like the academics, state higher education institutions, too, showed resistance to the idea of accreditation due to the facts that some of them were the mentor universities and they are used as benchmarks to which the private institutions were compared.

The reason why accreditation had become an issue was the fact that the function of higher education had shifted. The University was no longer the sole place to seek knowledge (Brennan, et al, 1996, Brodjonegoro 2002). Its function was rather provision of qualified manpower and production of knowledge. Twelve years have past since the first introduction of accreditation system. In particular, for the past few years, from the advertisement of private higher education institutions in major newspapers and magazine in Indonesia, almost all institutions denoted their accreditation status of a study program by grade A, B or C. As the highest, grade A also qualifies the university as a mentor institution to others. Although accreditation of a study program is no longer a must, rather a choice, higher education institutions have made accreditation their means of evaluation. Aside as means of evaluation, the external evaluation also has another purpose, which is

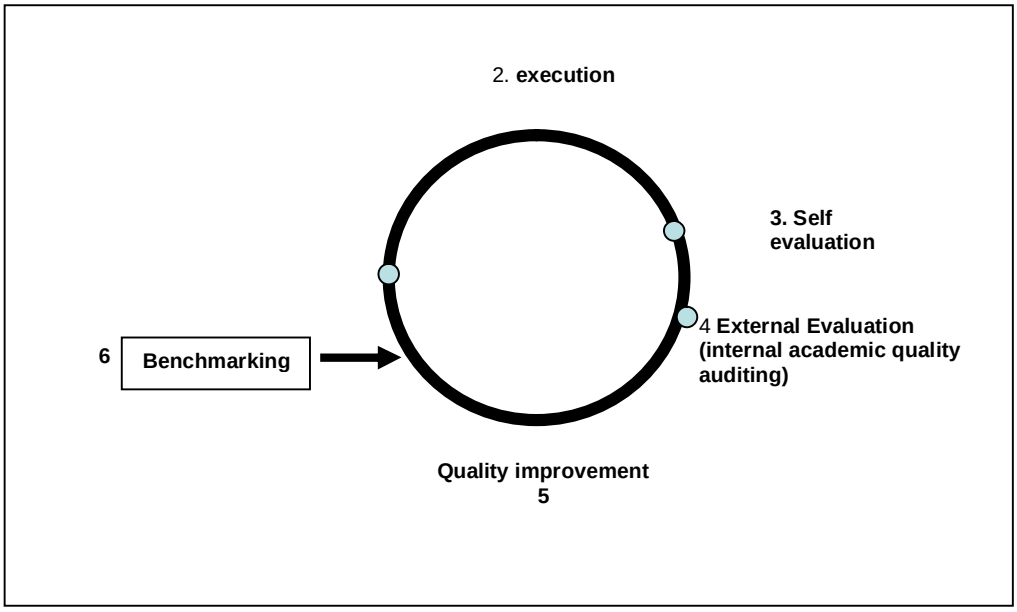
marketing the private higher education institutions,. Almost 2800 institutions competing to get as many as new students as possible, accreditation grades (A, B, and C) are almost always attached on the banners, advertisements, pamphlets, brochures of an institution, a clever way to attract high school leavers to enrol in the accredited study program. At least the people who are aware of the quality education will be interested in enrolling in such institutions. Mace (1992) emphasizes on this matter and argues that the motive of people spending money for higher education is an investment for future economic benefits, while Brodjonegoro (2002) argued that the society demands that a higher education institution be responsible for product, i.e. graduates, it produces.

The Department of National Education in its Higher Education Long Term Strategy 2003-2010 states the vision of higher education in Indonesia as follows:

> In a healthy organization, a continuous quality improvement should be internally driven, institutionalized within each organization's standard procedure, and could also involve external parties (p. 11)

Quality should be imposed and developed not only by the internal but external bodies as well. The public needs information about the quality of an institution in which they spend money on education which in most cases is very costly. Therefore the National Accreditation Board (the *BAN PT—Badan Akreditasi Nasional Perguruan Tinggi*) and other professional bodies serve as external control to help the people consider their choice of higher education institution from the many choices available in the country.

Figure 7: Basic model of quality assurance in higher education in Indonesia



The good practice of higher education follows Kaizen Model, the PDCA (Plan, Do, Check, and Action) Model. Every higher education institution is free to implement their own model of quality assurance as long as the basic model is included[18].

Gadjah Mada University, for example, has created an instrument of quality assurance that consists of seven components which form a cycle: (1) standardization of documents from the highest to the lowest levels, (2) Management, (3) Monitoring, (4) Self Assessment, (5) Internal Audit, (6) Evaluation, and (7) Continuous Quality Improvement.[19] Implementation of the cycle will be consistently and continually coordinated for what the institution claimed to be the excellence purpose.

[18] http://www.kopertis4.or.id/Pages/data%202006/akreditasi/SMP-PT/Bab%20II.pdf.
[19] http://www.ugm.ac.id/downloads/siklus-kjm.pdf.

Study program accreditation is an accountability of an institution to the public,[20] therefore all study programs should assess their programs as their responsibility to the people who have invested their money in education. Assessment is an exercise of the core functions and activities in higher education institution which help them evaluate, develop, and improve the quality of activities. Through accreditation, HE institutions are exposed to external bodies which evaluate a study program or institution by using certain criteria. The process of self-assessment which leads to the overall evaluation deals with management of data banks and good documentation. From the information of the number of students enrolled each year to the drop-out and graduating rate, from the number of teachers to the specialization of each, from the inventory learning facilities to the benefit of each, are amongst the questions that a study program should answer.

Although the National Education Act part 3, article 8, states clearly that the community has the right to participate (not only) in the planning, implementation and monitoring, (but also) and evaluation of the education programs, it is not until the quality assessment was taken into effect that the society was aware of their other function, as reviewer and quality control, not only as provider of funds or students.

Twelve years have passed since the first introduction of accreditation system. In particular, for the past decade advertisement of private higher education

[20] Decree of Minister of National Education No. 004/U/2002, art. 7

institutions in major newspapers and magazine in Indonesia include their accreditation status of study programs they offer to attract prospective students, especially those with highest rank. The society now also prefers institutions not only with good reputation but also high accreditation rank, a status that proves that they administer good governance.

The reason accreditation has become such an issue is the fact that the function of higher education has shifted. University is no longer the sole place to seek knowledge (Brennan, et al, 1996, Brodjonegoro, 2002). Its function is rather provision of qualified manpower and produce knowledge. Mace (1992) also argues that the motive of people spending money for higher education is an investment for future economic benefits. Therefore, accountability ought to take place since it involves society. The society demands that a higher education institution be responsible for product, i.e. graduates, it produces (Brodjonegoro, 2002).

Although accreditation of a study program is no longer a must, rather a choice, higher education institutions have made accreditation their means of evaluation. The writer presumes, however, that the results of the external evaluation is very effective for promotion purposes--the banners, advertisements, pamphlets, brochures of a private institution almost always include the accreditation grade (A, B, and C) of a study program. It is a clever way to attract high school leavers to enroll in the accredited study program.

For some higher education institutions in Indonesia, apparently accreditation of a study program by the National Accreditation Board is not sufficient anymore since the demand from the society and professional boards, be it national or international, is growing therefore they invite other international quality organizations to evaluate their institutions.

An organization with quality measurement which is worth mentioning is ISO (International Standard Organization). It is now the most popular among other standardized accreditation organizations, even amongst higher education institutions because it also offers service to evaluate higher education programs. The ISO forms a bridge between the public and private sectors.[21] On the one hand, many of its member institutes are part of the governmental structure of their countries, or are mandated by their government, and on the other hand, other members have their roots uniquely in the private sector, having been set up by national partnerships of industry associations. Therefore ISO enables a consensus to be reached on solutions that meet both the requirements of business and the broader needs of society. Bina Nusantara University is one of higher education institutions that achieved ISO 9001 Certificate on November 17th, 1997 and Akpindo (*Akademi Pariwisata Indonesia*—Indonesian Tourism Academy) gained ISO 9002 in 1998 (Idrus, 1999). The certificate proved that the institutions have

[21] http://www.iso.org/iso/about/how_iso_develops_standards.htm

applied and contributed to quality management system in the scope of curriculum design and lecture materials, lecture operational, teaching and research.[22]

The Accreditation Board for Engineering and Technology (ABET) Inc. is another example. The board that provides accreditation to engineering programs assures that their evaluation program will assist a study program or institution to meet established quality standards. Currently, ABET accredits some 2,700 programs at more than 550 colleges and universities nationwide.[23] Many Indonesian faculties of engineering obtain ABET certification in order to --what ABET called to be well prepared with the global competition.

Another example of an agency that grants professional certificate is the ACCA (Association of Chartered Certified Accountants). This professional agency provides technical assistance in order to achieve world class professional accountants.[24] This accreditation agency has been acknowledged in more than 170 countries and many companies in Australia and the UK have specifically indicated ACCA qualification for their prospective employees. The Department of Accounting, University of Indonesia, has already accredited by ACCA for standard of teaching and learning and curriculum for accounting study program. The department stated that the *S1* graduates will automatically be exempted from

[22] http://www.binus.ac.id/contain1.aspx?nmPage=ISO-9001%20Certifcation&&kd Menu=269
[23] http://www.abet.org/history.shtml
[24] http://www.accaglobal.com/

9 subjects in ACCA standardized examination. The department also hoped that they will produce graduates with competitive values in the global market.[25]

Higher education institutions look for other accreditation certification as mentioned above in search of excellence for their study program. The aim is clear, to get acknowledgment from professional reputable firms which will eventually open wider market to the graduates.

[25] http://www.accounting-department. fe.ui.ac.id/web/

Chapter 4

Case Study and Methodology

4.1. Universitas Kristen Indonesia: the Case Study

Established in 1953, Universitas Kristen Indonesia (UKI) is the oldest Christian university in Indonesia and the third private university in Indonesia, after the Islamic University in Yogyakarta and National University in Jakarta.

The idea of establishing a university based on Christian belief actually started before the WW II within Christian scholars who were associated with the church, the Christian secondary education and the overseas missionary organizations (the *zending*--the Dutch term that is commonly used to refer to the German and Dutch missionary in Indonesia). However, due to certain restrictions from the governments at that moment and limited resources that they encountered, the idea only came into realization in 1949 with the establishment of a foundation called "*Panti Ilmu Pendidikan*" (literally means education institution) aiming at educating Christian leaders-to-be through courses in education and English. Including in the statute of the foundation was a plan to establish a Christian university, the foundation started a committee for that purpose (Mulia, 2003).

Three Christian scholars, Todung Sutan Gunung Mulia, Yap Thiam Hien, and Benjamin Thomas Phillip Sigar who founded UKI foundation started the

university with only two faculties, the Faculty of Philosophy and Letters with two departments, i.e. Education and English and the Faculty of Economics. The two faculties served as higher learning and/or training school because Indonesia, gaining its independence only 8 years prior to the establishment of the university, was in need of skilled human resources in its development, particularly teachers and educators to speed up the nation building in the country.

In its inaugural address of the Establishment of UKI, Sutan Gunung Mulia, the first rector, said that "the establishment of the university was indeed a significant contribution of Christian scholars and community in Indonesia to the new emerging country" (Sitepu (Ed.) 2003). From the beginning, starting with only 20 students in two faculties and only 2 full-time lecturers in each department, UKI was supported by overseas organizations--Church-based mostly-- from the Netherlands and Germany. ÖSW (Ökumenisches Studienwerk eV-- now EED (Evangelischer Entwicklungsdienst)), Brot für die Welt, Dienste in Übersee, and ICCO, to name a few of European organizations that have provided significant assistance and support in the development of the institution in the form of buildings (the faculties of Engineering and housing complex), human resource development (scholarships and fellowships for the lecturers), organizational building, and community development projects. Other assistance worth mentioning is the contribution of Christian scholars from all over the country who dedicated their time and energy to help UKI grow and lead amongst private

higher education institutions in Indonesia. Development and establishment of new departments and study programs that shape the present *Universitas Kristen Indonesia* are their hard work and dedication.

As other religion-based education institutions UKI also shared the same platform, which is " … to create human being who are not only excellent in their fields but also humane and able to bring prosperity to other mankind" (Soebagio, 2003: 61). This gives additional values that students pursuing education in religion-based institution.

In the course of time the university developed into seven faculties, namely, the Faculty of Education and Teachers' Training, Faculty of Letters, and Faculty of Economics (established in 1953), Faculty of Law (established in 1958), Faculty of Medicine (established in 1962), Faculty of Engineering (established in 1962), and Faculty of Social and Political Sciences (established in 1996). UKI in the 1980es also established three-year non-degree programs (D3 program), namely, tax, management, English language, nursing, and physiotherapy to cope with the need of skilled labour in Indonesia and in the 1990es graduate programs in Education Management and Law. In opening a new study program, UKI fulfilled the requirement of the Directorate General of Higher Education, among others, the minimum number of lecturers with corresponding credentials and facilities. This, however, does not apply to the faculty of medicine because of a regulation that

restricts expansion of faculty of medicine not only by the number of seats[26] available for new students, but also opening of graduate programs and specialization programs by private institutions.

Every year, UKI admitted around 1000 new students in its 7 faculties. The growing number of private higher education institutions in Indonesia has made competition amongst private higher education institutions fierce.

Preference of study programs changes from time to time, except for the faculty of medicine, which for the past decade has been the most popular study program, followed by the faculty of law. The composition of new students enrolling at UKI's 7 faculties for the past 5 years is roughly 10% at the Faculty of Education and Teachers' Training, 5% Faculty of Letters, 20% Faculty of Economics, 25% Faculty of Law, 20% Faculty of Medicine, 5% Faculty of Engineering, and 15% Faculty of Social and Political Sciences.

Until 2006, the university released more than 25,000 graduates from non-degree, undergraduate and graduate programs. From UKI's experience, and perhaps of other institutions', establishing contacts with the graduates is not easy, because the relationship with the graduates expire ceases once they have graduated, and the only contact is when they need to legalize the paper for job requirement or letters of recommendation when they want to continue their studies.

[26] The government regulation limits the capacity students in the faculties of medicine both in the state and private institutions. There are currently 52 faculties of medicine in Indonesia despite the poor condition of health service in Indonesia.

The alumni organization (IKA UKI) was established when the first graduates of UKI were sworn in in 1959, but not until 2003, at the 50th anniversary of the institution, when it came to 'real' existence with the first congress held on 2 August 2003 that voted for Mr. Maruli Gultom (now Rector of UKI) as the first chairperson of IKA UKI. The organization has 4 working divisions, i.e. (1) alumni development, (2) alumni empowerment, (3) alma mater service and (4) organizational development. After hibernating for a long time, IKA UKI slowly has gained respect and position in the community. Prominent alumni in the government administration, socialites or successful businessmen have emerged to contribute positively to their alma mater through the organization. Currently, the chairman of UKI Foundation is Mr. Edwin Soeryadjaya, one of the most prominent businessmen in Indonesia, who is also UKI alumnus from the faculty of engineering. Not much has been done in its 6 years of existence, but IKA UKI has contributed significantly by, among others, provision of scholarships to the tsunami victims from Nias Island and UKI students, seminars addressing political and social issues in the country, workshops and trainings for students and junior graduates with topics related to labour market and competencies by successful alumni, and jobs and career expos to facilitate students and graduates. IKA UKI also has established regional offices in several parts of Indonesia to accommodate activities of the alumni in the regions.

Table 8: UKI's graduates from 2000-2005

Faculties of	Year of Graduation					
	2000	2001	2002	2003	2004	2005
Education and Teacers' Training	45	45	50	56	75	153
Letters	67	65	91	77	75	112
Economics	306	271	306	402	305	272
Law	64	64	86	185	228	263
Engineering*	136	166	168	151	157	111
Medicine	167	127	121	170	122	173
Social and Political Sciences	14	38	45	51	46	127
TOTAL	799	776	867	1092	1008	1211

*including architecture study program

4.2. Survey Methodology

4.2.1 Target respondents

The survey is aimed at investigating the competencies of the graduates to those that are required by the labour market as perceived by the graduates. The target respondents are graduates of Universitas Kristen Indonesia (UKI) from three Faculties: (1) Faculty of Engineering, (2) Faculty of Economics, and (3) Faculty of Letters. Six study programs of the selected faculties are involved in the surveys: (1) Electrical Engineering, (2) Mechanical Engineering, (3) Civil Engineering; (4) Management, (5) Accounting, and (6) English, of graduation years of 2001, 2003, and 2005.

The reason of including three cohorts of the graduates was to see clearly their early stage of searching for a job (2005), the period of settling for the job (2003) and the period of building career in their perspective jobs (2001). Although the main analysis would be the competence provided by the HE and those required by the labour market, the selection of the three cohorts of the graduates were based on the following:

1. The year 2005 cohort was selected in order to see their transition from higher education to the world of work based on the perspective of fresh graduates. How do they perceive initial employment
2. The year 2003 cohort was used in order to see their perspective of employment, assuming that they will have to change work once or several times and try to equip themselves with necessary competencies required for the world of work
3. The last cohort, 2001 graduates was selected because it was assumed that about 4 years after graduation (graduating in 2001) is that the career stage of the graduates is "the moment when initial search and trial and error activities, as well as the initial preparatory training within the firm or the profession, was over and when major steps of career progression had not yet begun" (Garcia-Montalvo, et al., 2007: 96). Thus competencies necessary for the world of works have been achieved in their pursuit of their careers.

The selection was based on the characteristic of the study programs, whether it lead to professional or non professional degrees. The Faculty of Engineering was considered a professional school that lead graduates to gain professional careers in their respective fields; the Faculty of Economics belongs to semi-professional since its graduates can both enter professional fields of their program or other fields close or not at all related to study programs; the Faculty of Letters belongs to the non-professional program because the chances of career prospects are diverse since the mastery of the language—English-- is their tool to enter labour market.

This is also emphasized by Brennan, et al.:

> According to conventional wisdom, fields of study differ substantially according to their relationships to the world of work. This is confirmed by employment data in the relationship between field of study and occupation: whereas graduates from some fields are most likely to transfer to 'corresponding' professions, graduates from other fields will be widely dispersed. (in Brennan, et al ., 1996: 14)

Table 9: Distribution of projected respondents according to study programs

FACULTY/ Study Program	YEAR OF GRADUATION 2001	2003	2005	100% Population
Engineering:				302 (20.6%)
Electrical Engineering	44	36	32	
Mechanical Engineering	51	24	33	
Civil Engineering	49	14	19	
Economics:				911 (62.3%)
Management	105	154	108	
Accounting	180	209	155	
Letters:				250 (17.1%)
English	64	76	110	
TOTAL	453	370	370	1463

4.2.2 Questionnaire design

The questionnaire for this survey is based on standardized questionnaires that were developed by the INCHER (International Centre of Higher Education Research) of the University of Kassel, Germany, i.e. the adaptation of 2 questionnaires from the *Reflex* (Research into Employment and professional Flexibility) and *CHEERS* (Careers after Higher Education: a European Research Study) projects.

The two projects, the Reflex and the Cheers developed 2 survey projects that aimed at looking at the relationship between higher education and the world of work from many dimensions.

Reflex involved 15 European countries and Japan and was funded by European Union and was coordinated by the Research Centre for Education and the Labour Market from Maastricht University. Three studies were carried out: (a) a country study highlighting the main structural and institutional factors that shape the relation between higher education and work in the different countries, (b) a qualitative study on graduate competences in the knowledge society, and (c) a survey of higher education graduates in the different countries involved in the study. The study involved some 70,000 graduates in the 16 countries, five years after their graduation.

Focuses on the project are:

1. Providing a more detailed description of the demands that the modern knowledge society places on higher graduates.
2. Assessing the degree to which higher education institutions in Europe are up to the task of equipping graduates with the competencies needed to meet these demands.
3. How the demands, and graduates' ability to realise them, is influenced by the way in which work is organized in firms and organizations.
4. The goals, aims and orientations of graduates.
5. The transition from higher education to work and later occupational outcomes.

(Allen and van der Velden, 2005)

Cheers, on the other hands, involved 11 European countries, such as, Austria, the Czech Republic, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden and the United Kingdom, and one Asian country, Japan. The major funds for the study came from European Commission in the framework of the Targeted Socio-economic Research Programme (TSER). The study addressed, among others, the job search and transition period from higher education to employment and also employment situation during the first years of graduation. It also examined competencies of the graduates and their utilization at work. Differences of employment and work according to regions, gender and international mobility of the respondents were also studied (Teichler 2002).

Questionnaires were sent to around 100,000 persons who graduated about four years earlier from bachelor, master or similar programs. The questionnaire addressed among others the socio-biographic background, schooling and the course of study up to graduation,, transition to employment and career start, etc. The return rate of the survey was about 40%. (Teichler, 2009)

The questionnaire, consisting of 351 variables in 61 questions and was designed under 10 sub-topics.

The questions were to address the following information:

(1) Education background before higher education time: study program, education before higher education, work experience before period of study

(2) Study time and other activities: activities during the course, division of time per week for activities during study, and other activities not related to study,

(3) Transition Period from higher education to work as a graduate: first employment and waiting time and other activities related to job search

(4) Current Activities and Work: what kind of job, position, salary, and other activities related to work or not related to work.

(5) Competencies: competencies acquired and competencies required by work

(6) Other Courses and Further Studies: other knowledge- or skills improvement activities which is related or not related to work

(7) Higher Education and Work: how higher education training contribute to work in search of relationship between the two

(8) Work Orientation and Job Satisfaction: achievement in work and situation at work

(9) Personal Information: education background of parents, types of residence during study and at the time of the survey.

(10) Retrospective questions: questions to give feedback to institutions about their impression of the place where they used to study

The types of questions are (1) closed questions, with yes or no answer, multiple choice and multiple reply; (2) statements which are in the form of 1 to 5 points Lickert scale (1 as strongly disagree or not at all and 5 as strongly agree or to a very high extent); and (3) open questions.

Data from the questionnaires was cleared and was analysed by using SPSS 17.0.

4.1.3 Survey time table

A Time table was designed to make an effective survey and to get as many returned questions as possible and the activities of the survey which was designed following that of the standardized survey method of Incher's, such as:

(1) distributing hard copies of the questionnaires

(2) Reminder Letter I (sent after one month of the distribution)

(3) Reminder Letter II (sent one month after the Reminder Letter I) with another copy of the questionnaires)

Aside from printed questionnaires, online was also employed by using INCHER server at http://www.hochschulforschung.uni-kassel.de/qtafi2/projects/uki/, however, only 10% of target respondents admitted that they have email addresses because only through email addresses that the password to the online questionnaire could be obtained. The total returned online questionnaires were 9.7%.

During the process of distributing questionnaire and waiting for questionnaires to be returned, several time adjustments were made due several difficulties as follows:

1. Since it was the first time for UKI to conduct tracer study and the questions were many, the researcher spared time to explain to respondents who asked the purpose of the questionnaire although it was clearly stated in the covering letter at the first page (pls. refer to the attached questionnaire).
2. Two reminders in span of 8 weeks were prolonged to 12 weeks and

Besides the two mail reminders, the following methods of reminder were used:

1. Telephone reminders to 698 traced respondents were conducted aside from the two reminders by mails, reminding time was between 19.00 and 22.00 during working days and between 07.00 and 09.00 during the weekend. Some 30 calls were made every day. Two land line numbers were used for these purposes.
2. Reminders by short message services (SMS). Found to the most effective and inexpensive way of communication, SMS was used not only for reminders but

also to trace addresses, however, the only obstacle about this was some respondents changed numbers so easily because it was not difficult or expensive to get new mobile number. Two mobile numbers were used from the beginning of the survey to send reminders every month to 409 mobile numbers of the traced respondents.

3. Two respondents working in the remote areas in Kalimantan and Riau asked researchers to send the question one by one by SMS. Unfortunately it could not be done because it was too complicated and instead, telephone interviews based on questions were made and it took 50 and 60 minutes to read and answer questions. In the future SMS could be considered to send questionnaire automatically especially to those who work in less privileged areas where no internet facilities were available.

There is, however, an important note when collecting addresses of the respondents. The Procedure for collecting the addresses of the graduates was a struggle. The basis of tracing the address was from the alumni book released each year at the time of graduation ceremony. The book contains information of the graduates, such as, name, address, date and place of birth, faculty/study program, and the title of the project/Sarjana thesis/project paper. In the information of the address, some of the graduates tend to fill in the temporary addresses where they stayed during the period of studies, for example, the addresses of the boarding

houses or rooms around the campus neighbourhood they rented. It was not right and those who were responsible for data input should have informed them to give the right address or parents' addresses for future tracing purposes. It was also worth noting that tracing the graduates of the 2005 cohort was easier than those of older ones due to the mentioned reason above and also poor relationships between UKI and its graduates. The graduates only come back for some legalization of documents or credentials and there were no written documentation of the change of addresses. The younger cohort was easier to trace since there is a possibilities of still living in the same address.

Figure 8: Flowchart of the survey

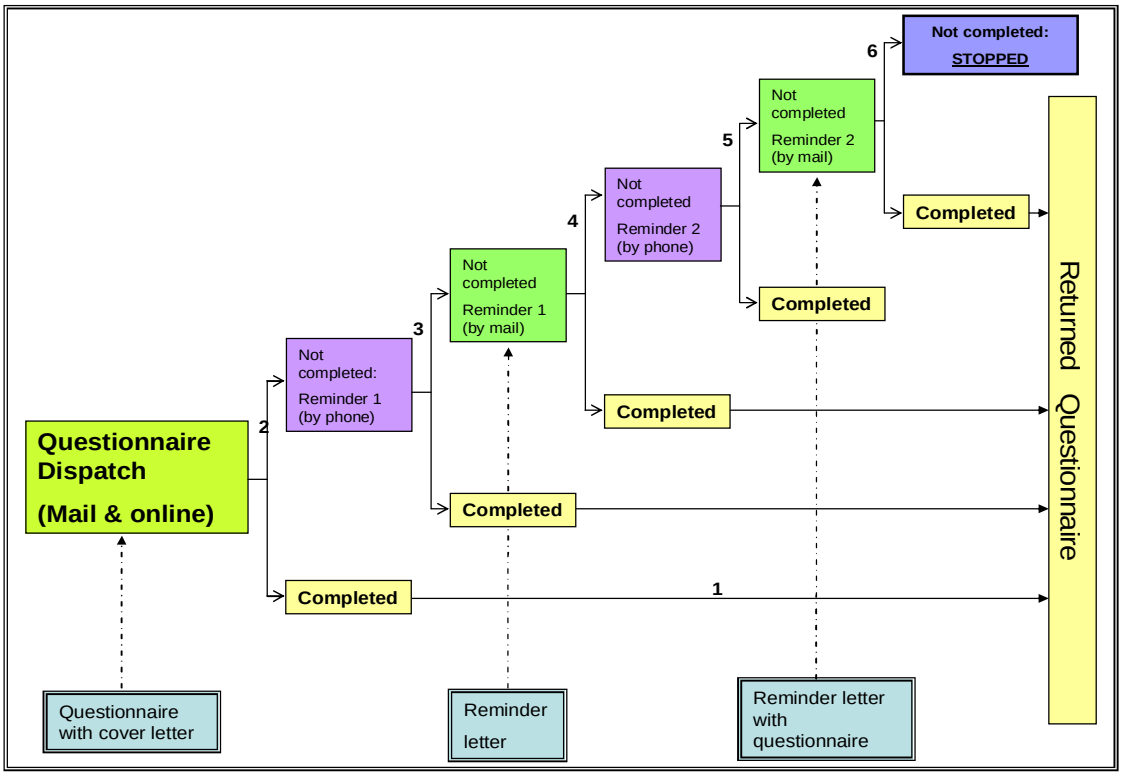


Table 10: Research time table

Description	2007											2008					
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
I. Questionnaire development	X	X															
II. Preparation of Fieldwork			X	X													
III. Field work																	
Distribution of the questionnaire					X												
Filling up the questionnaires						X	X	X	X	X	X	X					
Reminder (1) by telephone							X	X									
Reminder (2) (letter of reminder only)							X										
Reminder (3) by telephone								X	X								
Reminder (4): (letter of reminder and the questionnaire)									X								
Reminder (5) by telephone										X	X	X	X				
Receiving return questionnaires						X	X	X	X	X	X	X	X	X	X		
IV. Data Analysis																	
Data Cleaning and Data Entry								X	X	X	X	X	X	X			
Data Analysis																X	X

4.3. Limitation of This Tracer Study

"Tracer study" as the name indicates is a survey which is carried out in the effort to search what the graduates do after higher education training and to ascertain the relevance of higher education to work via the experience of the job seekers--the graduates. This study will help higher education institutions map the situation of the labour market and use the results of the survey to narrow the gap between supply and demand of graduate labour. In carrying out the survey, however, there are several shortcomings, as follows,

1. Higher education must get information on labour market in order for higher education to prepare students with the right skills, required by the job. The means of tapping necessary information about labour market change is through a tracer study, graduate survey or alumni survey. The "labour market", from the point of views of the graduates, is the picture of the 'real life' they face after they complete their HE period. The survey tries to map the labour market and the world of work, and because it relies solely on the graduates' experiences, it should engage as many graduates as possible to give a clearer picture and direction.
2. An unreturned questionnaire may become an important message for a researcher. From the experience, unsuccessful graduates will stay away from campus and have no desire to return. Those who come and share experience to others are those who consider themselves successful enough. Therefore, it

is also important to inform the graduates about the purpose of the survey so that no matter how negative their experience, the graduate can share it for accurate interpretation.

3. In order to get a picture of the labour market and work, it is advisable that sample method be avoided. Sample method tends to give a vague picture because of the limitation of experience. Besides, we might lose important messages from those who do not belong to the sample.
4. The first step of successful tracer study is a good data base. The failure of recruiting as many respondents as possible is a poor data base.
5. Questionnaires tend to include as many questions as possible therefore it is feared that the low rate of returned questionnaire was due to this although there were no evidence to prove this.
6. Duration of time in survey that can be very lengthy.
7. The study can be very costly if mailing delivery system is employed. If internet connection is available and possible, the survey will take less time and can be less costly although it cannot guarantee high return rate of the survey.

Chapter 5

Results and Discussion

This chapter discusses the results of the tracer studies at Universitas Kristen Indonesia, involving 6 study programs, i.e. Civil Engineering, Mechanical Engineering, Electrical Engineering, Management, Accounting and English which are grouped into professional (Civil Engineering, Mechanical Engineering, Electrical Engineering study programs), semi professional (Management and Accounting study programs) and non-professional (English).

This chapter will begin with the response rate of the survey and the profile of respondents. It is then followed by graduates' perception on whether higher education training has impacted on their performance at work or whether it helped them get their first job. Graduates' expectations about work and career will also be discussed in this chapter.

In analysing the central topic of this research--the graduates' competencies-- as perceived by the graduates and as job requirement from the experience of the graduates, the discussion will be based the analysis on each study program or in group with a purpose of observing differences or similarities between acquisition of competencies during the training period and requirement of competencies at the time of job search and at work. The analysis of each group will answer the

question which of the group is the most competent as far as the job requirement is concerned.

In presenting the results, this chapter observe the following:

a. Tables and figures presented are based on percentage (1-100%) or arithmetic mean (1.00--5.00).
b. Lickert scale (1-5 scale) with 1 being the lowest and 5 being the highest is used in questions that require measurement. For example, questions that measure graduates' perceptions;
c. Abbreviations of study programs are used in tables and figures. They are CE for civil engineering, EE for Electrical Engineering, ME for Mechanical Engineering, Let. for English, Mgt. for Management, and Acct. for Accounting.

This chapter will be concluded with a discussion of acquisition of important competencies and what they did in order to acquire them during and after higher education training.

5.1. Population and Response Rate

From the total number of graduates from the six study programs, the number of target respondents was decided: 859 (55.6% out of total graduates). The decision of the number of respondents was based on the accessible data of the graduates in the university and reconfirmation of addresses. Another 44.4% of the graduates

could not be traced because the contact addresses in the alumni book and in the registrar's office were either incomplete or incorrect.

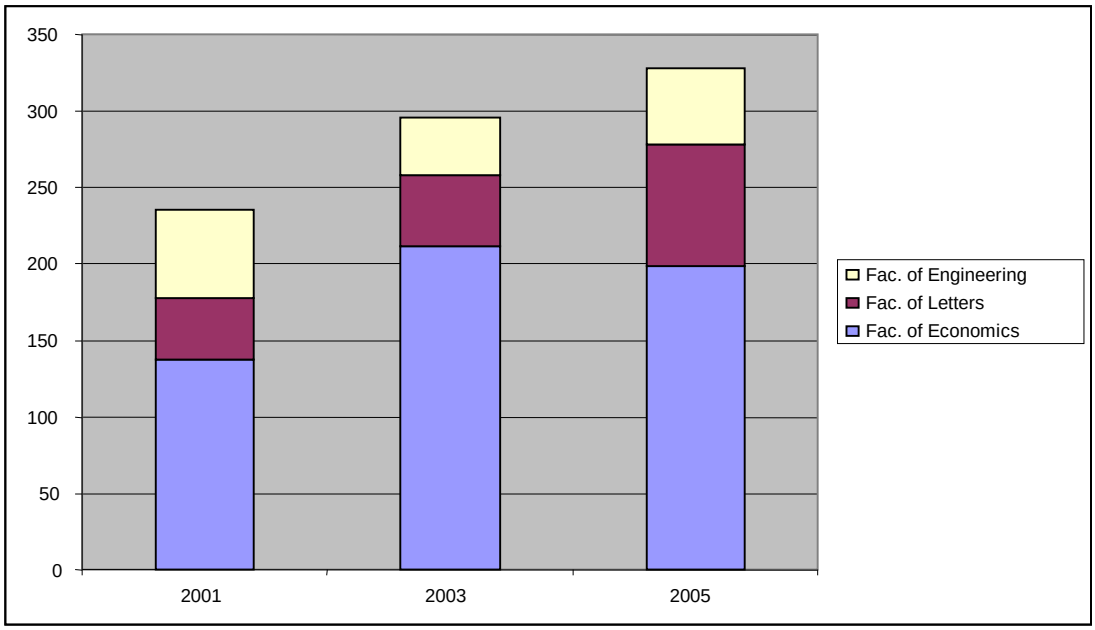
The following table 11 shows the number of the graduates at selected study programs:

Table 11: The number of graduates from years 2001, 2003, 2005

Study Program	Year of Graduation			Total	(%)
	2001	2003	2005		
Electrical Engineering	47	41	34		
Mechanical Engineering	41	33	38		
Civil Engineering	47	45	20		
Total number of the Faculty of Engineering				346	22.4%
Management	96	165	110		
Accounting	175	237	162		
Total number of the Faculty of Economics				945	61.2%
English	65	77	112		
Total number of the Faculty of Letters				254	16.4%
TOTAL	453	370	370	1545	100%

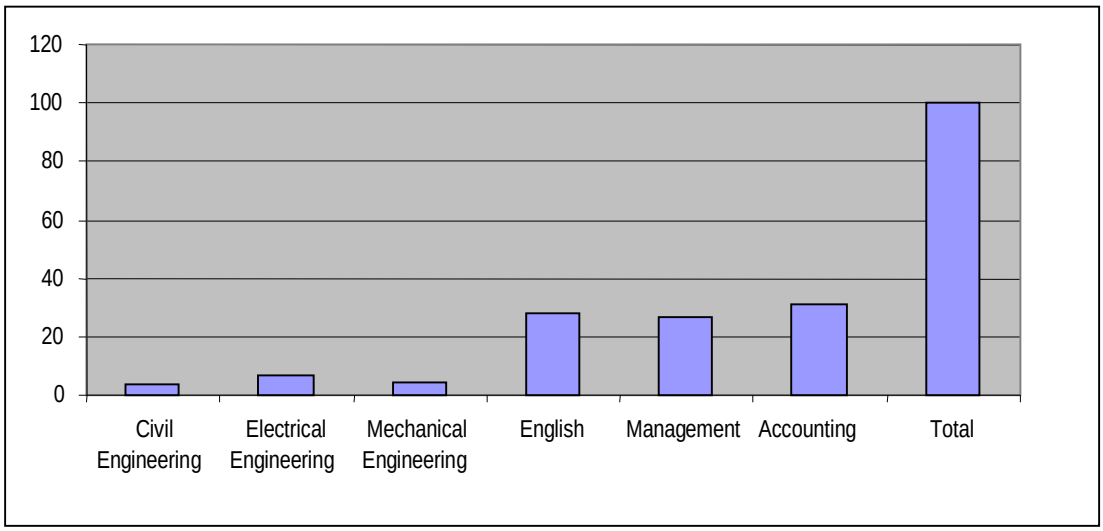
The traced respondents comprise 48% of the Faculty of Engineering, 60% Faculty of Economics, and 66% Faculty of Letters. Figure 9 shows that 548 respondents were from the Faculty of Economics, 166 from the Faculty of Letters, and 145 from the Faculty of Engineering. Cohort 2005 is the biggest proportion of respondents (38%), followed by cohorts 2003 (35%) and cohort 2001 (27%). The proportion tells that the older the cohort the more difficult it is to trace the respondents.

Figure 9: Target respondents by cohort



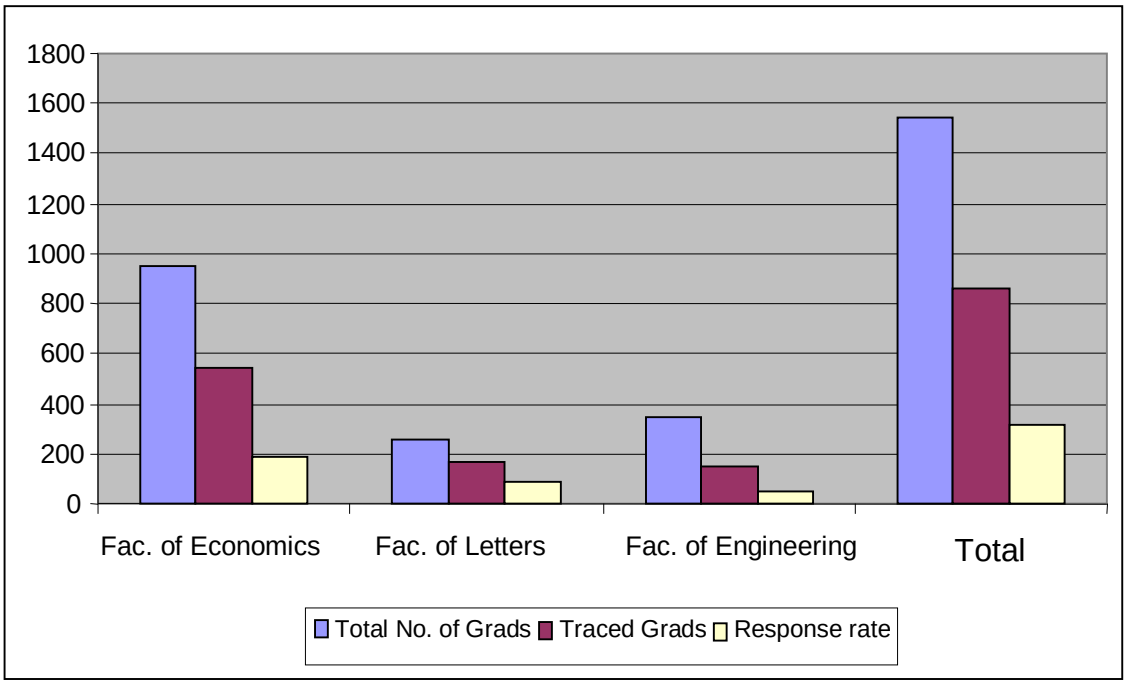
The response rate of the survey is 37% (out of 859 respondents), comprising 3% graduates from civil engineering study program, 7% from electrical engineering study program, 4 % mechanical engineering study program, 28% English study program, 27% management study program, and 31% accounting study program.

Figure 10: Response rate by study program (percent)



From cohort year 2001, there were 68 returned questionnaires (from 232 questionnaires), from cohort year 2003, 100 returned questionnaires (from 301 questionnaires) and from cohort year 2005, 151 returned questionnaires (from 326 questionnaires). From the experience of carrying out this tracer study, it is apparent that a good and updated data base of the respondents is a key to successful contact to the graduates. When this is fulfilled then the procedures of the first part of tracer studies, i.e. sending questionnaires and letters of reminder, will be done successfully. A poor data base will only result in difficulties of tracing the graduates.

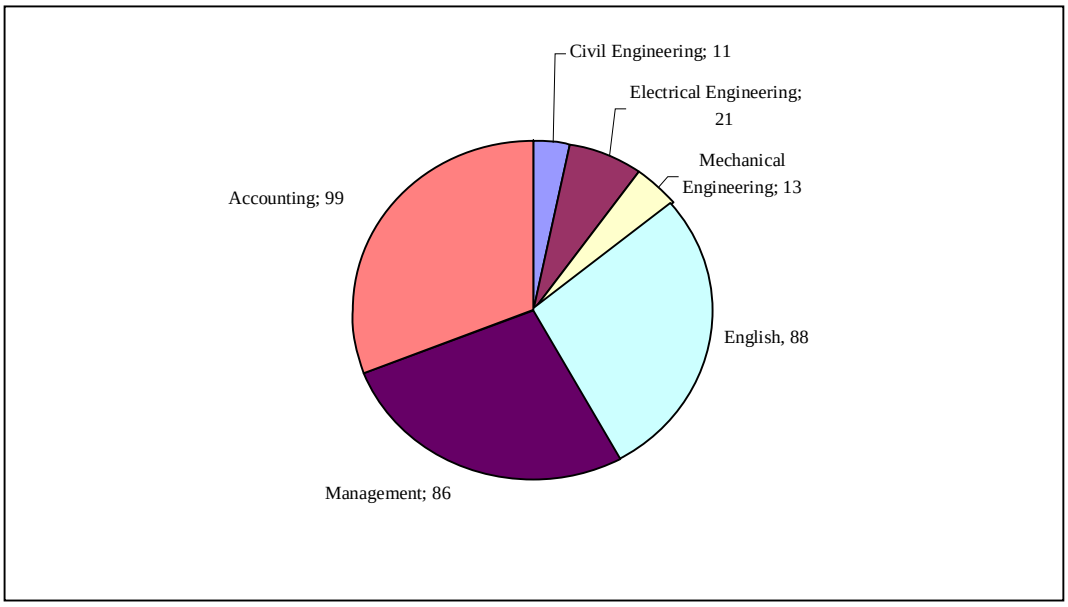
Figure 11: Number of graduates, traced graduates, and returned questionnaires by faculties



5.2. Profile of Respondents

There were 319 (37.2%) respondents in this survey. By study program, as Figure 12 shows, 99 respondents are from Accounting, 88 English, 86 Management, 21 Electrical Engineering, 13 Mechanical Engineering, and 11 Civil engineering.

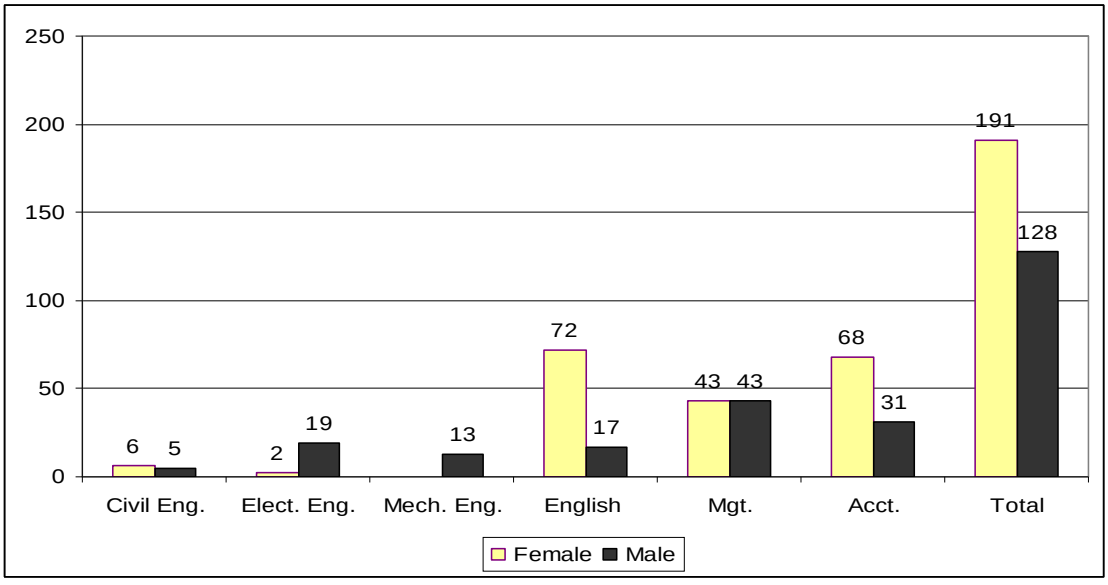
Figure 12: Number of respondents by study programs



Concerning gender perspectives, 40% were male and 60% female. The faculty of engineering is male domain while the faculty of Letters is female domain but there is no gender preference when the faculty of economics is concerned. The choice of study program in higher education has changes. In the faculty of engineering, for example, although the number of male students is still higher than female, they are no longer dominating. More female high school leavers do not hesitate to go to once male-dominated study programs, like mechanical engineering. Other study

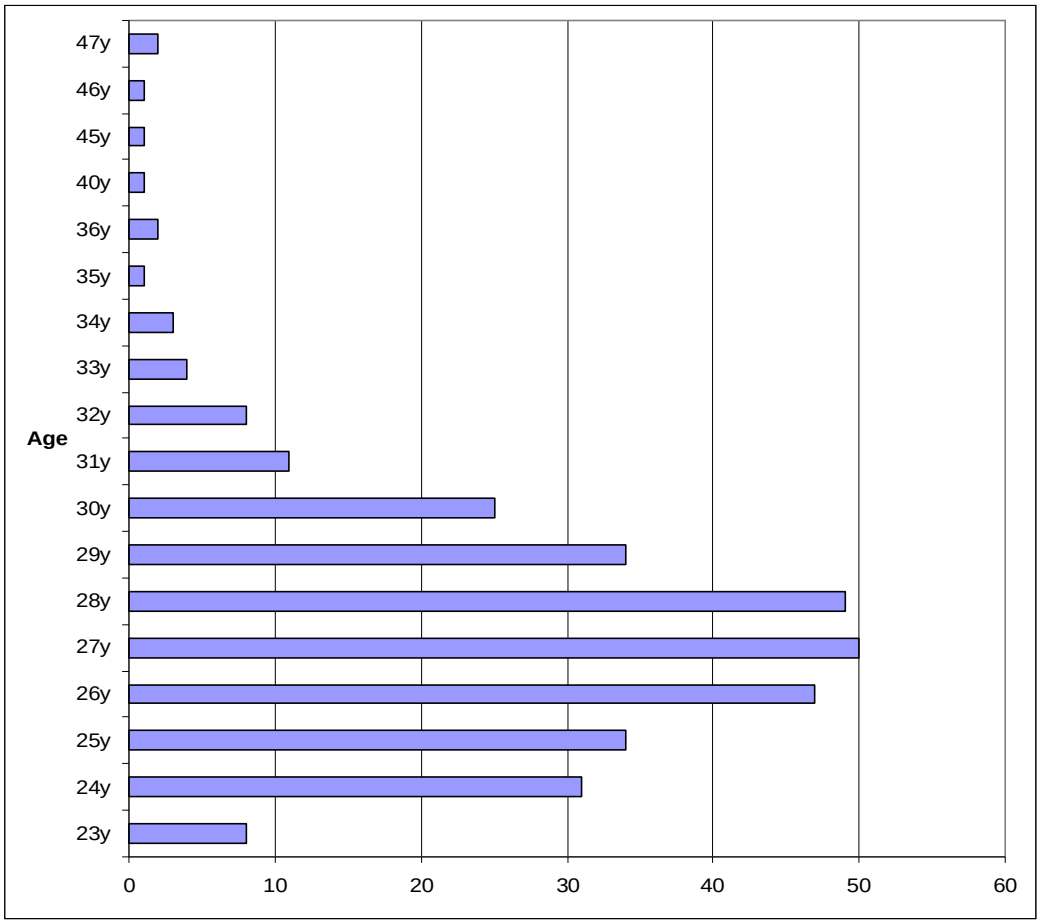
programs, such as civil engineering and electrical engineering have also admitted more female students. English study program at UKI and in other institutions, which is a female domain, admits more male students although the number has not exceeded the number of female students. In the faculty of Engineering, it is the mechanical engineering study program that has low percentage of female students; the highest has been 10% out of the total population. From Figure 13 below, it is clearly seen the gender domination in the study programs. Only mechanical engineering has no female graduates.

Figure 13: Gender by study program



Concerning the age of respondents, 46% of the respondents were between 26-28 years old, 11% 25 years old and 11% 29 years old, and 10% 24 years old; there were however, respondents who were above 40 years old by the time of the survey (Figure 14).

Figure 14: Age of respondents by 2007



As many as 282 respondents (89 %) held senior high school diplomas when they enrolled at UKI and 35 vocational school diplomas (11%). Before the new Indonesian higher education system was implemented, vocational school leavers were allowed to enrol at tertiary education only after two or more years of work experience. In addition to their vocational school diploma, their work experience will serve as equivalence to high school diploma. The present system, however, allows all secondary education graduates to enter tertiary education regardless their experience. The selection of study programs that vocational school leavers can choose depend on the major. Those in secretary, tourism or book keeping

majors can go to social sciences departments and those in technical or mechanical majors can go to the engineering department. Every year UKI admitted around 10% vocational school leavers from the total number of new students in 6 faculties, mostly in Letters, Economics, and Engineering; only the Faculty of Medicine does not admit vocational school leavers. The number is increasing because vocational school leavers have found that their diplomas are not sufficient to get jobs after they graduated.

Fifty seven percent (57%) of the graduates' GPAs (General Performance Average) were above 3.00 (1.00 – 4.00 scale-- with 4.00 as the highest), and only 5% was between 2.00-2.49 (Table 12). The calculation of the GPA is the total grade is divided by the number of credits taken during studies. The range of grade is 1-100 with the minimum passing grade is D (45 - 55 points) and the maximum is A (above 80 points)[27].

UKI follows the government regulations when it comes to GPA range as follows:[28]

a. 2.00-2.75 as satisfactory;

b. 2.76-3.50 as very satisfactory; and

c. 3.51-4.00 as with honour.

[27] Passing grade and range of grades is evaluated regularly and the present range is based on the government regulation on A (80-100), A- (75.0-79.9), B+ (70-74.9), B (65-69.9), B- (60-64.9), C+ (55-59.9), C (50-54.9), D (45-49.9), E (fail).

[28] Minister of National Education Decree No. 232/U/2000

Table 12: GPA at the time of graduation

GPA	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
3.75 - 4.00	0	0	1	1	4	3	9
3.50 - 3.74	0	2	1	4	3	14	24
3.00 - 3.49	5	7	5	35	34	45	131
2.75 - 2.99	4	4	2	28	23	16	77
2.50 - 2.74	1	4	2	8	11	6	32
2.00 - 2.49	1	1	2	4	3	3	14
Total	11	18	13	80	78	87	287

Question B11: What is your GPA (General Performance Average)?

The average requirement of GPA is around 2.75, however, it is a common practice that employers determine different requirement of minimum GPA for applicants from the state and private institutions. In many advertisements requirements for graduates from state universities differ from those from private ones. Companies require higher GPAs for graduates from private institutions, by 0.25-0.50. For example, a multinational company in Indonesia requires, among others, GPA >= 2.75 for graduates from state universities but >=3.00 for those from private universities. Employers argue that private institutions not only tend to give higher grades compared to the state institutions, but also had vast different ranges of passing grades. Although no studies have proven that graduate employees from private institutions were inferior in job performance compared to their state counterparts, this practice is still going on.

If the GPA average for employment alone is observed, then 72% graduates should not find difficulties in getting a job. But there are other requirements than just academic achievement that need to be observed.

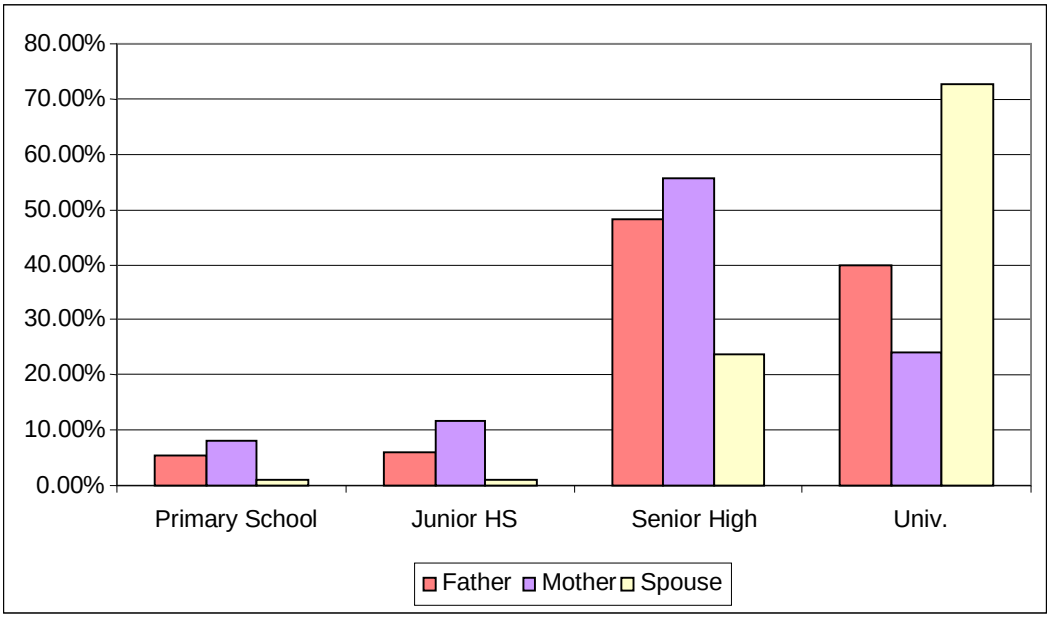
As many as 100 (31.3%) graduates completed their studies in 3.5- 4 years; 121 (38%) in 5 years; 59 (18.5%) in 6 years; 20 (6.2%) in 7 years; and 16 (5.1%) in 8-10 years. To earn a *Sarjana* degree, normally a student needs to take the requirement of 144 to 160 credit unit in around 4 to 5 year. The study shows that 69.3% completed their studies in the duration of 4 to 5 years. One of the graduates could complete it in 3.5 years, which is extraordinary. Although small in percentage, there were graduates who completed their studies in 6-7 years, but this does not necessary mean that they were less intelligent. There were cases where students wanted to upgrade their GPAs by retaking low grade courses in one or two semesters. The reason of upgrading GPAs is to broaden work opportunities when they graduate since more and more companies (and also government offices) require a GPA of >3.00 (scale 1.00 - 4.00, with 4 being the highest) to apply for a post. The policy allows it and the students benefit from it, but unfortunately, the institution does not because the above “average period” of study of the students is not a good record for accreditation purposes.

Figure 15 below shows the education background of the respondents' families: 48.3% of the respondents' fathers were senior high school leavers, 40% university graduates, 6.1% junior high school leavers and 5.5% primary school leavers. As

much as 55.5% of the respondents' mothers were senior high school leavers, 24% university graduates, 11.8% junior high school leavers, and 8.2% primary school leavers. 88 respondents were married at the time of the survey (27%) and 73% of their spouses were university graduates, 23.8% senior high school leavers, and 2.2% junior high school and primary school leavers.

The *Sarjana* status in Indonesian society has been a privilege since 1970s. More families invested their money not only in primary and secondary education but also in higher education, hoping that their social status will be increased with a child holding a *sarjana* degree in the family. They hope that the degree would open broader job opportunities if they were not lucky enough to become civil servants.

Figure 15: Parents' and spouse's education background

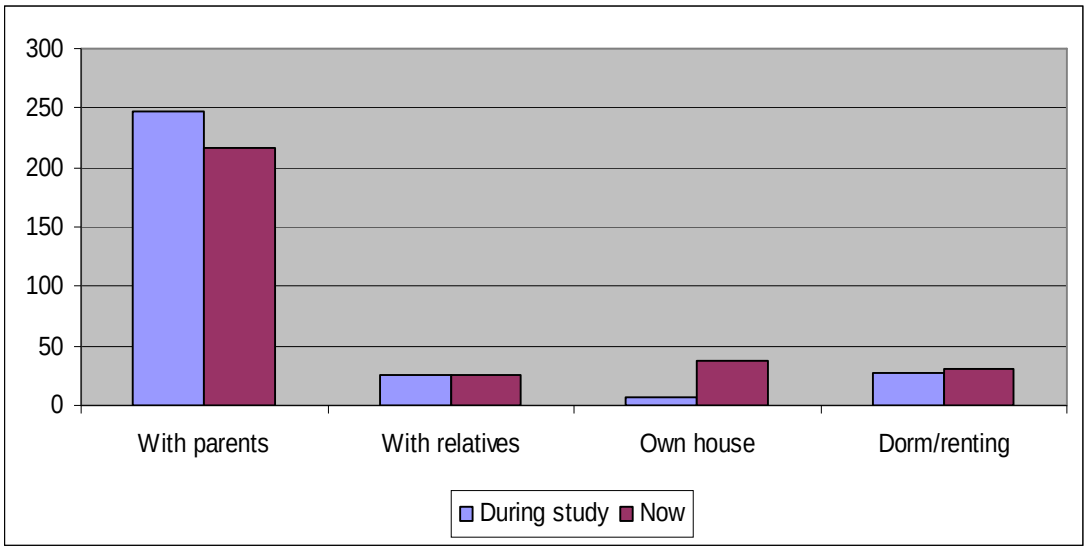


The figure also reflects the socio-economic background of UKI students. Most of them come from middle class families whose income ranges between 2- 5 million rupiah/month (approximately €142-357). UKI tuition fees belong to the middle level amongst the existing universities in Jakarta, between Rp. 8,000,000-13,000,000 (or € 550-900)/year excluding the Faculty of Medicine. High level universities charge above Rp. 15,000,000 (> € 1000)/year.

Where respondents lived during their studies and afterwards (Figure 16) reflects the general social reality of the people in Indonesia. The results of survey show that during their studies, 80.7% respondents lived with their parents and at the time of the survey 69% still lived with their parents.

In Indonesia and in most Asian countries, living with parents is considered common, especially when one is not married--only 27.6% of respondents were married at the time of the survey. The culture allows that, so having a house or living in separate house with parent is not really a must. The figure also shows that most of the respondents lived close to the campus because only as much as 8% respondents living in rented house/room during their studies. Students usually rent a room nearby the campus if their families do not live in the same town or far from the campus area. At the time of the survey, as much as 22% lived in their own house or rented house.

Figure 16: Respondents' residence



5.3. Transition to Employment and Current Work

Transition from higher education to work can be a very difficult phase for graduates because it is the time for the job search. This begins from the time of graduation up until they finally get their regular employment, hopefully with occupations that match with their level of education and field of studies. The process of finding a job can be as short as several days to more than 12 months, depending on the availability of graduate jobs that the graduates are searching for or whether the graduates will settle for the jobs lower than their qualifications.

The UKI graduates also experienced the transition period after they graduated until they got their regular employment. Some were lucky enough to find the jobs at a very short time, some were not. In this part experiences of the graduates of the three groups (professional, semi professional and non professional) will be

investigated. Eighty four percent (85%) of respondents stated that they worked and only around 15% did not work at the time of the survey. Seventy percent (70%) of the respondents worked in private companies, 10 % in state or public offices, and 7 % had their own business.

Table 13*:* Graduates' status (percent)

	Study Programs						Total
Work status	CE	EE	ME	Let.	Mgt	Acct	
Yes	73	90	92	80	81	92	85
No	27	10	8	20	19	8	15
Total	100	100	100	100	100	100	100

Question D1: Are you currently working?

As for methods of job search, 88% respondents looked for job advertisements in newspapers or magazines, 62% from the internet, 58% from their relatives or friends, and 33% from the job fair--regularly exhibited for the past 5 years in big cities in Indonesia. Although most of respondents stated that looking for a job in advertisements in newspaper/magazine and fliers were the most common methods, 33% respondents were convinced that connections was also an important method of job search, followed by advertisement in the newspaper (31%), internet (11%), 8% alumni organization (8%), and networking during their study period (7%).

Table 15: Method of job search (percent; multiple responses)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct	
Advertisement in newspaper/ magazine, fliers	91	100	100	86	88	86	88
Contacting companies without checking for vacancy	18	10	8	1	8	7	9
I went to Job fair	27	60	23	36	34	24	33
I searched in the internet	64	80	69	60	62	59	62
The company contacted me	0	10	15	21	17	14	16
I contacted work agencies	9	0	0	5	9	3	5
I contacted commercial work agencies	0	0	8	4	9	1	4
I had infos. from the alumni organization	9	10	38	4	5	4	6
I contacted the office of students' affairs	0	0	0	0	0	1	0
I built networks when I studied	9	0	8	9	7	10	8
Connections (parents, relatives, friends, etc.)	55	50	46	58	66	55	58
I established my own business	9	0	0	5	3	1	3
Internship during studies	0	0	8	2	1	5	3
Others	0	15	0	1	4	1	3
Total	291	335	323	302	313	272	298

Question C3: How did you search your first job? (Multiple responses)

Only 3% searched their first job through work placement or internship during study. Work placement and internship are actually not obligatory as it is in the non-degree programs and study programs of the Faculty of Education and Teacher's Training. For other sarjana programs, work placement and internship are electives.

It is, however, interesting to note that the office of student affairs was not the place for seeking information on job vacancy because none of the respondents stated that they got any information from that office. The office of student affairs' duties, are, among others, to organize students' activities or job fair. The fact that none of the respondents contacted this office for this purpose proves that the office has neglected its role in facilitating contact between senior students or graduates with prospective employers. This office needs to facilitate not only intra and extra curricular activities but also other activities which are related to future employment for the students, for example, organizing career expos or job fairs where the graduates meet their prospective employers.

The 15% unemployed graduates stated that their reasons for not working were:

(a) (still) looking for jobs (47%),

(b) married and busy with the family or raising children (21%), and

(c) continuing studies for higher degrees or taking additional courses that lead to competencies (9%).

The first reason, (the graduates are in the process of) looking for jobs, is a typical response for someone who does not have any job. It sounds much better than if one has to admit that he/she actually unemployed. 47% of the unemployed graduates were from the cohort 2005, 32% from cohort 2003 and 21% from cohort 2001.

The 47% unemployed graduates from cohort 2005 indicated that transition period was not very easy. They tried to fit in among other job seekers from various education backgrounds. To make things worse, fresh graduates sometimes postpone the job search for some time after graduation because they want some time to relax before they start their activities in their workplaces. What they are not aware of is that in academic year 2005/2006 alone, there were around 323,895 new graduates from the state and private higher education institutions Indonesia. The longer they postponed their job search, the more intense the competition because more job seekers enter the labour market.

During their transition from education to employment, also known as job search period, graduates had different experiences. Most of graduates searched for their first jobs right after they completed their studies (91% civil engineering, 95% electrical engineering, 100% mechanical engineering, 81% English, 82% Management, and 91% Accounting). The duration of time they needed for this activity was approximately 5.8 months, with a minimum of Ø month and a maximum of 48 months. The non professional graduates spend the least time in searching their first job. English graduates used approximately 5.2 months to look for the job, followed by accounting 5.3, management 5.5, mechanical engineering 7.3, civil engineering 8.2, and electrical engineering 8.8.

Table 15*: Duration of first job search (in months)*

Duration of job search (in months)	Study Program						Total
	CE	EE	ME	Let	Mgt	Acct	
.00	1	0	0	5	1	0	7
1.00	0	7	2	15	11	21	56
2.00	1	0	1	8	12	11	33
3.00	0	0	2	7	11	7	27
4.00	0	1	1	4	6	8	20
5.00	0	2	1	5	3	8	19
6.00	3	3	2	11	7	12	38
7.00	2	0	0	7	3	3	15
8.00	0	1	0	0	2	3	6
9.00	1	0	0	1	2	3	7
10.00	1	0	0	1	4	2	8
11.00	0	0	0	0	0	1	1
12.00	0	1	1	4	8	5	19
13.00	0	0	0	0	1	0	1
14.00	0	0	2	0	0	0	2
15.00	0	0	0	1	1	0	2
16.00	0	1	0	2	0	0	3
17.00	1	0	0	0	0	0	1
20.00	1	1	0	0	0	0	2
24.00	0	1	1	1	0	4	7
36.00	0	0	0	1	1	0	2
48.00	0	1	0	0	0	0	1
Total Graduates	**11**	**19**	**13**	**73**	**73**	**88**	**277**

Question C6: How many months did you spend in searching for the first job before or and after you were graduated?

In recruiting employees, graduates believed that employers took computer operation (95%), personality (93%), and English proficiency (88%) into consideration. GPA, reputation of university, study background, and specialization were also considered, although low. Overseas experiences (for working or internship purposes) were not really considered by employers (35%).

Table 16: Employers' recruitment criteria by field of study (percent; multiple responses-- responses 4 and 5)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct	
Study programs	82	86	85	73	71	78	76
Specialization	82	81	85	75	77	71	75
Grades/GPA	91	81	85	81	87	87	85
Work experience during studies	55	57	77	65	66	63	64
Reputation of institution	82	76	92	74	77	89	81
Overseas experience	36	29	46	44	34	29	35
English Proficiency	82	86	92	99	84	81	88
Other foreign language proficiency	55	75	62	69	65	57	64
Computer operation	100	86	92	94	96	98	95
Reference from third party	45	38	38	58	56	62	56
Personality	100	95	85	95	89	96	93
Others	0	80	100	87	100	80	89

Question C7: According to your perception, to what extent are the following considered by employers in recruiting you?

More than half of the graduates (60%) had regular employment after graduation; 13%) graduates had many temporary jobs; 13% continued studies or took professional courses; and 9% had no jobs most of the time.

Private companies, the highest as the type of office where graduates worked, and if other than government offices is grouped into private, then 90% graduates worked in private offices. Observing from the cohort, the results were similar. 65% cohort 2001, 77% cohort 2003 and 67% cohort 2005 worked in private office. Only 12%, 8%, 10% from each cohort worked for the government.

Table 17: Types of office (percent)

	Study Programs						Total
	CE	EE	ME	Let.	Mgt	Acct	
Public	20	21	15	4	15	7	10
Non-govt. organization	0	5	0	1	1	1	1
Private	40	68	77	65	75	74	70
Self-employment	10	5	8	7	4	8	7
Others	30	0	0	23	4	10	12
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Question D4: Please state the kind of organization you currently work for (if you have more than one, state only the main employer)

Only 7% of the graduates run business (the types of businesses and the characteristics of their business are described in (Table 18). Although the kinds of businesses they were in is not clearly stated, 44% of them run business in partnership with friends or relatives, 41% own a store and 25% established a new firm or office. Most of the graduates who run businesses had employees (95%). Starting a small scale business like opening a shop is actually a good choice for persons with limited capital who want to start a business in their house.

Table 18: Characteristics of business by field of study (percent; multiple responses)

	Study Programs						Total
	CE	EE	ME	Let	Mgt	Acct	
I have a small contractor	67	33	14	0	6	5	9
I took over an existing firm	0	0	14	7	0	8	5
I established a new firm/ office	100	11	29	25	19	26	25
I own a shop/store	0	33	0	29	52	54	41
I work in my house	0	11	29	11	6	8	9
I have no employees	0	11	14	4	3	5	5
I have a partnership with friends/relatives	67	67	14	46	55	31	44
Others	0	0	14	14	10	8	9
Total	233	167	129	136	152	144	147

Question D8: If you are self-employed, pls explain the characteristic of your business: Multiple answer possible

Despite the fact that nowadays higher education seems ‘not promising’ people still spend (several authors use the word 'invest' to give a strong emphasis on the meaning) more money on higher education because as Altbach (1999: 107) puts it "a degree from a postsecondary educational institutions is increasingly seen as a necessity for economic success". Economic success means good career, good remuneration and other beneficial facilities, etc. In Indonesian context, the degrees, as they are not always associated with good career or good remuneration, they, at least, elevated the bearers’ social status.

Table 19 portray the situation of graduate salaries. In general 62% graduates earned Rp. 1-2.5 million[29]/month, and 23% earned Rp. 2.5-5 million/month and only 1% had a salary as much as 15.0 million rupiah. For fresh graduates, it is common to earn Rp. 1-2.5 million a month as a secretary, administrative staff, or school teacher. It is, however, disappointing to find that there was as much as 7.7% graduates that still earned less than 1.00M (<69 €), an insufficient amount of money for someone who live in a capital city, Jakarta.

Table 19: Overall income/month by field of study (percent)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct	
Less than 1,000,000	0	5	15	15	9	1	8
1,000,000 – 2,500,000	50	47	54	56	71	65	62
2,500,000 – 5,000,000	50	21	23	24	13	30	23
5,000,000 – 7,500,000	0	16	8	4	4	2	4
7,500,000 – 10,000,000	0	5	0	0	3	2	2
10,000,000 – 12,500,000	0	5	0	0	0	0	0
More than 15,000,000	0	0	0	1	0	0	0
Total	100	100	100	100	100	100	100

Question D9: What is your approximate overall monthly income (including bonuses)?

As for distribution of income, 69% graduates from cohort year 2005 earned Rp. 1-2 Million/month at the time of the survey. This is a common salary condition for cohort 2005 considering that they just started their work but the fact that there was

[29] Rp. 14.000 = € 1,00

still 63% of cohort 2003 and 47% of cohort 2001 earning that much was not a good indication because graduates from cohort 2003 and 2001 are supposed to be in a steady career track 4 and 6 years after the graduation. The data, however, shows an interesting fact that a graduate of English study program, the non-professional study program graduate, earned the highest, i.e. Rp. 15.00 million/month (Table 20).

Table 20: Distribution of income by the year of graduation

Year of graduation	Monthly income							Total
	< 1 M.	1-2 M	2.5- 5 M	5 - 7.5 M	7.5-10 M	10-12.5 M	> 15 M	
2001	1	28	27	2	1	0	0	59
2003	8	54	16	6	2	0	0	86
2005	12	85	21	4	2	1	1	123
Total	21	167	64	12	5	1	1	271

The mean of the use of English and other foreign languages was moderate, the former was 3.3 and the latter 1.9. While the national language was the highest 4.8, the use of vernacular is high for graduates of electrical and mechanical engineering study programs but low for civil engineering, English and accounting study programs. The competency of vernaculars is found useful especially when one works in remote areas where local languages are more frequently used than bahasa Indonesia (Table 21).

Table 21: Use of languages by field of study (arithmetic mean)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct	
Vernacular(s)	1,6	2,4	2,6	1,9	2,0	1,9	2,0
Bahasa Indonesia	4,9	4,8	4,5	4,8	4,9	4,8	4,8
English	2,9	3,4	3,1	3,9	3,0	3,0	3,3
Other foreign language	1,0	1,5	1,5	2,5	2,2	1,5	1,9

Question D12: To what extent do you communicate *(oral and written)* with other parties?

5.4. Relationship between Higher Education and Work

Despite the fact that most of the graduates earned moderate wages, satisfaction rate of the graduates can be described as not too disappointing. 59.1% graduates found that their work were satisfactory. 76.2% graduates earning 2.5-5.00M were satisfied with their work. Surprisingly, 51.2% graduates earning 1.00-2.5 M were too. According to fields of study, more than 75% graduates were relatively satisfied with their works but 60% of English graduates were the most satisfied with their work, 56% of Electrical Engineering and Mechanical Engineering graduates were satisfied with their work, Civil Engineering graduates were found to be the least satisfied (36%).

Table 22: Work satisfaction by field of study (percent; arithmetic mean)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct.	
Work Satisfaction							
Very dissatisfied	0	0	8	2	5	3	3
2	9	16	17	5	9	6	7
3	55	26	17	33	33	36	33
4	36	37	33	43	43	43	42
Very satisfied	0	21	25	17	11	12	14
Total	100	100	100	100	100	100	100
Count	(11)	(19)	(12)	(82)	(80)	(90)	(294)
Recoded values							
1,2	9	16	25	7	14	9	11
3	55	26	17	33	33	36	33
4,5	36	58	58	60	54	56	56
Arithmetic mean	3,3	3,6	3,5	3,7	3,5	3,6	3,6

Question H1: Altogether, to what extent are you satisfied with your current work?

However, when the graduates were asked if the current work was related to their studies or not, only 37% stated that their fields of study were the only possible/by far the best field, for 36% of the graduates other fields of study could also prepare for the job, 17% stated that the field did not really matter much, and 5% stated that other fields of study could work better in the job. According to study programs, 41% English graduates stated that other fields of study could also prepare for their jobs. It is not surprising since English is considered non-professional study program, meaning, with additional skills in addition to English, they are able to work in various fields. For instance, with certificates of public relations courses, an English graduate can apply as a graduate to fill up the position in a public relations office; to fill the position of English language teacher in a high school, he or she is competent enough to teach especially with an additional teaching

certificate; etc. With a general competency like English language, in fact one can be more flexible to find a job.

However, it was interesting to note that 47% Electrical engineering and 38% Mechanical engineering graduates also stated that their fields of study did not matter very much to their work. The survey shows that 52.7% graduates worked as regular (marketing, purchasing, administrative, etc) employees. Banking and other finance are the economic sectors that employ many graduates therefore it is common that fresh graduates seek career in those sectors regardless of their study background. There were 52 graduates (20%) of all study backgrounds (but civil and mechanical engineering), who worked in banks, finance, and insurance companies and 86% of whom were management and accounting graduates, 11.5% english, and 2% electrical engineering.

Table 23: Fitness of study background to work (in percent)

	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
My field of study is the only possible/by far the best field	55	29	18	30	35	45	37
Other fields of study could also prepare for this kind of job	18	47	9	41	34	36	36
Other fields of study could work better in this kind of job	9	6	9	4	9	0	5
The field of study does not matter very much	9	18	36	19	18	15	17
Higher education studies are not at all related to my area of work	9	0	9	4	5	2	4
Others	0	0	18	1	0	2	2
Total	100	100	100	100	100	100	100

Question G2: Is your current work related to your study background?

As much as 74% of the total graduates agreed that *Sarjana* degree was the most appropriate level for their jobs and only 1% agreed that their jobs could also be done by a non-*sarjana* holder. 80% english graduates and 78% accounting graduates believed that their level of education fits for the work. With the degrees, ideally they were in middle management positions but the reality showed that not all graduates were hired according to their qualifications. More than half of the graduates (57.5%) were ordinary employee/staff in administration (finance, customer service, marketing, accounting, etc.).

As much as 19% graduates believed that diploma (non-degree) or lower were the most fitting for their jobs (33% Electrical engineering graduates and 27%

mechanical engineering graduates believed that non-degree graduates were the most fitting for the jobs). Although they thought that they were over-qualified for the jobs, only 9% stated that they had not got a better job. Graduates are sometimes left without many choices when employment is concerned. Without additional competencies it was likely that they will take any kind of employment offered to them as long as they earned their regular income.

Table 24: The most fitting level of education for work by field of study (percent)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct	
Higher than *Sarjana*	18	6	0	7	5	4	6
The same level	64	61	64	80	70	78	74
Non degree program (*D3*)	0	33	27	12	17	17	16
A lower level than tertiary education	0	0	9	1	4	0	2
Not a *Sarjana*	9	0	0	0	4	0	1
Others:	9	0	0	0	0	1	1
Total	100	100	100	100	100	100	100

Question G3: What is the most appropriate level of degree for your current employment and work?

It is clear that in their employment, the graduates faced a mis-match between their level of study and level of assignment or between their field of study and occupational categories or both. In this survey, only as much as 29% graduates stated that their job was closely linked to the study, others stated the opposite, i.e. their employment and work were not appropriate or linked to their education background, and the reasons vary with several highest percentage: (a) they could

not find a job more appropriate (35%); (b) they got more income in that job (32%), (c) the job was more interesting (26%); (d) it had better career prospect (28%); (e) it offered more security (20%); (f) at the beginning was forced to accept the job (17%); and (g) preferred a job not related to study (13%) (Table 25).

Compared to professional study programs (CE, EE, ME) and semi professional study program (Mgt, Acct), non-professional study program (Letters--English) found that their jobs were closely linked to their studies (by 32%) simply because of the English language that they frequently used at work: 26% worked as (English) teachers, 8% as secretary, 6% as interpreter and magazine editor.

It is worth noting that there were 3 reasons that made mechanical engineering graduates accept the jobs not appropriate to their study background, i.e. (1) they had not (yet) been able to find a job more appropriate (75%), (2) they got higher income in their current jobs (58%), and (3) they had better career prospects (42%).

Table 25: Reasons for taking the employment not linked to education (percent; multiple responses)

	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct	
I have not (yet) been able to find a job more appropriate	22	38	75	19	42	37	35
In doing this job I have better career prospects	22	31	42	29	26	25	28
I prefer an occupation which is not closely connected to my studies	11	25	8	14	10	13	13
I was promoted to a position less linked to my studies than my positions	0	0	0	3	6	1	3
I can get a higher income in my current job	22	25	58	22	38	35	32
My current job offers me more security	22	25	25	17	22	20	20
My current job is more interesting	0	19	25	39	25	21	26
My current job provides the opportunity for part-time/ flexible schedules etc.	11	13	17	12	17	13	14
My current job enables me to work in a locality, which I prefer	11	0	8	7	3	8	6
My current job allows me to take into account family needs	11	6	0	6	10	8	8
At the beginning of the career I have to accept work hardly linked to my study	22	25	25	12	25	11	17
Others	0	13	8	7	5	10	7
Not applicable, I consider my job closely linked to my studies	44	31	17	32	25	30	29
Total	**200**	**250**	**308**	**219**	**253**	**232**	**239**

Question G4: If you consider your employment and work as hardly appropriate and not linked to your education: why did you take it up? *Multiple replies possible*

When the graduates were asked to put priority in several aspects, such as, prestige, personal development, family, money and academic achievements, they put all aspects in high priorities except for academic achievement, which

decreased slightly in comparison to the priorities at the time of graduation. As shown in Table 26 shows personal achievement (money, work and personal development) ranked (slightly) higher than social development (social life, family and prestige). This is natural concerning 88% of the respondents were between 24-28 years old and they just started their career or work at the time of the survey.

Table 26: Priority at the time of graduation and at the time of survey (percent; responses 4 and 5)

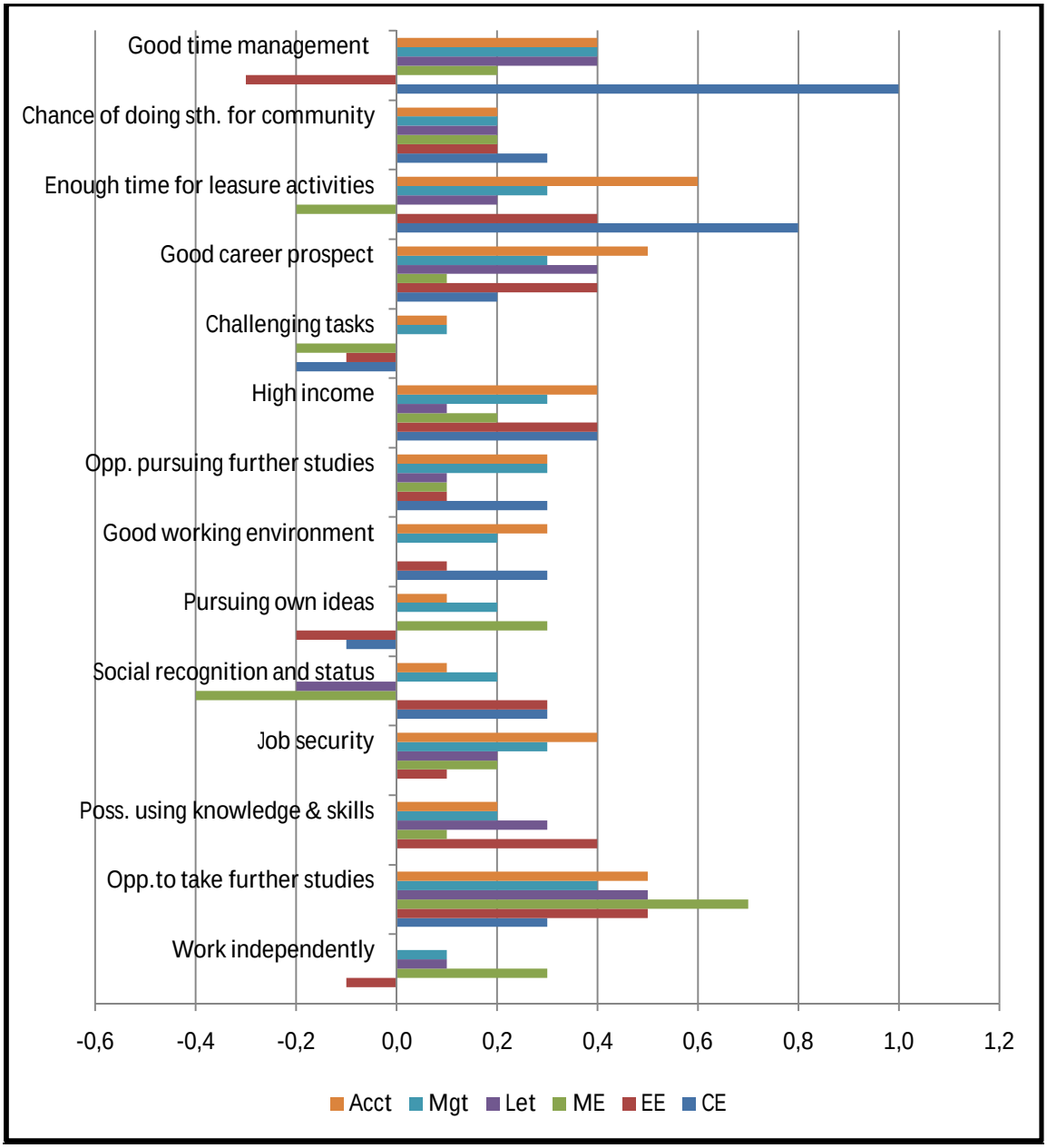
	Study Program						Total
	CE	EE	ME	Let.	Mgt	Acct.	
Prestige	82	47	46	67	65	72	66
Personal development	91	100	92	92	88	89	90
Social life	100	95	100	86	84	84	86
Family	100	95	92	92	88	84	89
Money	100	95	92	89	92	86	90
Academic achievement	91	79	54	75	77	76	76
Work	100	100	100	96	96	87	94

Question H2B: Please indicate to what extent are the following goals you place now.

When asked about aspects which are considered important to the graduates personally and also important in their current professional work, respondents were asked to grade it according to degree of importance. Figure 17 presents several aspects that were important to graduates personally and to their current professional work. From all of the aspects, the graduates confirmed that according to their opinions their expectations about work independently, social recognition and social status, and challenging tasks met with the expectations of their

professional works. The graduates' expectation to take further study was high but the opportunity was low in their professional work. Further study is considered a formal education and in their respective jobs, higher qualifications were not important for their work.

Figure 17: Important aspects according to personal opinion and to current professional work (arithmetic mean)



Question H3_How important are the following to you personally (PART A) and to your current professional work (PART B)? *If you are not employed, answer only PART A.*

5.5. Competencies

Chapter 2 of this thesis has described selected literature that discusses competencies in general in international and national contexts and how important they are in work settings. Many authors emphasize that acquisition of competencies is indispensable in addition to field-specific knowledge or disciplines. They contribute significantly to successful work and career after higher education training. Nowadays, employers want not only employees who can work diligently but also grow with their companies. Knowledge or technical skills alone cannot guarantee that graduates get employed or have a good career prospect as far as the growth of the companies is concerned. They need to have additional values for employment, i.e. personal attributes, interpersonal skills, communication skills and knowledge (Harvey, 2003) or general competencies and social communicative skills (Teichler, 1998). It is necessary for a graduate to possess both knowledge and skills for a smooth transition to work and when they are at work. Harvey (2003) particularly emphasizes that personal attributes help organizations deal with change. Hodges et al (2003: 18) also add that today's graduates need to understand that their attitude to work is as important as the work itself.

Competency here is understood as a combination of technical skills and non-technical skills or a combination of 'hard skills' and 'soft skills.' Wojtczak (2002)[30]

[30] http://www.qualityresearchinternational.com/glossary/competence.htm

defines competency in generic terms as "possession of a satisfactory level of relevant knowledge and acquisition of a range of relevant skills that include interpersonal and technical components at a certain point in the educational process. They are necessary to perform the tasks that reflect the scope of professional practices." In order to be successful in transition period and at work, graduates should be aware that knowledge or technical skills that they have is not sufficient to keep them employed. Knowledge is just one, others--personal and interpersonal skills-- are just as important as the knowledge itself and is usually not given priority during study time but is found most important for work. In the past employers trained their employees in the practice of these essential "soft skills" but now they believe employees are responsible for acquiring them (Hussey in Bowles, --). When employees are supposed to be responsible for acquiring them, higher education institutions should also take part in preparing the students for their workplaces.

This part will discuss about the competencies of UKI graduates. There are 32 questions about competencies in the questionnaire that were put into three groups, namely, knowledge, personal competencies and interpersonal competencies. The respondents were asked to measure their competencies, according to their perception, at the time of graduation and the required competencies at work in a 5-point Lickert scale.

The three groups of competencies are divided as follows:

1. Knowledge: general knowledge, knowledge of their study background or discipline, knowledge of other fields or disciplines, English, and computer operation (for office);
2. Personal competence or "personal attributes": creativity, problem solving ability, learning ability, working under pressure, time management, fitness to work, working independently, analytical ability, ability to take responsibility, initiative, loyalty and integrity, ability to present ideas/product/report, planning coordinating. and execution, ability to document ideas and information, ability to write reports, memos, documents, and continuous learning ability;
3. Interpersonal competencies or "people skills": working with other people/ team working, negotiation, tolerance, adaptability, assertiveness, persistence, appreciating different points of views, understanding of the system values in the society, leadership, and communication skills.

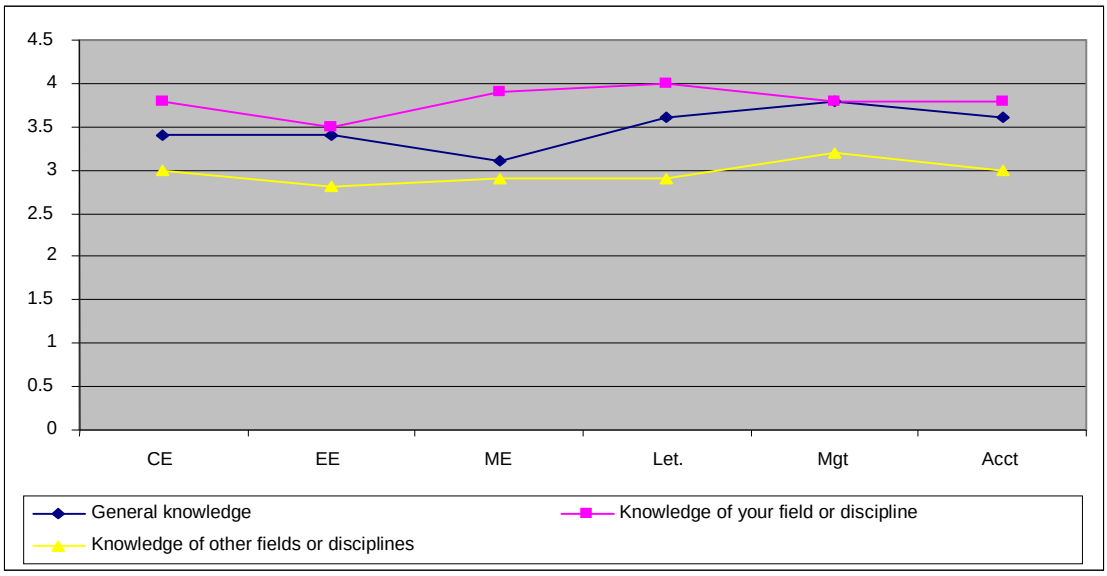
The answers were analysed according to study backgrounds to see the differences of acquisition of competencies and competencies as work requirement between the fields in percentage and arithmetic means.

5.5.1 Competencies at the time of graduation and required at work

Considering knowledge, all graduates believed that knowledge, be it general knowledge, field specific knowledge or knowledge of other field of study, was

considered important as shown in Figure 18. For Mechanical Engineering and English graduates, knowledge of their fields or disciplines was more important while Electrical Engineering, Management and Accounting graduates believed that general knowledge and knowledge of their fields were almost equal. In general, the graduates thought that knowledge of other discipline, although considered important, was not as important as general knowledge.

Figure 18: Importance of knowledge



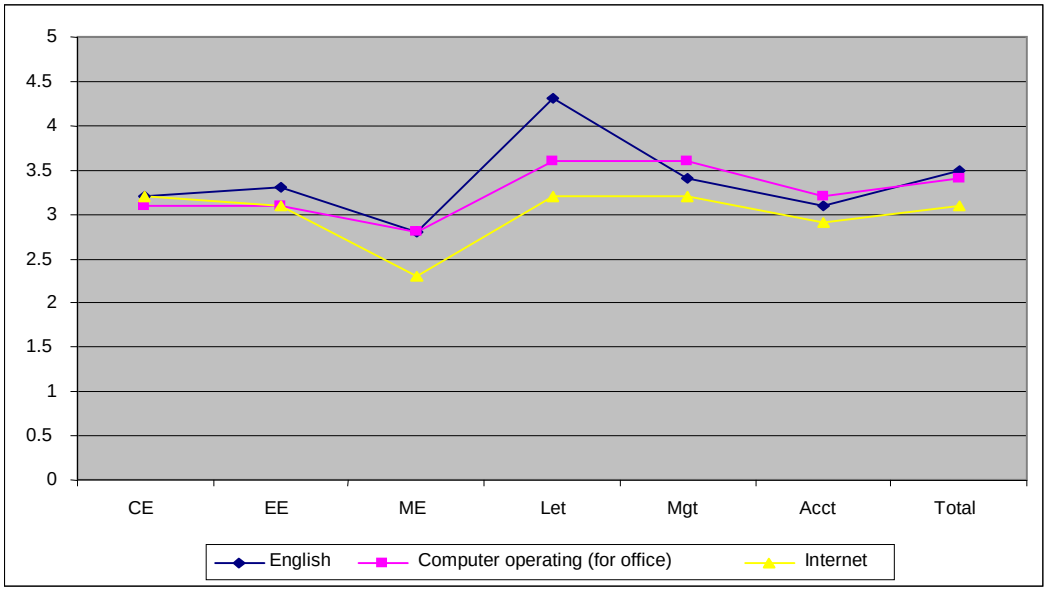
There are three technical skills which are important for work: English, computer operation and internet. The three courses are obligatory in all fields of study at UKI, although time allocation for each subject is not sufficient to give them enough knowledge to be applied in the future. The time allocation of English is even worse since only 4 credit units[31] are allocated for English. With a very low cutting

[31] Each credit unit is equal to 50 minutes classroom learning, 50 minutes structured and 50 minutes individual leaning

score for English in the entrance examination, more time should be dedicated for English studying.

The results of the survey proved that the three skills were very important for work. The graduates believed that the three skills were important although for mechanical engineering graduates, internet was considered the least importance compared to other responses. Civil Engineering graduates thought that English, computer operating and internet were of equal importance while for English graduates, English was the most important and internet was the least; for Electrical Engineering graduates, English was also more important than computer or internet. Except Civil Engineering and Electrical Engineering graduates, they thought that internet was the least important compared to the other two skills (Figure 19).

Figure19: Technical skills: English, computer and internet at the time of graduation



All graduates stated that their skills in word processing/MS Word and spreadsheets were proven to be highly proficient; programming language, data base and subject-specific software were considered to be low in proficiency. However, it was intriguing to find that proficiency of computer skills in programming language--data base and field-specific software--were absent in graduates of the faculty of engineering, especially for mechanical engineering study program (0%).

Nowadays, the use of computers in teaching and learning activities at every level of education system is getting more common, in big cities especially. Therefore, at the tertiary level, each study program offers more specific computer operation courses which are related to their studies. For example CAD (Computer Aided Design) is offered in engineering study programs and *Accurate* is offered in the accounting study program. For students of engineering study programs, computer operation skills are everyday business and the number of credits in the curriculum (office and other programming languages) is higher than those of other study programs in other faculties. Therefore it is not understandable why they rated their computer skills at the time of graduation were lower compared to graduates of other study programs.

Table 27: Computer operating skills and other computer programs at the time of graduation (arithmetic mean)

	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Word processor/MS Word	3.5	3.8	3.6	3.6	3.7	3.7	3.7
Programming Languages	2.3	2.8	2.7	2.4	2.6	2.4	2.5
Spread sheet/Excel	3.1	3.3	3.4	3.0	3.3	3.4	3.2
Data base	1.7	2.5	2.2	2.3	2.7	2.6	2.5
Software related to field of study	1.9	2.6	2.9	1.7	2.2	2.1	2.1

Question E4A: How do you rate software capability at the time of graduation?

In Table 28 below, we can see the percentage of graduates' competencies of computer applications at the time of the survey. It is clear that the gap was wide, even for typical office computer applications as word processors and spread sheets. In general, the graduates' competency in word processor/MS Word was 89% at the time of the survey, increasing 34% from the graduation; spread sheet/Excel was 80% at the time of the survey, increasing 42% from the graduation, it is apparent that this skill is used at work therefore the degree of skill increased significantly. The significant increase is seen particularly in civil engineering and electrical engineering graduates (by 100% at the time of the survey). For field-related software, the increase is found in graduates of civil and electrical engineering but not so much in mechanical engineering graduates (3% difference).

Table 28: Computer operating skills and other computer programs at the time of survey (percent)

	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Word processor/MS Word	100	100	70	88	87	91	89
Programming Languages	45	21	33	45	51	39	43
Spread sheet/Excel	91	89	70	76	79	83	80
Data base	36	42	20	33	52	48	43
Software related to fields of studies	55	63	30	18	29	35	31

Question E4B: How do you rate *software* capability ar present time?

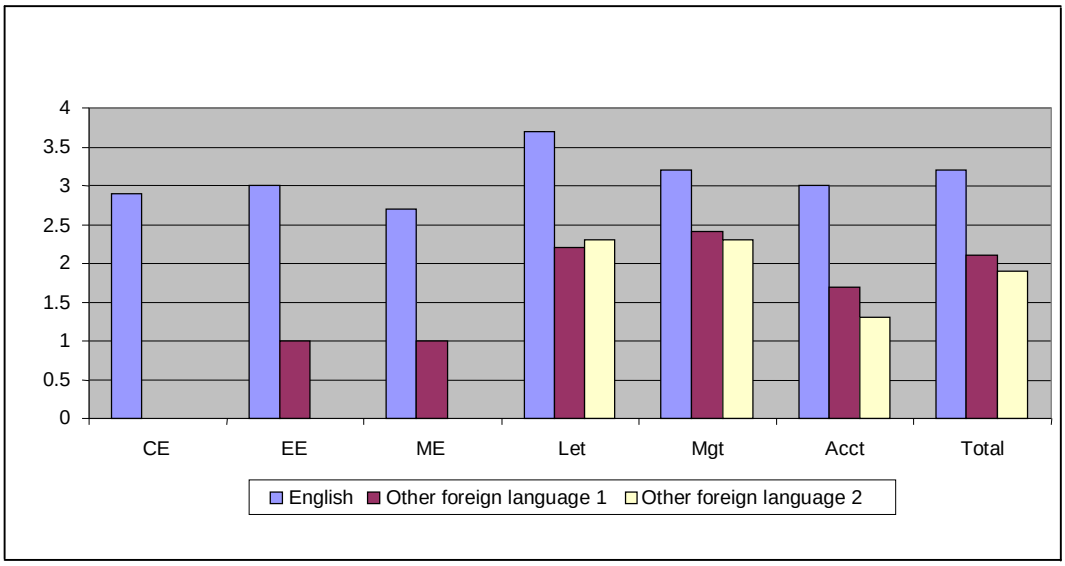
All graduates' proficiency in English was high but low in other foreign languages. The graduates' proficiency in English in general was above average (3.2). Only graduates of Letters stated that their proficiency in English was high (3.7), Civil Engineering graduates stated that only English was their other language aside from bahasa Indonesia; Letters, Management and Accounting graduates stated that they were proficient in three foreign languages, the second and third to be Mandarin (Chinese), Japanese, French, Korean, or German.

English is the first foreign language in Indonesia and a compulsory subject starting from 7th. up to 12th grade with a minimum of 4 to 6 credits per week depending on the level. At the tertiary level, other than English study program (at the Faculty of Letters), the compulsory minimum requirement for English is about 3% from the total credit units for Sarjana degree. With the increasing demand of language competency, every institution at any level is free to add more credits to

this subject. If possible, other foreign languages are also offered to give more choices for students to master a foreign language other than English. For UKI graduates, only English is offered in the curriculum or extra curriculum, therefore learning alternative foreign language(s) was really their own choice and taken outside the campus.

Although none of the graduates working abroad or the number of graduates working in multinational companies is not significant, still learning alternative foreign languages would hopefully give them broader work opportunities.

Figure 20: Competencies in foreign languages



Question E5: How do you rate your foreign language capabilities now?

The use of the languages at work was dominated by bahasa Indonesia (4.8), followed by English (3.3), vernaculars (2.0), and other foreign languages (1.9). Vernaculars are also important. In the multi-lingual country like Indonesia, the proficiency in local languages is beneficial, especially for people working in

marketing or purchasing departments where they have to deal with local people who more appreciate people using their languages as means of communication. The use of vernaculars for graduates of mechanical engineering and electrical engineering is high, 2.6 and 2.4 respectively.

Table 29: The use of languages at work by field of study (arithmetic mean)

	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Vernacular(s)	1,6	2,4	2,6	1,9	2,0	1,9	2,0
Bahasa Indonesia	4,9	4,8	4,5	4,8	4,9	4,8	4,8
English	2,9	3,4	3,1	3,9	3,0	3,0	3,3
Other foreign languages	1,0	1,5	1,5	2,5	2,2	1,5	1,9

Question D12: To what extent do you communicate *(oral and written)* with other parties?

Aside from language proficiencies, there were other competencies required at work, i.e. (a) intercultural communication, (b) knowledge of other country, such as, economics, social and political matters, (c) knowledge about local and international cultures, and (d) working with people from different background. The four competencies are considered important for successful work performance. Indonesian people are exposed to pluralities because Indonesia is a multicultural country and whether they realize it or not, the people are used to differences and are expected to practice tolerance with each other. Indonesians speaking two or three different local languages is an example of practicing pluralism in the

Indonesian context. This is actually the strength of Indonesian graduates in general and therefore their responses to these competencies were positive, ≥ 50%. Working with people from different background was 80% and communicating in foreign language was 78%. However, according to fields of study, graduates of civil engineering and mechanical engineering found that knowledge about other country's economic, social and political matters and knowledge about local and other country's culture were not really important for their work, by 38% and 27% respectively (Table 30).

Table 30: The importance of certain competencies at work by study program (percent)

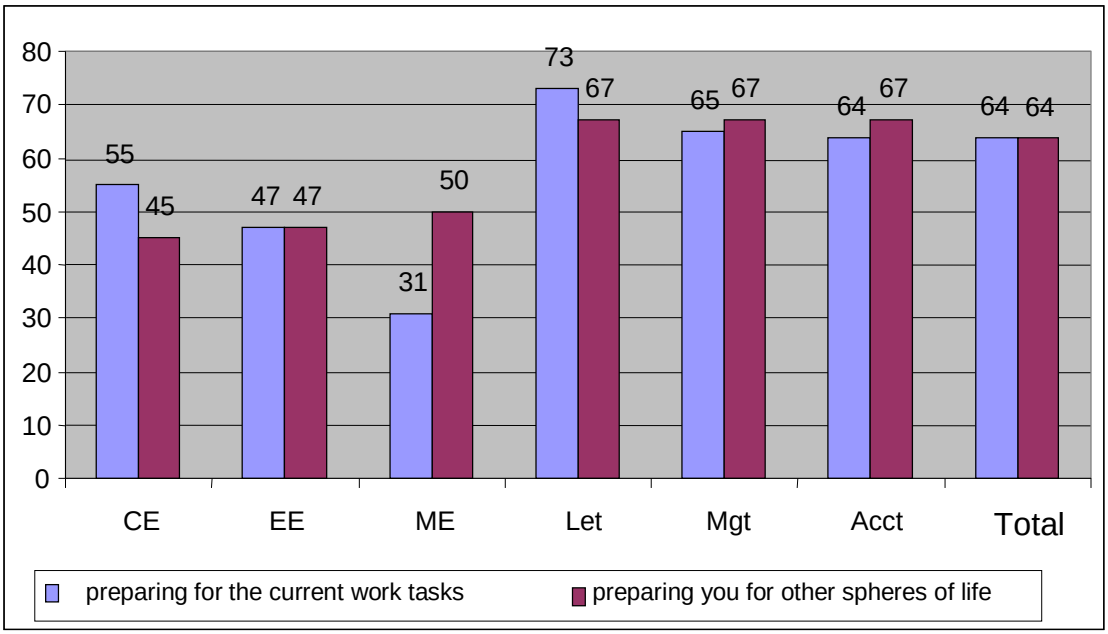
	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Knowledge about other Country's economic, social & political matters	38	56	27	70	57	65	61
Knowledge about local and other country's culture	38	63	27	79	49	50	57
Working with people from different background	88	88	64	86	78	78	80
Communicating in foreign languages	88	88	58	92	70	72	78

Question E3: According to you, how important are the following competencies to your current work?

When asked if their studies prepared them for the current work tasks or other spheres of life, 64% graduates of all study programs stated that their studies prepared them for both. More than 60% of the graduates of English, Management, Accounting study programs stated that their studies helped them in current work tasks and other spheres of life, while graduates from the faculty of engineering

showed more varied response. 55% of civil engineering, 47% of electrical engineering, and 31% mechanical engineering stated that their study prepared them for the current work tasks; 45% of civil engineering, 47% of electrical engineering, and 50% mechanical engineering stated that their study prepared them for other spheres of life.

Figure 21: Role of study in work tasks and other spheres of life (in percent)



Question H2B: To what extent your study help you in preparing you for the current work tasks and other spheres of life.

5.5.2 Competencies related to professional, semi-professional, and non-professional study programs

From the results of tracer studies in three universities in Indonesia, namely, UGM, UI, IPB tracer studies, it was obvious that the gap did exist between competencies acquired during studies and competencies required by employers. The rate of

acquisition of competencies is almost always lower compared to the rate of work requirement except in the case where certain competencies (knowledge especially) are not required at work. According to the graduates, personal and interpersonal competencies are found significant for work. Graduates' lack of working skills, as complained by employers is correct because the results of tracer studies said so. In the case of UKI graduates, the gap between competencies acquisition and requirements was also proven, especially in personal and interpersonal competencies, like the results of other tracer studies and employer's survey.

Discussion in this part will focus on competencies related to professional, semi professional and non professional study programs to observe whether there were differences in acquired and required competencies in the three groups and how the graduates managed to meet requirements of the competencies.

In general, the graduates believed that their study programs did not really equip them with necessary skills or competencies required at their work places, especially the personal competencies and interpersonal competencies. Graduates responded positively to acquisition of competencies during studies and believed that when they were graduated, they did acquire certain competencies although the competencies were not adequate as required by employers.

Presentation of the following sub chapters will be divided into three groups of competencies: knowledge, personal competencies and interpersonal competencies in professional, semi professional and non professional study programs.

A. Knowledge

Graduates of civil engineering, electrical engineering and mechanical engineering stated have a lot of opportunities to utilize their knowledge and competencies in work places when they chose to work in the study program-related jobs. They stated that there were differences in competencies acquisition and requirement for work. But it is more apparent that they focus more on their knowledge of their field compared to general knowledge or knowledge of other fields of study. The gap between all knowledge--except for knowledge of their own fields--acquired during studies and required at work was between -0.7 to -1.5. There is a significant gap between 'at graduation" and "required at work" (z = between -1.389 - 4.478, p <0.01).

Table 31: Knowledge gap between graduation and work in professional study programs

Knowledge	Acquired	Required	Gap	Z	P
General knowledge	3.3	4	-0.7	-2.550	.011
Knowledge of your field or discipline	3.7	4	-0.3	-1.389	.165
Knowledge of other fields or disciplines	2.9	3.8	-0.9	-3.653	.000
English	3.1	4.3	-1.2	-3.685	.000
Computer operation (for office)	3	4.4	-1.4	-4.214	.000
Internet	2.8	4.3	-1.5	-4.490	.000

The ability of using internet was very much required in the workplaces like computer operation and English but the provision of these competencies during studies was low.

In comparison to the professional study programs, semi-professional study programs (management and accounting) believed that their knowledge (general knowledge, knowledge of their field or discipline and knowledge of other fields) were sufficient, and between acquisition and requirement, the gap was also significant (-0.2 to - 0.6), so are computer operation and internet (Table 32). The results are comparable to that of professional study programs, -0.8 for English, -1.2 for computer operation and internet, respectively.

Table 32: Knowledge gap between graduation and work in semi professional study programs

Knowledge	Acquired	Required	Gap	Z	*p*
General knowledge	3.7	4.2	-0.5	-5.773	.000
Knowledge of your field or discipline	3.8	4	-0.2	-3.170	.002
Knowledge of other fields or disciplines	3.1	3.7	-0.6	-6.751	.000
English	3.2	4	-0.8	-6.923	.000
Computer operation (for office)	3.4	4.6	-1.2	-8.271	.000
Internet	3	4.2	-1.2	-7.819	.000

The English study program is considered a non-professional study program. The major is English language and literature, however, in order that the graduates have more opportunities in their future employment, many elective courses are offered and proved to be effective in job search because the respondents could go to almost any kinds of jobs that required no field-specific background. The English graduates found it most beneficial to have mastered the English language.

Graduates of English study program believed that their knowledge of English was sufficient for work (Ø gap) and general knowledge was -0.5; in IT skills, such as computer operation skills and internet, the gap was -0.8 and -1 (Table 33).

Table 33: Knowledge gap between graduation and work in nonprofessional study programs

Knowledge	Acquired	Required	Gap	Z	*p*
General knowledge	3.6	4.1	-0.5	-3.085	.002
Knowledge of your field or discipline	4	4	0.0	-0.346	.729
Knowledge of other fields or disciplines	2.9	3.7	-0.8	-3.978	.000
English	4.3	4.7	-0.4	-2.818	.005
Computer operation (for office)	3.6	4.5	-0.9	-5.379	.010
Internet	3.2	4.3	-1.1	-4.161	.000

Knowledge gap between acquisition and requirement exists in all competencies, except English in English study background (Ø).

The graduates of all study backgrounds believed that their knowledge or their fields of study were sufficient enough for work while knowledge of other fields of study and general knowledge were not. All graduates stated that their competencies in IT skills (computer operation and internet) were also lower than the requirement in their workplaces, so was English competency (except for English graduates) (Tables 31, 32, and 33). In general, the gap in knowledge was between 0.6 - 1.0, with professional study programs the highest (1.0), and non professional program the lowest (0.6). The narrowest gap in professional, semi professional and non professional study programs was knowledge of field of

study, by 0.3, 0.2, and 0, respectively; and the biggest gap in all study programs was internet by 1.5, 1.2 and 1.1, respectively. The gap in computer operation in semi professional study programs was also quite low (1.2).

B. Personal attributes

Personal attributes are skills adhered to a person and can be developed through trainings or activities outside and inside the classrooms, in the framework of teaching and learning activities. Acquisition of personal attributes needs to be taken seriously because employers discover, as Harvey (2003) also emphasizes, they contribute significantly to the company's growth. In the teaching and learning process, these skills were actually trained in many ways, in classroom activities, individual assignment or in many extracurricular activities, with or without students' awareness. Professional study programs tend to focus more on their own fields of study. More than 70% of the graduates' GPA was ≥ 2.75, which means that their academic achievement was above average, but from their experiences in transition period and workplaces, they found our that knowledge of fields of study alone was not sufficient in getting a job or even building a career. The gap between professional graduates' acquisition and requirement of personal attributes was also very broad; the requirement of these competencies was between 4.2 and 4.7 while the acquisition was between 3.0 and 3.7 (Table 34).

In general, the competencies gap in professional study programs was 1.1, with 'fitness to work' (1.6), 'Problem solving ablity' (1.4), and 'time management' (1.4) being the broadest gaps, and 'initiative' and 'loyalty and integrity' being the narrowest (0.7).

Table 34: Personal attributes gap between graduation and work in professional study programs

Personal Attributes	Acquired	Required	Gap	Z	*p*
Creativity	3.3	4.5	-1.2	-4.478	.000
Problem solving Ability	3.3	4.7	-1.4	-4.802	.000
Learning ability	3.5	4.7	-1.2	-4.289	.000
Working under pressure	3.3	4.5	-1.2	-4.109	.000
Time management	3.1	4.5	-1. 4	-4.626	.000
Fitness to work	3	4.6	-1.6	-5.120	.000
Working independently	3.5	4.3	-0.8	-4.107	.000
Analytical ability	3.5	4.5	-1.0	-3.641	.000
Ability to take responsibility	3.6	4.6	-1.0	-4.192	.000
Initiative	3.7	4.4	-0.7	-3.797	.000
Loyalty and Integrity	3.7	4.4	-0.7	-3.598	.000
Ability to present ideas/product/report	3.4	4.4	-1.0	-4.269	.000
Planning, coordinating, and execution	3.3	4.5	-1.2	-4.443	.000
Ability to document ideas and info	3.1	4.2	-1.1	-4.363	.000
Ability to write reports. memos. doc	3.2	4.5	-1.3	-4.452	.000
Continuous learning ability	3.3	4.4	-1.1	-4.085	.000

In semi professional study programs these skills can actually be acquired in many learning activities, in management study program, for instance, students involved in entrepreneurship and business plan workshops were trained to put into practice all personal attributes listed in the table. However, the graduates believed

that the requirement for those skills was still higher compared to the acquisition during studies.

The competencies gap was significant at the time of graduation and required at work, from 0.5 to 1.1, as shown in Table below. The widest gaps were in 'creativity' and 'problem solving ability' (by 1.1), and 'learning ability' and the narrowest gaps were 'loyalty and integrity' (by 0.5).

Table 35: Personal attributes gap between graduation and work in semi professional study programs

Personal Attributes	Acquired	Required	Gap	Z	*p*
Creativity	3.3	4.4	-1.1	-8.790	.000
Problem solving Ability	3.4	4.5	-1.1	-8.838	.000
Learning ability	3.8	4.3	-0.5	-6.301	.000
Working under pressure	3.3	4.2	-0.9	-7.140	.000
Time management	3.5	4.4	-0.9	-7.854	.000
Fitness to work	3.6	4.5	-0.9	-8.020	.000
Working independently	3.7	4.4	-0.7	-6.791	.000
Analytical ability	3.4	4.3	-0.9	-7.602	.000
Ability to take responsibility	3.7	4.5	-0.8	-7.141	.000
Initiative	3.6	4.5	-0.9	-7.353	.000
Loyalty and Integrity	3.9	4.4	-0.5	-6.255	.000
Ability to present ideas/product/report	3.5	4.3	-0.8	-7.206	.000
Planning, coordinating, and execution	3.5	4.3	-0.8	-7.729	.000
Ability to document ideas and info	3.4	4.2	-0.8	-6.973	.000
Ability to write reports. memos. doc.	3.5	4.3	-0.8	-7.648	.000
Continuous learning ability	3.6	4.3	-0.7	-7.346	.000

In non professional graduates, the competencies gap was lower than those of professional or semi professional graduates; the gap was 0.4 to 1.1 between acquisition and requirement (Table 36). 'Working independently' was proven to be

the narrowest (0.4), and 'creativity', 'problem solving ability' and 'fitness to work' was the broadest, by 1.1, 1.0, 1.0, respectively.

Table 36: Personal attributes gap between graduation and work in non-professional study program

Personal Attributes	Acquired	Required	Gap	Z	*p*
Creativity	3.3	4.4	-1.1	-4.880	.000
Problem solving Ability	3.6	4.6	-1.0	-5.684	.000
Learning ability	3.8	4.5	-0.7	-4.528	.000
Working under pressure	3.3	4.1	-0.8	-4.051	.000
Time management	3.6	4.5	-0.9	-5.084	.000
Fitness to work	3.5	4.5	-1.0	-4.906	.000
Working independently	3.9	4.3	-0.4	-3.460	.001
Analytical ability	3.7	4.4	-0.7	-3.818	.000
Ability to take responsibility	4	4.6	-0.6	-4.714	.000
Initiative	3.9	4.5	-0.6	-4.096	.000
Loyalty and Integrity	4	4.5	-0.5	-4.612	.000
Ability to present ideas/product/report	3.6	4.3	-0.7	-4.376	.000
Planning, coordinating, and execution	3.5	4.4	-0.9	-5.080	.000
Ability to document ideas and info	3.5	4.1	-0.6	-3.646	.000
Ability to write reports. memos. doc.	3.6	4.2	-0.6	-3.878	.000
Continuous learning ability	3.8	4.5	-0.7	-4.278	.000

All graduates found that personal competencies, especially 'creativity' and 'problem solving ability' were very important for their work but the acquisition of those skills during studies were not sufficient.

'Ability to present ideas/product/report', 'planning, coordinating and execution', 'ability to document ideas and information', and 'ability to write reports, memos, and documents' can actually be inserted to everyday activities in the classrooms, in a form of project as an individual or team work, for example. Those activities will surely improve the capacity of those competencies if practiced regularly

during the time of studies. The results show that professional graduates are not doing many of activities that lead to the acquisition of the four competencies compared to semi-professional or non-professional graduates.

It was personal attributes that the graduates believed to be the lowest in acquisition during their studies as compared to knowledge and interpersonal competencies. In general, the narrowest gap of personal attributes was in non-professional study program by 0.7, followed by semi-professional study programs by 0.8, and finally professional study programs by 1.1.

Although there was still gap between acquisition and requirement (≤ 0.6), the graduates have strong points for 'loyalty and integrity', and 'working independently'. By study program, non-professional graduates strongest point is in 'working independently' as compared to professional and semi professional graduates; semi professional graduates and non professional graduates' strongest points in 'loyalty and integrity' as compared to professional graduates.

C. Interpersonal competencies

Interpersonal competencies are skills that involve other people or interaction with other people. Employers emphasize the requirement of these competencies because in modern work settings, it is necessary that employees work with other people and communicate effectively, especially if work assignments require them to deal or negotiate with other parties, such as in marketing and public relations.

The results show that compared to personal attributes, the gap between acquisition and requirement of interpersonal competencies was not high.

In professional study programs, the gaps were between 0.2 and 1.2, except for tolerance, where the gap was 0.2. However, when compared to personal attributes, the gap in interpersonal competencies between acquisition and work requirement was lower. 'Tolerance' was the narrowest (0.2), but 'leadership (1.2) and negotiation (1.1) were the widest.

Table 37: Interpersonal competencies gap between graduation and work in professional study programs

Interpersonal Competencies	Acquired	Required	Gap	Z	*p*
Working with other people, team working	3.6	4.6	-1.0	-3.971	.000
Negotiation	3.1	4.2	-1.1	-4.465	.000
Tolerance	3.9	4.1	-0.2	-1.849	.064
Adaptability	3.9	4.4	-0.5	-3.477	.001
Assertiveness	3.4	4.1	-0.7	-3.535	.000
Persistence	3.3	4	-0.7	-3.648	.000
Appreciating different points of view	3.7	4.2	-0.5	-2.917	.004
Underst. of the system. values in the society	3.7	4.3	-0.6	-3.601	.000
Leadership	3.2	4.4	-1.2	-3.813	.000
Communication skills	3.6	4.6	-1.0	-4.299	.000

In semi professional study program, the narrowest gap of interpersonal competencies between acquisition and work requirement was 'tolerance' (0.2), 'appreciating different point of views (0.4) and ''understanding of the system, values in the society' (0.4) and the widest was 'communication skills' (0.9) and 'negotiation' (0.8)

Table 38: Interpersonal competencies gap between graduation and work in semiprofessional study programs

Interpersonal Competencies	Acquired	Required	Gap	Z	*p*
Working with other people, team working	3.8	4.5	-0.7	-7.079	.000
Negotiation	3.4	4.2	-0.8	-7.100	.000
Tolerance	3.7	4.1	-0.4	-4.371	.000
Adaptability	3.8	4.5	-0.7	-7.253	.000
Assertiveness	3.5	4.2	-0.7	-6.599	.000
Persistence	3.5	4	-0.5	-6.152	.000
Appreciating different points of view	3.9	4.3	-0.4	-5.555	.000
Underst. of the system. values in the society	3.7	4.1	-0.4	-5.531	.000
Leadership	3.6	4.2	-0.6	-6.644	.000
Communication skills	3.7	4.6	-0.9	-7.690	.000

In the non-professional study program, the gap of 'tolerance' was the narrowest (0.1), followed by 'persistence' and 'appreciating different points of view', (each by 0.2).

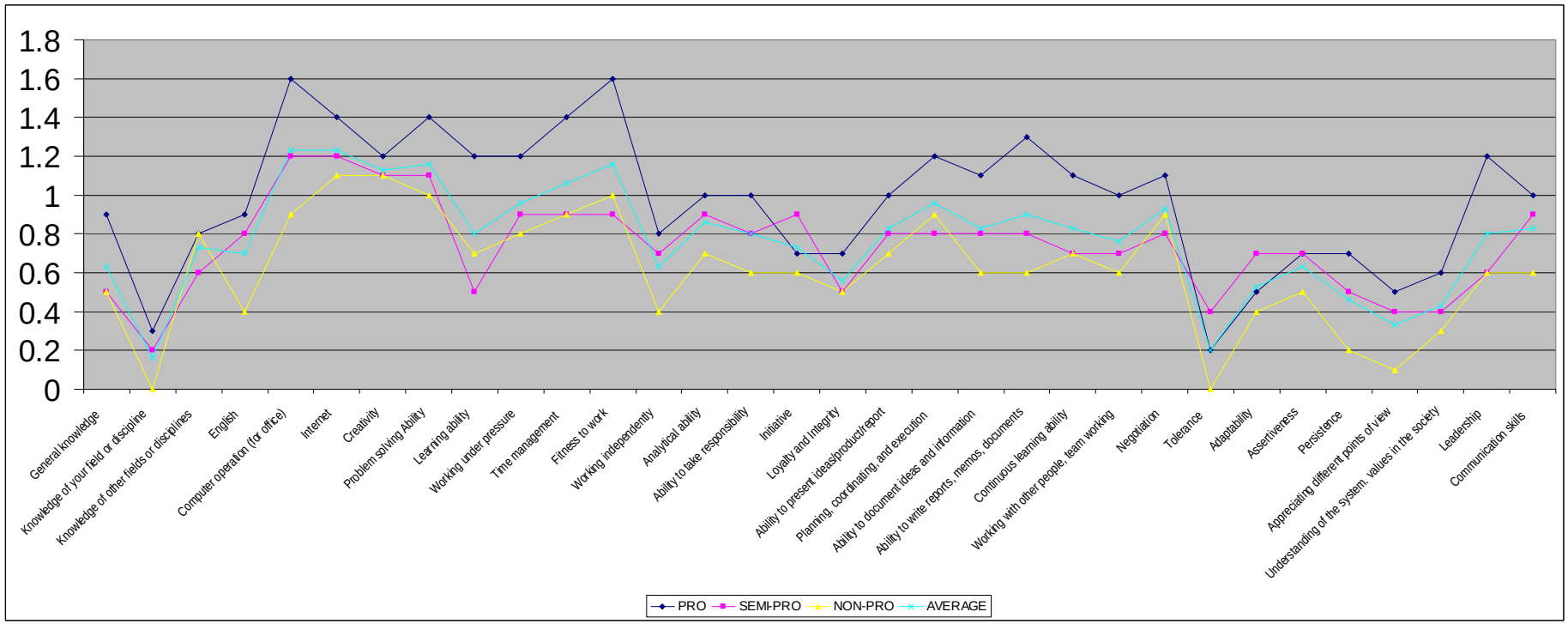
Table 39: Interpersonal Competencies gap between graduation and work in nonprofessional study programs

Interpersonal Competencies	Acquired	Required	Gap	Z	*p*
Working with other people, team working	3.9	4.6	-0.7	-4.413	.000
Negotiation	3.3	3.9	-0.6	-3.759	.000
Tolerance	4.1	4.2	-0.1	-1.809	.070
Adaptability	4.1	4.5	-0.4	-3.212	.001
Assertiveness	3.7	4.2	-0.5	-2.599	.009
Persistence	3.8	4	-0.2	-1.420	.156
Appreciating different points of view	4.2	4.4	-0.2	-3.098	.002
Underst. of the system. values in the society	3.8	4.2	-0.4	-2.962	.003
Leadership	3.6	4.3	-0.7	-3.716	.000
Communication skills	4	4.7	-0.7	-5.269	.000

The general picture of the tables show that concerning interpersonal competencies, non-professional graduates had the lowest gap (0.4), followed by semi professional graduates (0.6), and finally professional graduates (0.7).

Concerning the strongest points in interpersonal competencies, UKI graduates rated themselves high in 'tolerance' and 'appreciating different point of views' and the weakest points were in 'communication skills', 'working with other people, team working', 'negotiation', and 'leadership'. The strongest points of UKI graduates, i.e. 'tolerance' and 'appreciating different point of views', were a very significant finding of this research. Claiming itself to be a multicultural campus, UKI is indeed a place to practice tolerance in a multicultural country. The everyday interaction with people of different background has created graduates with these very important skills.

Figure 22: The gap between acquisition and requirement of knowledge, personal attributes and interpersonal competencies



Question E1 Pls state to which extent you had the following competencies at the time of grad. and to what extent they are required in your current work . If you are *not currently working, pls answer only A.*

Graduates believed that competencies matter a great deal in their workplaces. Study related competencies or so called 'technical skills' are important but there are other competencies that are required by employers. The results show that personal attributes and interpersonal competencies were more important than knowledge as far as employment is concerned but their acquisition during study time was not sufficient. Regardless of education background, be it professional, semi-professional or non professional study program, acquisition of competencies, especially personal attributes and interpersonal competencies were very important and should be integrated in the curriculum.

To conclude the discussion, there are indeed differences in the gaps between acquisition and requirement of competencies in the professional, semi-professional and non-professional study programs, but the overall results show that no matter from what study program one belongs to, personal attributes and interpersonal competencies are very important aspects in workplaces.

5.6. Acquisition of Competencies

Because they were aware of the fact that they needed to acquire other competencies, 47% of English graduates took additional courses --inside or outside campus--during their studies and after graduation to make them more prepared for their jobs.

Harvey (2003) states the studies in the 1990s and earlier found that employers doubted that university students, especially full time students could not picture

the whole nature and culture of the workplace and in the beginning they would find difficulties with adjustment to the real workplace:

> This period of adjustment — the time it takes for a graduate to become effective in the workplace — is a cost that graduate employers are no longer able or willing to bear. This means that higher education programmes are expected to better prepare graduates for workplace culture. (Harvey, 2003: 5)

Graduates are aware of that and therefore they pursue certain competencies that might be useful for them in their search of employment. They are also aware that the increasing competition in the economic-driven market has put pressure on companies to operate more efficiently and effectively and this has caused companies to put as less investment as possible on human resource by increasing job requirements for prospective employees to many higher education graduates that seek employment. With the increasing number of higher education graduates seeking jobs in the market, companies only select their future employees that meet their requirements.

All graduates believed that in order to be successful in the transition period and work, they need to possess job-related skills that will help them deal with many situations they will encounter in their workplaces. The Commerce and Industry and Business Council (2002) emphasized this and stated that nowadays those skills are the main requirement for the modern worker. It stated further that "employees need to demonstrate teamwork, problem-solving, and the capacity to deal with non-routine processes. They should be able to make decisions, take

responsibility and communicate effectively". So when higher education graduates go to the labour market, not only should they be able to demonstrate their field specific knowledge, but also competencies that are required for those available jobs.

In addition to that, there are also other important aspects that make people lose their jobs: improper work habits and attitudes. "Beach cited research indicated that fully 87% persons losing their jobs or failing to be promoted were found to have 'improper work habits and attitudes rather than insufficient job skills or knowledge." (in Bowles, --)

Graduates believed that in addition to their field-specific knowledge, competencies were important for work and without additional required competencies, they would come across difficulties in getting a job. 60% graduates stated that they took additional courses/trainings to give them additional skills which were necessary for study and work during their studies at UKI and after they were graduated (Table 40).

Table 40: ***Additional courses by field of study (percent)***

	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Yes	90	63	42	55	54	67	60
No (Go to Q. G)	10	37	58	45	46	33	40
Total	100	100	100	100	100	100	100

Question F1. When you were studying at UKI and after the graduation, did you take any courses in order to make yourself prepared or more equipped for the workplace?

The three most important skills that they believe would help them in the work places were (a) English (62%), (b) computer operation skills (59%) and (c) field-related computer skills (20%); 16% graduates also took other foreign language(s), however, 9% leadership and 8% entrepreneurship. By field of study, 83% graduates of mechanical engineering, 76% management, 75% electrical engineering, 67% civil engineering and accounting graduates took English. It is ironic, however, 34% graduates of English who learned English language and literature (80% of the curriculum is in English) still found that English language they learned was not sufficient enough for their future employment so they took an extra English course during their period of study.

Table 41: Courses taken during study period by field of study (percent; multiple responses)

	Study Programs						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Computer operation (MS Office and the like)	22	58	33	64	73	54	59
Field-related computer programs	67	75	33	7	15	12	20
English	67	75	83	34	76	67	62
Other foreign language(s)	11	0	0	43	5	9	16
Leadership	0	8	17	5	12	12	9
Entrepreneurship	0	0	0	5	20	5	8
Others	0	17	0	20	15	42	24
Total	167	233	167	177	215	202	198

Question F2 What kind of courses did you take during your studies at UKI *(Multiple answers possible)*

After graduation, graduates also took additional courses which they found necessary for work purposes. In general, the priority of courses changes from during and after the study period. After the study period, 51% took computer operation (MS office and the like), 38% took English course and 21% took field-related computer programs. It is noted that all (100%) civil engineering graduates took field-related computer programs and 71% took English course.

Table 42: Courses taken after study period by field of study (percent; multiple responses)

	Study Program						Total
	CE	EE	ME	Let.	Mgt.	Acct.	
Computer operation (MS Office and the like)	29	30	25	57	60	49	51
Field-related computer programs	100	50	25	6	11	22	21
English	71	50	50	11	54	38	38
Other foreign language(s)	14	0	25	26	6	5	12
Leadership	0	20	25	11	11	14	13
Entrepreneurship	0	0	0	14	20	19	15
Others	0	40	25	37	29	32	31
Total	214	190	175	163	191	178	180

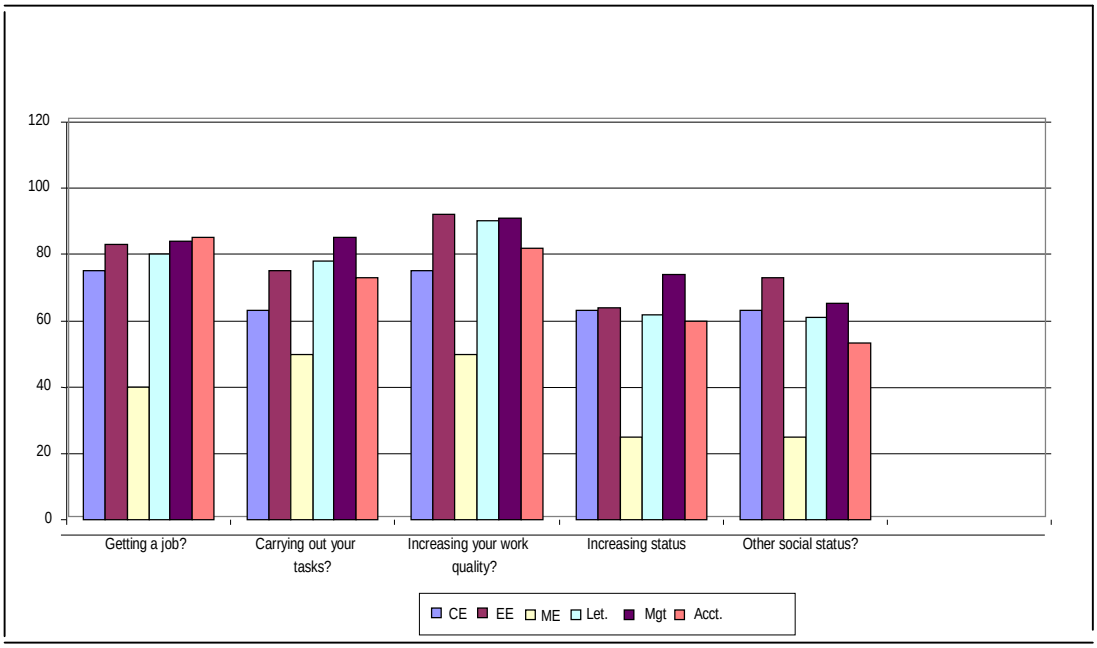
Question F2: What kind of courses did you take during your studies at UKI (Multiple answers possible)

The graduates were aware that there were some knowledge and skills missing from their higher education training, and taking additional courses or training outside the institution was a right decision in the effort to narrow down the gap between competencies acquisition and requirement.

It is still not understandable, however, that additional courses that they took during and after higher education trainings were still sufficient? Take engineering graduates for example. 67% civil engineering, 75% electrical engineering and 83% mechanical engineering took English course during their study, but still they found that their competencies were not sufficient enough to meet the requirement at their work.

In general, the graduates were aware that higher education trainings did not really prepare them for their future employment, therefore they took several additional courses that hopefully would help them in transition period and workplaces. Figure 22 shows that 82% graduates stated that the courses help them in getting a job, 77% in carrying out work taks, 86% increasing work quality, 64% increasing status, 60% for other social status.

Figure 22: Reasons for taking additional courses



Question F4: To what extent that those courses help you in …?

5.7. Summary of Findings

What employers complained about, graduates' lacking of competencies required for work tasks, was confirmed by the graduates of this survey. Graduates from either professional, semi professional or non-professional background believed

that competencies that they acquired during study period were not sufficient to meet the requirement of the labour market. In other words, there is a discrepancy between 'supply' and 'demand'.

Graduates of the three groups--professional, semi professional or non-professional-- found that knowledge of their field of study was indeed important but was not adequate for work or to cope with work tasks assigned to them. In reality more than half of the graduates took jobs that were not related to their fields of study, either by choice or because they were forced to accept the job. They stated that there must be additional competencies that would help them in their responsibilities which are essential for many kinds of jobs.

Possession of certain competencies is as important as the higher education credentials in order to successfully compete in the labour market and build career in the workplaces (especially the preferred ones).

The graduates further stated that the university did not provide them with necessary competencies required for the jobs, therefore took additional courses--during and after their study period-- that would equip them with the skills they needed when they got employed. The additional courses were aimed at acquisition of additional competencies that might be necessary for work.

Graduates of professional study programs tended to be less competent compared to the graduates of semi professional study programs, and the graduates of non-professional study programs were proven to be the most competent compared to

those of professional and semi professional study programs. Their mastery in English language proved to be the key to success in their job search and with additional competency in computer operating, they had fulfilled the requirement of many jobs available in the labour market. The mastery of English has given them the opportunity to work in many economic sectors, from education (as an English teacher in primary, secondary schools to tertiary institutions) to service sectors that absorbed the highest number of human resource in Indonesia.

Concerning competencies of the graduates of the three groups, the results showed that compared to semi-professional and non-professional graduates, professional graduates' competencies were found to be the lowest, in knowledge, personal and interpersonal competencies. The competency gap between acquisition and requirement among non-professional graduates was the smallest. The more professional a study program, the broader the gap between acquisition and requirement of competencies. And this needs to be taken into consideration when developing curriculum.

Chapter 6

Conclusion

As many as 3016 state and private higher education institutions in Indonesia released 200.000- 350.000 graduates from different study programs in academic years 2004-2007, with a *sarjana* degree. Their degrees, however, did not guarantee either their future careers or a secure job. The chance of a graduate work for a *sarjana* was getting more difficult because companies demand that *sarjana* graduates possess certain qualifications in addition to their degrees. As a consequence, many graduates who did not meet their requirement would take jobs not related to their study background or settle on those which did not require *Sarjana* credentials (over-qualification). This occurred because the graduates lacked the competencies needed to cope with job responsibilities.

The National Education Ministerial Decree depicts clearly that a *Sarjana*-degree holder should possess the basic science and skills in certain expertise, the ability to apply scientific knowledge and skills, the ability to show a good attitude and behaviour in his/her workplace and among the community, and the ability to keep up with the advancement of science, technology, and/or arts in the area of his/her expertise.

In practice, however, only the first two qualifications which are given priority, the last two are only given a minor attention. This proves why higher education graduates lack competencies which are necessary for work.

To achieve the above qualifications, each institution should develop curricula that will enable the students to demonstrate those qualifications and hopefully help them in their subsequent careers. In the reality, however, many graduates fail to meet job requirements because when they are in the workplace, there are other qualifications in addition to the above which are equally necessary. Modern companies need employees who are not only capable of carrying out tasks assigned to them but also who can contribute the company's growth.

Different terms are used in different countries but with one concept in mind: a set of skills that will help someone to perform job responsibilities successfully. Chomsky's description of competence and performance in language acquisition illustrate the relationship of competencies which one possesses with a good job performance. Furthermore, many studies indicated that graduates should possess not only knowledge but also competencies which will help them in dealing with work assignments and prepare themselves to accept assignments which are sometimes not at all related to their study background.

Responding to this, tracer studies of graduates' experience after they complete their higher education training have been done extensively in Europe and other developed countries as a means of mapping the dynamic world of work. Higher

education institutions need to recognize the signals from the labour market to narrow the gap between 'supply' and 'demand' and this can be investigated through the experience of the graduates. Their important information will help higher education institutions to see further the relationship between higher education and work. In other words, they need to know and "be responsible for" the graduates' subsequent career after graduation.

The total number of higher education graduates (from the non-degree programs and *Sarjana* programs) amounts 6,649,065, around 6% of the total workforce of different education background. With the so much investment put into higher education and the so many graduates in the labour market, it is essential that activities of the graduates be followed and the information of labour market be tapped.

The focus of this study is the competencies of the graduates of professional, semi professional and non-professional study programs in their respective work places. The case study is 6 study programs from the faculties of Engineering, Economics, and Letters at Universitas Kristen Indonesia (UKI): (1) Electrical Engineering, (2) Mechanical Engineering, (3) Civil Engineering; (4) Management, (5) Accounting, and (6) English, of graduation years of 2001, 2003, and 2005.

The 319 respondents of the 6 study programs were asked to measure competencies that they acquired during study period and required by employers. The competencies are grouped as follows:

1. Knowledge: general knowledge, knowledge of their study background or discipline, knowledge of other fields or disciplines, English, and computer operation (for office);
2. Personal competence or "personal attributes": creativity, problem solving ability, learning ability, working under pressure, time management, fitness to work, working independently, analytical ability, ability to take responsibility, initiative, loyalty and integrity, ability to present ideas/product/report, planning coordinating. and execution, ability to document ideas and information, ability to write reports, memos, documents, and continuous learning ability;
3. Interpersonal competencies or "people skills": working with other people/ team working, negotiation, tolerance, adaptability, assertiveness, persistence, appreciating different points of views, understanding of the system values in the society, leadership, and communication skills.

Graduates from professional, semi professional, and non professional study background stated different measurement of the above three groups. In general graduates stated that knowledge of their field alone was not sufficient, they need to be aware of knowledge of other fields to enrich their horizon. For example, knowledge of different cultures which is not studied in engineering departments is found important, not at the time of study, probably but later at their respective workplaces where they need to demonstrate the knowledge, to communicate with

people from different cultures for example. For Indonesian settings where the people are multicultural, the knowledge of different cultures is very important.

All graduates believed that in order to be successful in transition period and work, they needed to possess job-related skills that will help them deal with many situations they will encounter in their workplaces.

This was proven true in the case of Universitas Kristen Indonesia graduates in their search of jobs and their activities in workplaces. The graduates of the three groups, i.e. the professional, semi-professional, and the non-professional study programs have stated that although field-specific knowledge is important in their jobs, competencies, such as personal skills or "attribute" and interpersonal skills or "people skills" are of equal importance in employment and that employers take into account all those skills in their employee recruitment.

Three technical skills which are important for work are English, computer operation and internet according to the graduates were found to be essential in search for jobs. Therefore they even took extra classes outside the campus to acquire the skills. Employers, too, rated the three technical skills above as most important requirements for graduate job seekers regardless their study background.

During and after the study period, graduates were aware that there were some knowledge and skills missing from their higher education training and therefore they took additional necessary courses or trainings that would help them in their

job search and careers afterwards. Computer operation and English courses were the choices that graduates took to make them prepared for work. Employers also agreed that the two were very important for work.

Concerning the gap between acquisition and requirement of competencies, the 3 observed groups in the study, the professional, semi professional and non professional study program, this study found that the more professional a study program, the less competent the graduates. The graduates did state that there were varied gaps between acquisition and requirement of competencies in knowledge, personal attributes, and interpersonal competencies. The gap is wider in professional graduates especially in personal attributes. Non-professional graduates were found to be the most competent compared to the other two, with the narrowest gap between acquisition and requirement of competencies. Gaps in English, computer operation, and internet were wider in professional graduates as compared to semi professional graduates. Regarding the gap between acquisition and requirement of the above three skills, professional graduates were found to be the narrowest.

6.1. Recommendation for acquisition of competencies

This study explored the competencies of higher education graduates and how indispensable they are in the workplace. The failure of graduates searching for and keeping a job is not because the graduates lack technical skills or field-related

skills but because of lacking the certain competencies related to work. This study proved that graduates from either professional, semi professional or non-professional fields could not demonstrate certain competencies for work. What is actually missing from the learning process at higher education?

A curriculum for a *sarjana* degree is designed to equip a person with knowledge and certain skills to achieve the credentials. It is aimed at providing students with skills related to the study with a purpose that when one is graduated, he or she has the ability to demonstrate the skills. In reality, however, in addition to study related skills, graduates need to demonstrate other competencies which are necessary for work. Therefore, it is important that lecturers be aware of this and they start equipping their students with necessary competencies.

In the learning process, the teaching methods and learning activities tended to neglect the acquisition of competencies. For example, lecturers prefer lecturing to discussing a topic or individual work to group work. Therefore it is logical that the acquisition of competencies during learning process in the university is low. This study also proves that personal attributes and interpersonal skills were found low compared to knowledge. They were proved to be the least concerned. The credits in curricula designed in those study programs were mostly dedicated to acquisition of knowledge and knowledge-related subjects. In the teaching and learning process, lecturers must put into consideration to implement techniques or approaches that leads to acquisition of competencies.

From the curricula it was obvious that for non subject-related classes, such as English, the credits allocated were only 4 or 0.03% from the total credits earned during a study period. In the non professional study program, since English is the study program, more than 80% of the curriculum was dedicated to English-related subjects, but acquisition of personal attributes and people's skills were also neglected. This needs to be addressed accordingly.

Acquisition of competencies is definitely essential for students during the period of study, for approximately 4 years. The method of delivering competencies can be through individual tasks or group work, project presentation, classroom interaction, etc. that lead to acquisition of certain competencies. They cannot be taught as separate subjects since they are to be exercised as often as possible and in many study conditions, be it inside or outside the classrooms.

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CURRICULUM VITAE

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Name	:	Ied Veda Rimrosa Sitepu
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Gender	:	Female
Marital status	:	Married to Dr.med. Abraham Simatupang, dr., M.Kes.
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Education Background

1996	:	Master of Arts in English Language and Literature, Department of English, Ateneo de Manila University, Manila, the Philippines
1990	:	*Sarjana Sastra* (Bachelor of Arts in English), Faculty of Letters, Universitas Kristen donesia, Jakarta, Indonesia

Experience:

1992 to date	: Lecturer at the Faculty of Letters, Universitas Kristen Indonesia, Jakarta
1999 to date	: Researcher, Women's Study Centre
1995 – 2001	: Head, Diploma 3 Program, Faculty of Letters, Universitas Kristen Indonesia
Jan. 2003-2007	: Director, Universitas Kristen Indonesia (UKI) Press
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Scholarships obtained:

Universitas Kristen Indonesia
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Research Interests:

1. Higher Education and the World of Work
2. Language and Literature Teaching
3. Teaching English as a Foreign Language

AFFIDAVIT

I herewith declare that this dissertation was written independently and without non-permissible help and that I used no sources other than those in the dissertation. All quotations that have been extracted from the published or unpublished sources have been marked as such. No part of this work has been used in other Ph.D. processes.

Hiermit versichere ich, dass ich die vorliegende Dissertation selbstständig und ohne unerlaubte Hilfe angefertigt und andere als die in der Dissertation angegebenen Hilfsmittel nicht benutzt habe. Alle Stellen, die wörtlich oder sinngemäß aus veröffentlichten oder unveröffentlichten Schriften entnommen sind, habe ich als solche kenntlich gemacht. Kein Teil dieser Arbeit ist in einem anderen Promotions- oder Habilitationsverfahren verwendet worden.

Kassel, 1 February 2011

Ied Veda Rimrosa Sitepu

APPENDICES

UKI Alumni Survey: Higher Education and Market Demand

Dear UKI alumni,

This is a questionnaire for graduates of S1 programs of the Faculties of Engineering, Economics, and Language and Literature, graduated in 2001, 2003, and 2005.

This first graduate survey, a cooperation between Universitas Kristen Indonesia and the International Center for Higher Education Research (INCHER), University of Kassel, Germany, is carried out in order to find out how competencies acquired in the university matches with those required by the labor market and to get a picture of how the graduates look for a job and develop a career. The results of this survey will be valuable inputs for the study programs and the almamater in their curriculum development in the effort to better prepare the students for the working places and to meet the demand of the labor market. It will also be beneficial for international comparison of the graduate employment.

The researcher guarantees that the information given will be used only for research purposes.

For alumni who live in Jabodetabek areas, we will collect the completed questionnaire one week after you receive this questionnaire or send an sms to 0812 908 1406 to inform us when you may want it to be collected and for those who live outside the area, we would like to ask you to return the completed questionnaire by using the stamped envelop prepared for you and send it back to us.

THE RESEARCHER GUARANTEES THAT THE GIVEN INFORMATION WILL BE TREATED STRICTLY CONFIDENTIAL.

We thank you for your kind attention, support and cooperation.

Sincerely,

Ied Veda Sitepu

PLEASE RETURN THIS QUESTIONNAIRE TO:

IED VEDA SITEPU

FAKULTAS SASTRA

UNIVERSITAS KRISTEN INDONESIA

JALAN MAYJEN SUTOYO, CAWANG,

JAKARTA 13630

(Email: sitepu@incher.uni-kassel.de)

or FAX to (021) 808 82 886

How to fill up this questionnaire:

HOW LONG DO I NEED TO FILL UP THIS QUESTIONNAIRE?

Frilling up this questionnaires is not long, depending on your work experience so far. We tried our best to facilitate you by providing multiple choice questions so that you only put a tick on the corresponding box. However, there are several open questions that need more explanation.

The following are examples of questions and how to answer them

Follow the directions:

1. For multiple choice questions, you only mark ☐ the corresponding box.
   For example:
   Study program:

   1 ☐ Civil Engineering
   2 ☐ Electrical Engineering

2. For the 1-5 scale answer, mark (X) on the corresponding box ☐
   1 the lowest point/not at all and **5** the highest point/to a highest extent.
   Fill in only one box.

1	2	3	4	5
☐	☐	☐	☐	☐

3. For questions like the following, fill up only one digit in each box

Year ☐☐☐☐

4. For open questions or questions that need further explanation, answer the questions in the provided space such as follow:

   Others: _____

   (pls explain)

Good luck!

A. Education Background before UKI

Fill up the following questions about your academic beackground before and at the time you enrol at UKI.

A1. **What is your study program?**

1 ☐ Civil Engineering
2 ☐ Electrical Engineering
3 ☐ Mechanical Engineering
4 ☐ Letters/Language and Literature
5 ☐ Management
6 ☐ Accountancy

A2 **What certificate do you have to enrol to UKI**

1 ☐ High school
2 ☐ Vocational schools (SMK/STM/and the like)

A3. What was your major in high school?

1 ☐ Natural Science
2 ☐ Social Science
2 ☐ Language and Culture
2 ☐ STM majoring in _____ (pls specify)
2 ☐ SMK majoring in _____ (pls specify)

A4 **When did you finish your high school (for example in 2000)**

Year ☐☐☐☐

B. Study years and other activities

B1 **What was the start and end date of your study**

Start month ☐☐ year ☐☐☐☐

End month ☐☐ year ☐☐☐☐

B2 **Did you acquire any study-related work experience?**

Either full time or part-time (not work placement/internship)

Before higher education ☐ Yes, for approximately ⌊⌊⌊ **months** ☐ No

During higher education ☐ Yes, for approximately ⌊⌊⌊ **months** ☐ No

B3 **Did you acquire any non-study-related work experience?**

Either full time or part-time (not work placement/internship)

Before higher education ☐ Yes, for approximately ⌊⌊⌊ **months** ☐ No

During higher education ☐ Yes, for approximately ⌊⌊⌊ **months** ☐ No

B4 **Approx. how many hours/week on average did you do the following during your study time?**

A. <u>Regular classes</u> (hours/week—approx.)	
☐☐	Lectures
☐☐	Independent learning/ working on homework
☐☐	Others *(pls explain):* .....
B. <u>Outside classroom</u> (hours/week—approx.)	
☐☐	Extra classes (SP).
☐☐	self study
☐☐	Extracurricular activities (sports, arts, choir, etc)
☐☐	Others (*pls explain):* .....

B5 During your study time, did yo involve in an organization (social/youth/religion organization)?

☐ Yes.

☐ No. → *PLS GO TO Q B7*

B6 How active were you in the organization?

Not at all				Very active
1	2	3	4	5
☐	☐	☐	☐	☐

B7 **Had you been staying overseas during your study at UKI** *(for working or study purposes)***?**

☐ No → *GO TO Q. B9*

☐ Yes

B8 **If you stayed abroad, explain** *(one by one if you stayed more thatn once)* **where and how long you stayed and on what purposes?**

	A. Name of country	**B. duration of stay** *(mos)*	**C. Purposes** *(multiple answer possible)*
1	.....	☐☐ months	☐ Study ☐ Working/Internship ☐ Others *(jelaskan)*: .....
2	.....	☐☐ months	☐ Study ☐ Working/Internship ☐ Others *(jelaskan)*: .....

B 9 **To what extent were the following was applied/emphasized by your lecturers during your study at UKI (1 to a very high extent → 5 not at all)**

Not at all 1	2	3	4	To a very high extent 5	
☐	☐	☐	☐	☐	a.. General knowledge
☐	☐	☐	☐	☐	b. Theory, concept
☐	☐	☐	☐	☐	c. Research orientation
☐	☐	☐	☐	☐	d. Problem-based learning
☐	☐	☐	☐	☐	c. Independent learning
☐	☐	☐	☐	☐	f. Oral presentation
☐	☐	☐	☐	☐	g. Group work
☐	☐	☐	☐	☐	h. Independent tasks
☐	☐	☐	☐	☐	i. Lecturers as source of information
☐	☐	☐	☐	☐	j Freedom to choose non obligatory courses
☐	☐	☐	☐	☐	k. Presence in classroom
☐	☐	☐	☐	☐	l. Tasks to gain work experience and internship
☐	☐	☐	☐	☐	m. Final paper/project paper/*skripsi*

B10 **What do you think of the following when you studied at UKI? (1 very good → 5 worst)**

Very good 1	2	3	4	Worst 5	
☐	☐	☐	☐	☐	a. Academic guidance in general with your advisor
☐	☐	☐	☐	☐	b. Skripsi/project paper advice
☐	☐	☐	☐	☐	c. Choosing of subjects
☐	☐	☐	☐	☐	d. Varierty of subjects offered
☐	☐	☐	☐	☐	e. Program planning
☐	☐	☐	☐	☐	f. Grading system
☐	☐	☐	☐	☐	g. The opportunities to choose subjects and specialization
☐	☐	☐	☐	☐	h. Emphasis on teaching and learning
☐	☐	☐	☐	☐	i. Teaching quality
☐	☐	☐	☐	☐	j. Learning modules/booklets
☐	☐	☐	☐	☐	k. Opportunity to participate in research projects
☐	☐	☐	☐	☐	l. Working opportunity and other work experience
☐	☐	☐	☐	☐	m. The opportunity to interact with other teachers outside teaching schedules
☐	☐	☐	☐	☐	n. The opportunity to interact with other students outside the classrooms
☐	☐	☐	☐	☐	o. Students`opportunity to take part in policy making in the university
☐	☐	☐	☐	☐	p. Library stocks and collection
☐	☐	☐	☐	☐	q. Laboratory facilities
☐	☐	☐	☐	☐	r. IT facilities

B11 What is your GPA (General Performance Average)?

- ☐ 1. 3.75 – 4.00
- ☐ 2. 3.50 -- 3.74
- ☐ 3. 3.00 -- 3.49
- ☐ 4. 2.75 – 2.99
- ☐ 5. 2.50 – 2.74
- ☐ 6. 2.00 – 2.49

C. Transition from Study to Work and Job search

In this section you will be asked about the transition period from HE to work place, a period around the graduation and some months afterwards. The questions asked will be about the jobs that you have applied or sought as a university graduate/*Sarjana*, not casual job or *kerja sambilan* that is not related to diploma.

C1 Did you ever look /applied for a job after you were graduated?

- ☐ Yes ➔ *PLEASE CONTINUE TO Q C2*
- ☐ No. I started my own business
- ☐ No. I already had a job before I graduated
- ☐ No. I continued my further education
- ☐ No. I got my job without applying. ➔ *PLEASE GO TO Q. C7*
- ☐ Others (pls explain): .....

➔ *IF YOU HAVE NOT APPLIED FOR OR SOUGHT A JOB PLEASE GO TO Q C8*

C2 When did you start looking for a job? *Please do not include side jobs.*

- ☐ Before graduation about ☐☐ months
- ☐ Around the graduation ceremony
- ☐ After the graduation ceremony, ☐☐ months afterwards

C3 How did you look for a job after the graduation? *Multiple answers possible*

- ☐ 1. Advertisement in newspaper/magazine, fliers
- ☐ 2. Contacting companies without checking for vacancies
- ☐ 3. I went to the job fair
- ☐ 4. I checked through the internet/on line advertisement
- ☐ 5. I was contacted by the company
- ☐ 6. I contacted the working agency
- ☐ 7. I contacted commercial working agency
- ☐ 8. I had information from the alumni association
- ☐ 9. I contacted the office of student affairs
- ☐ 10. I established a networking since I was in the uni
- ☐ 11. Relation (eg. parents, relatives, friends, etc.)
- ☐ 12. I established my own business
- ☐ 13. Workplacement/internship during study time
- ☐ 14. Others:_____
  (pls specify)

C4 To the best of your knowledge, which was the most important for your first job? *Just write the number from the above (C3) answers (eg. 9).*

No ☐☐ is the most important

C5 How many companies did you contact (via mails--ordinary mails or emails, for instance) before you got your first job?

Approx. ☐☐☐ companies

C6 How many months did you spend all together (before and after graduation) to seek for your first job?

☐☐ mos.

C7 **According to your perception, how important were the following aspects for your employer in recruiting you for your fist employment?**

Not at all important 1	2	3	4	Very important 5	
☐	☐	☐	☐	☐	a. Study program
☐	☐	☐	☐	☐	b. Specialization
☐	☐	☐	☐	☐	c. GPA/grades
☐	☐	☐	☐	☐	d. Work experience while studying
☐	☐	☐	☐	☐	e. Reputation of HEI
☐	☐	☐	☐	☐	f. Overseas experience (for work or internship)
☐	☐	☐	☐	☐	g. English proficiency
☐	☐	☐	☐	☐	h Other foreign language proficiency
☐	☐	☐	☐	☐	i. Computer operating
☐	☐	☐	☐	☐	j. Third party´s recommendation
☐	☐	☐	☐	☐	k. Personality
☐	☐	☐	☐	☐	l. Others (pls specify) ----------

C8 **In short, how do you summarize your general activity since you finished your study at UKI? Most of my time…**

1 ☐ I work ordinary work/I have regular employment
2 ☐ I have many temporary jobs
3 ☐ I have many jobs at the same time
4 ☐ Most of the time I have no job
5 ☐ I continue my studies and took professional courses
6 ☐ I got married and is busy with my family and children
7 ☐ Others : (pls explain) ----------

D. Current Work

D1 Do you currently work?

☐ Yes ..... *GO TO Q D3*

☐ No

D2 **If you are currently NOT employed, what is the reason**

☐ I am still studying/ continuing my higher degree or professional courses
☐ I got married and is busy with my family and children
☐ I am now looking for a job
☐ Others: ..... (pls specify)

IF YOU ARE NOT CURRENTLY WORKING, PLS GO TO Q E.

D3 **How many employers have you worked for (including self-employment) since your graduation?**

└┴┘ employers

IF YOU ARE NOT WORKING OR SELF-EMPLOYED; GO TO Q D14

D4 **Please state the kind of organization you currently work for** *(if you have more than one, state only the main employer).*

☐ Public employer
☐ Non-profit organization
☐ Private employer
☐ Self-employed
☐ Others: (pls specify).....

D5 **In which economic sector are you currently working?** *Please state in a specific term (e.g. car manufacturing, primary school, hospital, theatre).*

.....

D6 **What is your current posisiton (eg. Marketing staff, teacher, head of dept, etc.)**

……

D7 **Please estimate, to the best of your ability, the approximate number of people who are working in ...**

approx. ⌊⌊⌊⌊⌊⌊ a. the location where you currently work.

approx. ⌊⌊⌊⌊⌊⌊ b. the <u>entire organisation</u> if there are more than one location.

D8 **If you are self-employed, pls explain the characteristic of your business:**

Multiple answer possible.

- ☐ a. I have a small contractor
- ☐ b. I took over an existing firm.
- ☐ c. I established a new firm/office.
- ☐ d. I own a shop/store
- ☐ e. I work in my house
- ☐ f. I have no employees
- ☐ g. I have a partnership with a friend/relatives
- ☐ h. Others: .....
  (pls. explain)

D9 **What is your approximate monthly income of your major job?**

- ☐ a. <= 1 000 000
- ☐ b. 1 000 000 – 2. 500.000
- ☐ c. .2 500.000 – 5.000.000
- ☐ d. 5.000.000 – 7 500.000
- ☐ e. 7 500 000 -- 10.000.000
- ☐ f. 10 000 000 -- 12.500.000
- ☐ g. 12 500 000 -- 15.000.000
- ☐ h. >= 15 000 000

D10 **What is your approximate monthly income altogether (from of your major job, side jobs, etc, pls also include bonuses)?**

- ☐ a. <= 1 000 000
- ☐ b. 1 000 000 – 2. 500.000
- ☐ c. .2 500.000 – 5.000.000
- ☐ d. 5.000.000 – 7 500.000
- ☐ e. 7 500 000 -- 10.000.000
- ☐ f. 10 000 000 -- 12.500.000
- ☐ g. 12 500 000 -- 15.000.000
- ☐ h. >= 15 000 000

D11 **Have you undertaken business or professional trips abroad for the past 12 months?**

- ☐ No
- ☐ Yes, all together ⌊⌊⌊ weeks

D12 **To what extent do you communicate** *(oral and written)* **with other parties?**

Not at all				Very often	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. in local languages (vernaculars)
☐	☐	☐	☐	☐	b. in Bahasa Indonesia
☐	☐	☐	☐	☐	c. in English
☐	☐	☐	☐	☐	d. in other foreign language: _____ (pls specify)

D13 **In percentage, how much is your international context in your work?**

␣␣␣ (%)

E. Competencies

E1 **Pls state to which extent you had the following competencies at the time of grad. and to what extent they are required in your current work .** If you are *not currently working, pls answer only A.*

A. Competence acquired Not at all → To a very high extent					Knowledge, skills, and competencies	B. Competence required Not at all → To a very high extent				
1	2	3	4	5		1	2	3	4	5
☐	☐	☐	☐	☐	1. General knowledge	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	2. Knowledge of your field or discipline	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	3. Knowledge of other fields or disciplines	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	4. English	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	5. Computer operating (for office)	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	6. Internet	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	7. Creativity	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	8. Problem solving Ability	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	9. Learning ability	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	10. Working under pressure	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	11. Time management	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	12. Fitness to work	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	13. Working independently	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	14. Working with other people/team working	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	15. Negotiation	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	16. Analytical ability	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	17. Tolerance	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	18. Adaptability	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	19. Assertiveness	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	20. Persistence	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	21. Apreciating different points of view	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	22. Understanding of the system, values in the society	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	23. Leadership	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	24. Ability to take responsibility	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	25. Initiative	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	26. Loyalty and Integrity	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	27. Communication skills	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	28. Ability to present ideas/product/report	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	29. Planning, coordinating, and execution	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	30. Ability to document ideas and information	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	31. Ability to write reports, memos, documents	☐	☐	☐	☐	☐
					32. Continuous learning ability					

E2 **To what extent your study help you in ...?**

Not at all				To a very high extent	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. preparing for your present work tasks?
☐	☐	☐	☐	☐	b. preparing you for tasks in other spheres of life?

--> IF YOU ARE CURRENTLY NOT PROFESSIONALLY ACTIVE, GO TO Q G2

E3 **According to you, how important are the following competencies to your current work?**

Not at all				Very often	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. Professional knowledge of other countries (eg. Economics, social, legal)
☐	☐	☐	☐	☐	b. Knowledge of different cultures, national and internationally
☐	☐	☐	☐	☐	c. Working with people of different cultures or background
☐	☐	☐	☐	☐	d. Communicating in foreign languages.

E4 **How do you rate *software* capability <u>at the time you were graduated</u> from UKI and <u>the present time</u>**
1 Not at all → 5 Very good

At the time of graduation No xpertise at all				Very good		**Now** No expertise at all				Very good
1	2	3	4	5		1	2	3	4	5
☐	☐	☐	☐	☐	a. Word processor/MSWord	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	b. Programming language	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	c. Spread sheet/Excell	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	d. Data base	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	e. Subject-related software (eg: CAD for engineers, SPSS for social sciences, Accurate for Accountants))	☐	☐	☐	☐	☐

E5 How do you rate your foreign language capabilities <u>at the time you were graduated</u> from UKI and now?

At the time of graduation No expertise at all				Very good		**Now** No expertise at all				Very good
1	2	3	4	5		1	2	3	4	5
☐	☐	☐	☐	☐	a. English	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	b. Other language (pls specify) ……..	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	c. Other language (pls specify) ……..	☐	☐	☐	☐	☐

F. Courses and Other Additional Education

F1. When you were studying at UKI and after the graduation, did you take any courses in order to make yourself prepared or more equipped for the workplace?

☐ a. Yes
☐ b. No → (GO TO Question G)

F2 What kind of courses did you take during your studies at UKI *(MULTIPLE ANSWERS POSSIBLE)*

- ☐ a. Computer Operation (MS Office and the like)
- ☐ b. Computer Field specific (Accurate/AUTOCAD, etc)
- ☐ c. English
- ☐ d. Other foreign language (pls. specify) _____
- ☐ e. Leadership
- ☐ f. Entrepreneurship
- ☐ g. Others: (pls specify) _____

F3 What kind of courses did you take AFTER you graduated from UKI *(MULTIPLE ANSWERS POSSIBLE)*

- ☐ a. Computer Operation (MS Office and the like)
- ☐ b. Computer Field specific (Accurate/AUTOCAD, etc)
- ☐ c. English
- ☐ d. Other foreign language (pls. specify) _____
- ☐ e. Leadership
- ☐ f. Entrepreneurship
- ☐ g. Others: (pls specify) _____

F4 To what extent that those courses help you in …?

	Not at all 1	2	3	4	To a very high extent 5
a. getting a job?	☐	☐	☐	☐	☐
b. carrying out your tasks?	☐	☐	☐	☐	☐
c. increasing your work quality?	☐	☐	☐	☐	☐
d. increasing status (eg. Promotion, a wage raise)?	☐	☐	☐	☐	☐
e. fulfilling other social status?	☐	☐	☐	☐	☐
f. Others: _____ (pls. specify)	☐	☐	☐	☐	☐

F5 To what extent do you feel that you must *up date* or develop your competencies through such courses in the future?

Sangat perlu 1	2	3	4	Sama sekali tidak perlu 5
☐	☐	☐	☐	☐

G. Relationship between Higher Education and Work

G1 **If you consider your work altogether, to what extent do you use the knowledge and skills acquired in the course of study?**

Not at all 1	2	3	4	To a very high extent 5
☐	☐	☐	☐	☐

G2 **Is your current work related to the field of study?**

- ☐ My field of study is the only possible/by far the best field
- ☐ Other fields of study could also prepare for this kind of job
- ☐ Other fields of study could work better in this kind of job.
- ☐ The field of study does not matter very much
- ☐ Higher education studies arenot at all related to my area of work
- ☐ Others *(pls specify):* .....

G3 What is the most appropriate level of degree for your current employment and work?

- ☐ Higher than *S1*
- ☐ The same level
- ☐ Non degree program (*D3*).
- ☐ A lower level than tertiary education
- ☐ No tertiary level at all (Not a *Sarjana*)
- ☐ Others *(pls specify):* .....

G4 If you consider your employment and work as hardly appropriate and not linked to your education: why did you take it up? *Multiple replies possible*

1. ☐ I have not (yet) been able to find a job more appropriate
2. ☐ In doing this job I have better career prospects
3. ☐ I prefer an occupation which is not closely connected to my studies
4. ☐ I was promoted to a position less linked to my studies than my previous position(s)
5. ☐ I can get a higher income in my current job
6. ☐ My current job offers me more security
7. ☐ My current job is more interesting
8. ☐ My current job provides the opportunity for part-time/flexible schedules etc.
9. ☐ My current job enables me to work in a locality, which I prefer
10. ☐ My current job allows me to take into account family needs
11. ☐ At the beginning of the career I have to accept work hardly linked to my study
12. ☐ Other (please specify) .....
13. ☐ Not applicable, I consider my job closely linked to my studies

5 Taking all aspects into account, to what extent does your current work situation meet the expectations you had when you started your study?

Much worse than expected			Much better than expected		Not applicable, I have had no expectations
1	2	3	4	5	
☐	☐	☐	☐	☐	☐

G6 To what extent has your study program been a good basis for

Not at all				To a very high extent	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. starting work?
☐	☐	☐	☐	☐	b. finding a satisfactory job
☐	☐	☐	☐	☐	c. fulfilment of competence required by workplace?
☐	☐	☐	☐	☐	d. developing entrepreneurial skills?
☐	☐	☐	☐	☐	e. personal development?
☐	☐	☐	☐	☐	f. future career?
☐	☐	☐	☐	☐	g. Others: _____ (pls. specify)

H. Work Orientation and Job Satisfaction

H1 **Altogether, to what extent are you satisfied with your current work?**

Very dissatisfied → Very satisfied

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

H2 **Pls indicate to what extent are the following goals you place in the past and now.**

A. at the time of graduation Very important 1	2	3	4	Not important at all 5		**B. Now** Very important 1	2	3	4	Not important at all 5
☐	☐	☐	☐	☐	a. Prestige	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	b. Personal development	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	c. Social life	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	d. Family	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	e. Money	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	f. Academic achievement	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	g. Work	☐	☐	☐	☐	☐

H3 **How important are the following to you personally (PART A) and to your current professional work (PART B)?** *If you are not employed, answer only PART A.*

A. Personally Very important 1	2	3	4	Not important At all 5		**B. Current situation** Very important 1	2	3	4	Not important At all 5
☐	☐	☐	☐	☐	a. Work independently	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	b. Opportunity to take a further study	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	c. Possibilities of using acquired knowledge and skills	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	d. Job Security	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	e. Social recognition and social status	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	f. Opportunity of pursuing own ideas	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	g. Good working environment	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	h. Opportunity of pursuing continuous learning	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	i. High income	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	j. Challenging tasks	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	k. Good career prospect	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	l. Enough time for leasure activities	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	m. Chance of doing something useful for society	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	n. Good time management for work and family tasks	☐	☐	☐	☐	☐

H3 **How important are the following to you personally (PART A) and to your current professional work (PART B)?** *If you are not employed, answer only PART A.*

A. Personally Very important 1 2 3 4 5 Not important At all		B. Current situation Very important 1 2 3 4 5 Not important At all
☐ ☐ ☐ ☐ ☐	a. Work independently	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	b. Opportunity to take a further study	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	c. Possibilities of using acquired knowledge and skills	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	d. Job Security	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	e. Social recognition and social status	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	f. Opportunity of pursuing own ideas	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	g. Good working environment	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	h. Opportunity of pursuing continuous learning	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	i. High income	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	j. Challenging tasks	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	k. Good career prospect	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	l. Enough time for leasure activities	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	m. Chance of doing something useful for society	☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐	n. Good time management for work and family tasks	☐ ☐ ☐ ☐ ☐

I. Socio-biographic Data

I1 Gender

☐ Female
☐ Male

I2 Year of birth (eg. 1980)

☐☐☐☐

I3 Parental and spouse education background

Father	Mother	Spouse	
☐	☐	☐	Primary/First secondary school
☐	☐	☐	High school
☐	☐	☐	University

I4 You live ...

When you studied	Currently	
☐	☐	With parents
☐	☐	With relatives
☐	☐	In my own house
☐	☐	Shared appartment/rented room

J. If you go back to the past...

J1 **If you had an opportunity to go back again, would you....**

	Not at all 1	2	3	4	Agree 5
a. choose the same study program?	☐	☐	☐	☐	☐
b. choose UKI as a place to study?	☐	☐	☐	☐	☐
c. take the non degree program?	☐	☐	☐	☐	☐
d. decide not to go to college?	☐	☐	☐	☐	☐

J2 **With your working experience, what is your suggestion for improvement of UKI in general and study program in particular?**

.....

.....

Thank you very much for your kind cooperation.

Survei Alumni UKI:
Pendidikan Tinggi dan Tuntutan Pasar Kerja

Para alumni UKI yang terhormat,

Kami mohon partisipasi Anda dalam pengisian kuesioner yang ditujukan bagi para alumni program S1 (sarjana) Fakultas Teknik jurusan Elektro, Mesin dan Sipil; Fakultas Ekonomi jurusan Manajemen dan Akuntansi, dan Fakultas Sastra jurusan Sastra Inggris, Universitas Kristen Indonesia, lulusan tahun 2001, 2003, dan 2005.

Survei pertama alumni UKI, yang diadakan atas kerja sama Universitas Kristen Indonesia dan International Centre for Higher Education and Research (INCHER), University of Kassel, Jerman, diadakan untuk mengetahui sejauh mana kompetensi yang diperoleh selama kuliah di UKI dapat memenuhi persyaratan kompetensi yang ditetapkan oleh pemberi kerja/perusahaan. Survei ini juga diharapkan dapat memberikan gambaran pengalaman pribadi dalam mencari kerja dan meniti karier dan dapat menjadi masukan yang berharga bagi program studi masing-masing dan almamater dalam menyikapi situasi ketenagakerjaan. Hasil survei ini juga diharapkan dapat melengkapi informasi ketenagakerjaan yang diperlukan untuk perbandingan di skala internasional.

Peneliti menjamin kerahasiaan jawaban yang diberikan dan hasilnya hanya dipakai untuk kepentingan penelitian.

Cara pengembalian kuesioner yang telah diisi adalah sebagai berikut:

- *Kami ambil kembali kira-kira satu minggu setelah Anda menerima kuesioner ini atau kirim sms ke 0812 908 1406 atau ke 0815 806 0317 untuk memberitahu kapan kuesioner yang telah diisi bisa diambil kembali bagi alumni yang berdomisili di area Jakarta, Bogor, Depok, dan Bekasi;*
- *Kirim kembali melalui pos dengan menggunakan amplop berperangko yang telah kami siapkan bersama dengan kuesioner ini bagi para alumni yang berdomisili di luar area Jabodetabek; atau*
- *Fax ke 808 86 882*

INFORMASI YANG DIBERIKAN AKAN DIPERLAKUKAN DENGAN PENUH KERAHASIAAN.

Terima kasih atas perhatian, dukungan, dan bantuan yang diberikan.

Salam

Ied Veda Sitepu

MOHON KEMBALIKAN FORMULIR INI KEPADA:
IED VEDA SITEPU
FAKULTAS SASTRA
UNIVERSITAS KRISTEN INDONESIA
JALAN MAYJEN SUTOYO, CAWANG, JAKARTA 13630
(Email: sitepu@incher.uni-kassel.de)
atau FAX ke (021) 808 82 886

CARA PENGISIAN:

BERAPA LAMAKAH MENGISI KUESIONER INI?

Mengisi kuesioner in tidaklah lama, tergantung dari berapa lama pengalaman Anda dalam bekerja selama ini.
Kami berusaha agar pengisian kuesioner ini tidak menyulitkan Anda dengan memberikan pilihan pilihan jawaban, sehingga Anda hanya memberi tanda pada jawaban Anda. Namun, ada juga beberapa pertanyaan terbuka yang memerlukan jawaban atau penjelasan sehingga Anda diminta untuk mengisinya.

Berikut adalah contoh pertanyaan dan bagaimana cara menjawabnya

Ikutilah petunjuk berikut:

1. Untuk pertanyaan memilih, berilah tanda silang **(X)** pada kotak (☐) jawaban yang sesuai.
   Contoh:
   Program studi:

   1 ☐ Sipil
   2 ☐ Elektro

2. Untuk jawaban dalam bentuk skala, berilah tanda silang (X) pada kotak yang sesuai dengan pilihan Anda. Angka **1** untuk nilai terendah/paling buruk/sangat tidak setuju dan angka **5** untuk nilai tertinggi/paling baik/ sangat setuju. Isilah hanya satu kotak.
   Contoh:

   Seberapa aktifkah Anda di organisasi itu?

Sangat tidak setuju				Sangat setuju
1	2	3	4	5
☐	☐	☐	☐	☐

3. Untuk pertanyaan berupa bilangan, tuliskan satu angka pada satu kotak saja:
   Contoh

   Tahun ☐☐☐☐

4. Untuk jawaban yang berupa kata-kata atau penjelasan lebih lanjut, tuliskan pada tempat yang disediakan:

   Lainnya: _____
   (sebutkan)

SELAMAT MENGISI!

A. Latar belakang Pendidikan sebelum masuk ke UKI

Isilah pertanyaan berikut mengenai perkembangan pendidikan dan pengalaman kerja sebelum Anda mendaftar di UKI.

A1 Program studi Anda di UKI

1 ☐ Teknik Sipil
2 ☐ Teknik Elektro
3 ☐ Teknik Mesin
4 ☐ Sastra Inggris
5 ☐ Manajemen
6 ☐ Akuntansi

A2 Ijazah Anda pada saat masuk ke UKI adalah…

1 ☐ SMU
2 ☐ Sekolah kejuruan (SMK/STM/sejenisnya)

A3 Apa jurusan Anda pada saat di SMU/SMK?

1 ☐ IPA
2 ☐ IPS
3 ☐ Budaya
4 ☐ Bahasa
5 ☐ STM jurusan _____
6 ☐ SMK jurusan _____

A4 Tahun berapa Anda lulus sekolah menengah (SMU/SMK/STM)? (misalnya tahun 2000)

Tahun ☐☐☐☐

B. Masa Kuliah dan Aktifitas Lainnya

B1 Kapan Anda mulai kuliah dan kapan Anda lulus?

Mulai bulan ☐☐ tahun ☐☐☐☐

Lulus.. bulan ☐☐ tahun ☐☐☐☐

B2 Apakah Anda memiliki pengalaman kerja yang berhubungan dengan studi Anda?

Paro waktu/purna waktu (tapi BUKAN magang)

Sebelum kuliah ☐ Ya, kira-kira ⌊⌊⌊ **bulan** ☐ Tidak

Selama kuliah ☐ Ya, kira-kira ⌊⌊⌊ **bulan** ☐ Tidak

B3 Apakah Anda memiliki pengalaman kerja yang TIDAK berhubungan dengan studi Anda?

Paro waktu/purna waktu (tapi BUKAN magang)

Sebelum kuliah ☐ Ya, kira-kira ⌊⌊⌊ **bulan** ☐ Tidak

Selama kuliah ☐ Ya, kira-kira ⌊⌊⌊ **bulan** ☐ Tidak

B4 **Kira-kira berapa jam/minggu Anda gunakan untuk kegiatan di bawah ini selama Anda kuliah?**

A. <u>Kuliah reguler</u> (jam/minggu—kira-kira)	
☐☐	Kuliah
☐☐	Belajar mandiri/membuat PR/paper/tugas kuliah lainnya
☐☐	Lainnya *(sebutkan):* .....
B. <u>Di luar kuliah reguler</u> (jam/minggu--kira-kira)	
☐☐	Pelajaran tambahan/kelas di Semester Pendek (SP).
☐☐	Belajar/kursus-kursus di UKI maupun di luar UKI
☐☐	Kegiatan Ekstrakurikuler (olah raga, seni, PSM, dll)
☐☐	Lainnya (*sebutkan):* .....

B5 **Sewaktu Anda kuliah, Apakah Anda aktif di organisasi (org. sosial/kepemudaan/agama, dll)?**

☐ Ya.
☐ Tidak. → *LANGSUNG KE PERTANYAAN B7*

B6 **Seberapa aktifkah Anda di organisasi tersebut?**

Sama sekali pasif				Sangat aktif
1	2	3	4	5
☐	☐	☐	☐	☐

B7 **Apakah Anda pernah tinggal di luar negeri selama Anda studi di UKI** *(untuk keperluan bekerja atau belajar)***?**

☐ Ya
☐ Tidak → *LANGSUNG KE PERTANYAAN B9*

B8 **Bila Anda pernah tinggal di luar negeri, jelaskan** *(satu persatu bila pernah lebih dari satu kali)* **di negara mana, lama tinggal dan untuk kepentingan apa.**

	A. Nama negara	**B. Masa tinggal** *(dlm. bulan)*	**C. Untuk kepentingan apa** *(jawaban boleh lebih dari satu)*
1	.....	☐☐ bulan	☐ Studi ☐ Bekerja/magang ☐ Lainnya *(jelaskan)*: .....
2	.....	☐☐ bulan	☐ Studi ☐ Bekerja/magang ☐ Lainnya *(jelaskan)*: .....

B 9. **Sejauh mana hal-hal yang berhubungan dengan pembelajaran dan metode di bawah ini dipraktikkan atau diaplikasikan oleh dosen maupun jurusan Anda selama Anda kuliah di UKI (1 sangat kurang … → ...5 sangat cukup/memadai)**

Sangat kurang 1	2	3	4	Sangat memadai 5	
☐	☐	☐	☐	☐	a. Pengetahuan umum
☐	☐	☐	☐	☐	b. Teori, konsep
☐	☐	☐	☐	☐	c. Orientasi penelitian/riset
☐	☐	☐	☐	☐	d. Pembelajaran yang berorientasi pada permasalahan (*Problem-based learning*)
☐	☐	☐	☐	☐	e. Belajar mandiri
☐	☐	☐	☐	☐	f. Presentasi di depan kelas
☐	☐	☐	☐	☐	g. Diskusi kelompok
☐	☐	☐	☐	☐	h. Tugas-tugas mandiri
☐	☐	☐	☐	☐	i. Dosen sebagai sumber pengetahuan
☐	☐	☐	☐	☐	j Keleluasaan untuk memilih mata kuliah pilihan
☐	☐	☐	☐	☐	k. Kehadiran di kelas
☐	☐	☐	☐	☐	l. Tugas untuk mencari tempat magang dan pengalaman kerja
☐	☐	☐	☐	☐	m. Tugas akhir/skripsi

B10 **Menurut Anda, bagaimana hal-hal di bawah ini ketika Anda kuliah di UKI? (1 sangat buruk.....→.....5 sangat baik)**

Sangat buruk 1	2	3	4	Sangat baik 5	
☐	☐	☐	☐	☐	a. Bimbingan akademik oleh Dosen PA
☐	☐	☐	☐	☐	b. Bimbingan Skripsi/makalah akhir
☐	☐	☐	☐	☐	c. Pemilihan mata kuliah
☐	☐	☐	☐	☐	d. Jenis mata kuliah yang ditawarkan
☐	☐	☐	☐	☐	e. Perencanaan kuliah (pengisian KRS)
☐	☐	☐	☐	☐	f. Sistem penilaian
☐	☐	☐	☐	☐	g. Kesempatan untuk memilih mata kuliah dan spesialisasi
☐	☐	☐	☐	☐	h. Pembelajaran (belajar mengajar)
☐	☐	☐	☐	☐	i. Kualitas pengajaran
☐	☐	☐	☐	☐	j. Pengadaan modul-modul belajar
☐	☐	☐	☐	☐	k. Kesempatan untuk berpartisipasi dalam riset/penelitian
☐	☐	☐	☐	☐	l. Kesempatan bekerja dan pengalaman kerja lainnya
☐	☐	☐	☐	☐	m. Kesempatan untuk berinteraksi dengan dosen di luar jadwal mengajar
☐	☐	☐	☐	☐	n. Kesempatan untuk berinteraksi dengan mahasiswa lain di luar kelas
☐	☐	☐	☐	☐	o. Kesempatan untuk berpartisipasi dalam penentuan kebijakan di tingkat universitas
☐	☐	☐	☐	☐	p. Fasilitas dan koleksi perpustakaan
☐	☐	☐	☐	☐	q. Fasilitas laboratorium
☐	☐	☐	☐	☐	r. Fasilitas Teknologi Informasi

B11 **Berapakah IPK (Indeks Prestasi Kumulatif) ketika lulus dari UKI?**

1 ☐ 3.75 – 4.00
2 ☐ 3.50 -- 3.74
3 ☐ 3.00 -- 3.49
4 ☐ 2.75 – 2.99
5 ☐ 2.50 – 2.74
6 ☐ 2.00 – 2.49

C. Masa Transisi: Dari kuliah ke tempat kerja sebagai SARJANA

Pada bagian ini Anda diminta untuk menjawab pertanyaan-pertanyaan yang berhubungan dengan masa setelah kuliah sampai mendapat pekerjaan sebagai seorang SARJANA. Mohon diingat, yang ditanyakan pada bagian ini adalah pekerjaan yang bukan kerja sambilan.

C1 Apakah Anda pernah melamar/mencari kerja sejak Anda lulus?

1 ☐ Ya ➔ *LANJUTKAN KE PERTANYAAN C2*
2 ☐ Tidak. Saya membuka usaha sendiri
3 ☐ Tidak. Saya telah bekerja sebelum saya lulus kuliah
4 ☐ Tidak. Saya melanjutkan studi
5 ☐ Tidak. Saya mendapatkan pekerjaan tanpa melamar. ➔ *SILAKAN KE PERTANYAAN NO **C7***
6 ☐ Lainnya (sebutkan):

➔ *BILA ANDA BELUM PERNAH MELAMAR PEKERJAAN, LANGSUNG KE PERTANYAAN **C8***

C2 Kapan Anda mulai melamar/mencari pekerjaan? *Jangan masukkan pekerjaan-pekerjaan sambilan .*

1 ☐ Sebelum lulus kuliah, kira-kira ☐☐ bulan sebelumnya
2 ☐ Kira-kira sekitar wisuda
3 ☐ Setelah wisuda, kira-kira ☐☐ bulan setelahnya

C3 Bagaimana cara Anda mencari pekerjaan segera setelah wisuda? *Jawaban boleh lebih dari satu (1)*

1 ☐ .Melalui iklan di koran/majalah atau brosur
2 ☐ Menghubungi perusahaan-perusahaan tanpa mengecek apakah ada lowongan
3 ☐ Saya mengunjungi Bursa Tenaga Kerja (*Job fair*)
4 ☐ .Saya mencari info di internet
5 ☐ Saya dihubungi oleh perusahaan
6 ☐ Saya menghubungi agen ketenagakerjaan
7 ☐ Saya menghubungi agen ketenagakerjaan komersial
8 ☐ Saya mendapat informasi dari Ikatan Alumni UKI
9 ☐ Saya menghubungi kantor Purek III/Pudek III
10 ☐ .Saya membangun jejaring/*network* sewaktu saya kuliah
11 ☐ .Saya mendapat bantuan relasi (contohnya,. Orang tua, keluarga, teman, dll.)
12 ☐ .Saya membangun usaha sendiri
13 ☐ .Melalui tempat saya magang ketika kuliah
14 ☐ .Lainnya:*(sebutkan)*_____

C4 Dari metode di atas, mana yang menurut Anda paling penting pada saat mencari pekerjaan pertama Anda *Tulislah pilihan dari pertanyaan C3 di atas (misalnya No. 9).*

No ☐☐ adalah yang paling penting

C5 Berapa perusahaan yang Anda kontak (melalui surat, misalnya) sebelum Anda mendapatkan pekerjaan pertama Anda?

Kira-kira ☐☐☐ perusahaan/kantor

C6 Secara keseluruhan, kira-kira berapa bulankah yang Anda habiskan untuk mendapatkan pekerjaan pertama Anda sebelum atau setelah Anda lulus dari UKI?

☐☐ bulan

C7 **Menurut persepsi Anda, seberapa pentingkah hal-hal di bawah ini mempengaruhi perusahaan dalam merekrut Anda sebagai pegawai?**

Sangat tidak penting				Penting sekali	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. Program studi
☐	☐	☐	☐	☐	b. Spesialisasi
☐	☐	☐	☐	☐	c. Nilai/IPK
☐	☐	☐	☐	☐	d. Pengalaman kerja selama masa studi
☐	☐	☐	☐	☐	e. Reputasi universitas
☐	☐	☐	☐	☐	f. Pengalaman tinggal/belajar/magang di luar negeri
☐	☐	☐	☐	☐	g. Penguasaan bahasa Inggris
☐	☐	☐	☐	☐	h. Penguasaan bahasa asing lain
☐	☐	☐	☐	☐	i. Keterampilan penggunaan computer
☐	☐	☐	☐	☐	j. Rekomendasi orang lain
☐	☐	☐	☐	☐	k. Kepribadian
☐	☐	☐	☐	☐	l. Lainnya *(sebutkan)*_____

C8 **Gambarkanlah secara singkat, aktivitas utama Anda sejak Anda lulus dari UKI.**

1 ☐ Saya bekerja biasa
2 ☐ Saya mempunyai berbagai pekerjaan sambilan
3 ☐ Saya memiliki lebih dari satu pekerjaan pada saat yang bersamaan
4 ☐ Saya lebih banyak menganggur
5 ☐ Saya melanjutkan studi dan mengambil pelatihan atau kursus profesional
6 ☐ Saya disibukkan dengan keluarga dan anak.
7 ☐ Lainnya: *(sebutkan)* _____

D. Aktifitas Sekarang dan Pekerjaan

D1 **Apakah Anda sekarang BEKERJA?**

☐ Ya. → *LANJUTKAN KE PERTANYAAN D3*

☐ Tidak

D2 **Bila Anda sekarang ini TIDAK bekerja, mengapa?**

☐ Saya sedang melanjutkan sekolah/mengambil kursus-kursus profesional
☐ Saya menikah dan disibukkan dengan urusan keluarga dan anak-anak.
☐ Saya sedang mencari pekerjaan
☐ Lainnya (*sebutkan*)_____.

D3 **Sudah berapa kalikah Anda pindah kerja (termasuk mendirikan/membuat usaha) sejak Anda lulus dari UKI sampai sekarang ini ?**

☐☐ kali

BILA ANDA TIDAK BEKERJA ATAU MEMILIKI USAHA, LANGSUNG KE PERTANYAAN BAGIAN E

D4 **Jelaskan jenis pekerjaan/perusahaan tempat Anda bekerja** *(bila Anda memiliki lebih dari satu pekerjaan, sebutkan HANYA perusahaan utama).*

☐ Kantor/perusahaan negeri
☐ Organisasi nirlaba
☐ Pegawai swasta
☐ Pengusaha/memiliki usaha sendiri
☐ Lainnya (*sebutkan*)_____.

D5 **Sebutkan pada sektor ekonomi apa tepatnya Anda bekerja sekarang ini?** *Tuliskanlah dengan jelas (contoh: asuransi, pabrik perakitan mobil, sekolah (SD/SMP), rumah sakit, teater, dll)*.

.....

D6 **Apakah jabatan/posisi Anda sekarang ini** *(contoh: staf marketing, guru, kepala departemen, data processing, atau sales)*

.....

D9 **Menurut perkiraan Anda, kira-kira berapa orangkah yang bekerja di perusahaan tempat Anda bekerja ...**

Kira-kira. ⌊_⌊_⌊_⌊_⌊_⌊_⌋ a. di kantor Anda saja (bila Anda kerja di cabang).

Kira-kira ⌊_⌊_⌊_⌊_⌊_⌊_⌋ b. secara keseluruhan di perusahaan tempat Anda bekerja .

D8 **Bila Anda memiliki bisnis/usaha sendiri,** sebutkan karakteristik usaha Anda tersebut.
Jawaban bisa lebih dari satu.

1 ☐ a. Saya memiliki kontraktor kecil
2 ☐ b. Saya mengambil alih suatu usaha yang baru
3 ☐ c. Saya mendirikan usaha yang baru
4 ☐ d. Saya mendirikan usaha dagang
5 ☐ e. Saya bekerja di rumah
6 ☐ f. Saya tidak memiliki pegawai
7 ☐ g. Saya mendirikan usaha dengan teman/keluarga
8 ☐ h. Lainnya: *(sebutkan)*_____

D9 **Berapakah kira-kira penghasilan Anda dari PEKERJAAN UTAMA per BULAN?**

1 ☐ ≤1 000 000
2 ☐ 1.000 000 – 2.500.000
3 ☐ 2 500.000 – 5.000.000
4 ☐ 5.000.000 – 7.500.000
5 ☐ 7.500 000 -- 10.000.000
6 ☐ 10.000 000 -- 12.500.000
7 ☐ 12.500 000 -- 15.000.000
8 ☐ ≥ 15 000 000

D10 **Berapakah kira-kira penghasilan Anda SECARA KESELURUHAN per BULAN (dari pekerjaan utama dan sambilan. Hitung juga bonus-bonus yang Anda terima)?**

1 ☐ ≤1 000 000
2 ☐ 1 000 000 – 2.500.000
3 ☐ 2.500.000 – 5.000.000
4 ☐ 5.000.000 – 7.500.000
5 ☐ 7.500 000 -- 10.000.000
6 ☐ 10.000 000 -- 12.500.000
7 ☐ 12.500 000 -- 15.000.000
8 ☐ ≥ 15.000 000

D11 **Apakah Anda melakukan perjalanan bisnis/profesional ke luar negeri dalam 12 bulan terakhir?**

☐ Ya, keseluruhan ⌊_⌊_⌊_⌋ minggu
☐ Tidak

D12 **Dalam pekerjaan Anda, seberapa sering Anda berkomunikasi *(lisan maupun tulisan)* dengan orang/pihak lain dalam…?**

	Tidak sekali 1	2	3	4	Sangat sering 5
a. bahasa daerah	☐	☐	☐	☐	☐
b. bahasa Indonesia	☐	☐	☐	☐	☐
c. bahasa Inggris	☐	☐	☐	☐	☐
d. bahasa asing lainnya: *(sebutkan)*_____	☐	☐	☐	☐	☐

D13 **Berapa persenkah konteks internasional dalam pekerjaan Anda?**

⌊_⌊_⌋ (%)

E. Kompetensi

E1 **Jelaskan dengan skala, kompetensi yang Anda dapatkan pada saat Anda lulus dan kompetensi yang dibutuhkan/diperlukan untuk pekerjaan Anda.**
Bila Anda TIDAK BEKERJA, jawablah hanya bagian A.
1 sangat kurang → 5 sangat memadai/sangat diperlukan

A. Kompetensi yang di-dapatkan pada saat lulus					**Pengetahuan, keterampilan dan kompetensi**	**B. Kompetensi yang diperlukan untuk pekerjaan Anda**				
Sangat kurang				Sangat memadai		Sangat kurang				Sangat diperlukan
1	2	3	4	5		1	2	3	4	5
☐	☐	☐	☐	☐	1. Pengetahuan umum	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	2. Pengetahuan bidang studi	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	3. Pengetahuan tentang bidang studi lain	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	4. Bahasa Inggris	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	5. Komputer (*office)*	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	6. Internet	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	7. Kreatifitas	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	8. Pemecahan masalah	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	9. Kemampuan belajar	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	10. Bekerja di bawah tekanan	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	11. Manajemen waktu	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	12. Penyesuaian terhadap pekerjaan	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	13. Bekerja mandiri	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	14. Bekerja dalam tim/dengan orang lain	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	15. Negosiasi	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	16. Kemampuan menganalisis	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	17. Toleransi	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	18. Kemampuan beradaptasi	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	19. Bersikap asertif/dapat mengemukakan pendapat dan berkeinginan kuat	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	20. Kemampuan mengajukan dan mempertahankan ide/*persistence*	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	21. Menghargai pendapat orang lain	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	22. Pemahaman mengenai sistem yang berlaku di masyarakat/organisasi/kelompok	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	23. Kepemimpinan	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	24. Kemampuan mengambil tanggung jawab	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	25. Berinisiatif	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	26. Kesetiaan dan integritas	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	27. Keterampilan berkomunikasi	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	28. Kemampuan mempresentasikan ide/produk/laporan	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	29. Perencanaan, koordinasi dan pelaksanaan	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	30. Mendokumentasikan ide dan informasi	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	31. Kemampuan menulis laporan/dokumen tertulis lainnya	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	32. Sikap belajar berkelanjutan	☐	☐	☐	☐	☐

E2 **Sejauh mana studi Anda membantu dalam ...?**

	Sangat kurang 1	2	3	4	Sangat Besar 5
a. mempersiapkan diri Anda untuk pekerjaan Anda?	☐	☐	☐	☐	☐
b. mempersiapkan diri Anda dalam menghadapi tantangan kehidupan lainnya?	☐	☐	☐	☐	☐

→ ***BILA ANDA TIDAK BEKERJA, LANJUTKAN KE PERTANYAAN G2***

E3 **Menurut Anda, sejauh mana kompetensi di bawah ini penting untuk pekerjaan Anda sekarang ini?**

	Tdk penting sama sekali 1	2	3	4	Sangat penting 5
a. Pengetahuan tentang mancanegara (misalnya ekonomi, sosial, hukum, dll)	☐	☐	☐	☐	☐
b. Pengetahuan tentang budaya lokal dan mancanegara	☐	☐	☐	☐	☐
c. Bekerja dengan orang-orang dengan berbagai latar belakang budaya dan kebangsaan	☐	☐	☐	☐	☐
d. Berkomunikasi dalam bahasa asing	☐	☐	☐	☐	☐

E4 **Sejauh mana penguasaan *software* di bawah ini <u>pada saat Anda lulus dari UKI</u> dan <u>sekarang</u>**
1 tidak bisa sama sekali → 5 sangat baik

	Pada saat lulus dari UKI Tidak bisa sama sekali 1	2	3	4	Sangat baik 5	**Sekarang** Tidak bisa sama sekali 1	2	3	4	Sangat baik 5
a. Word processor/MSWord	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Bahasa-bahasa pemrograman	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Spread sheet/Excell	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Data base	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Software yang berhubungan dengan keahlian (contoh: CAD untuk teknik, SPSS untuk ilmu sosial, dll)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

E5 **Sejauh mana penguasaan bahasa asing di bawah ini <u>pada saat Anda lulus dari UKI</u> dan <u>sekarang</u>?**
1 tidak bisa sama sekali → 5 amat menguasai

	Pada saat lulus dari UKI Tidak bisa sama sekali 1	2	3	4	Amat menguasai 5	**Sekarang** Tidak bisa sama sekali 1	2	3	4	Amat menguasai 5
a. Bahasa Inggris	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Bahasa asing lainnya *(sebutkan)*.....	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Bahasa asing lainnya *(sebutkan)*.....	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

F. Kursus-kursus dan Studi lanjut

F1. Ketika Anda kuliah di UKI dan setelah lulus, apakah Anda mengambil kursus-kursus tambahan untuk mempersiapkan diri Anda untuk bekerja?

1 ☐ Ya
2 ☐ Tidak → ***LANGSUNG KE PERTANYAAN G***

F2 **Kursus-kursus apa yang Anda ambil sewaktu kuliah di UKI (di dalam maupun di luar UKI)?**
(Jawaban boleh lebih dari satu)

1 ☐ a. Pengoperasian Komputer (MS Office dan sejenisnya)
2 ☐ b. Komputer yang berhubungan dengan bidang studi (CAD/SPSS, dll.)
3 ☐ c. Bahasa Inggris
4 ☐ d. Bahasa asing lainnya *(sebutkan)* _____
5 ☐ e. Kepemimpinan
6 ☐ *f. Entrepreneurship*/Kewirausahaan
7 ☐ g. Lainnya *(sebutkan)* _____

F3 **Kursus-kursus apa yang Anda ambil setelah Anda lulus dari UKI?** *(Jawaban boleh lebih dari satu)*

1 ☐ a. Pengoperasian Komputer (MS Office dan sejenisnya)
2 ☐ b. Komputer yang berhubungan dengan bidang studi (CAD/SPSS, dll.)
3 ☐ c. Bahasa Inggris
4 ☐ d. Bahasa asing lainnya *(sebutkan)* _____
5 ☐ e. Kepemimpinan
6 ☐ *f. Entrepreneurship*/Kewirausahaan
7 ☐ g. Lainnya *(sebutkan)* _____

F4 **Sejauh mana kursus-kursus tersebut membantu Anda dalam hal-hal berikut?**

	Tidak sama sekali 1	2	3	4	Sangat membantu 5
a. mencari kerja?	☐	☐	☐	☐	☐
b. menyelesaikan tugas-tugas Anda?	☐	☐	☐	☐	☐
c. meningkatkan kualitas pekerjaan Anda?	☐	☐	☐	☐	☐
d. meningkatkan status kepegawaian Anda (contoh: promosi, kenaikan gaji, dll.)?	☐	☐	☐	☐	☐
e. memenuhi tuntutan status sosial lainnya?	☐	☐	☐	☐	☐
f. Lainnya: *(sebutkan)*_____	☐	☐	☐	☐	☐

F5 **Sejauh mana Anda perlu meningkatkan atau mengembangkan kompetensi Anda melalui kursus-kursus semacam itu di masa mendatang?**

Sama sekali tidak perlu 1	2	3	4	Sangat perlu 5
☐	☐	☐	☐	☐

G. Pendidikan Tinggi dan Dunia Kerja

G1 **Melihat pekerjaan Anda secara keseluruhan, sejauh mana pengetahuan dan keterampilan yang Anda dapatkan sewaktu kuliah membantu Anda?**

Sangat sedikit 1	2	3	4	Sangat banyak 5
☐	☐	☐	☐	☐

G2 **Apakah pekerjaan Anda sekarang berhubungan dengan bidang studi Anda?**

1 ☐ Bidang studi saya yang paling cocok untuk pekerjaan saya sekarang
2 ☐ Bidang studi lain dapat juga bekerja di jenis pekerjaan yang saya geluti ini.
3 ☐ Bidang studi lain dapat mengerjakan pekerjaan ini dengan lebih baik.
4 ☐ Bidang studi tidak ada hubungannya sama sekali dengan pekerjaan ini
5 ☐ Lulusan universitas tidak berhubungan dengan area pekerjaan saya
6 ☐ Lainnya *(jelaskan):* _____

G3 **Tingkat/level apakah yang paling cocok untuk pekerjaan maupun tugas-tugas Anda sekarang?**

1 ☐ Lebih tinggi dari lulusan S1
2 ☐ Setingkat lulusan S1
3 ☐ Setingkat lulusan program diploma (D3).
4 ☐ Lebih rendah dari lulusan universitas (setingkat SMU)
5 ☐ Bukan sarjana
6 ☐ Lainnya *(sebutkan):* _____

G4 **Bila Anda menganggap pekerjaan Anda tersebut tidak cocok atau tidak berhubungan dengan pendidikan Anda, mengapa Anda tetap bekerja di sana?** *Jawaban boleh lebih dari satu*

1 ☐ a. Karena saya belum mendapatkan pekerjaan yang lebih cocok dengan pendidikan saya
2 ☐ b. Karena pekerjaan ini memiliki prospek karier yang lebih baik
3 ☐ c. Karena saya lebih menyukai pekerjaan yang tidak terlalu berhubungan dengan pendidikan saya
4 ☐ d. Karena saya dipromosikan ke posisi yang tidak terlalu berhubungan dengan pendidikan saya dibandingkan dengan posisi (-posisi) sebelumnya
5 ☐ e. Karena saya mendapatkan penghasilan yang lebih baik
6 ☐ f. Karena pekerjaan ini memberikan banyak fasilitas dan jaminan
7 ☐ g. Karena pekerjaan ini lebih menarik
8 ☐ h. Karena pekerjaan ini sangat fleksibel dalam waktu dan memberikan kesempatan untuk *part time*/paro waktu.
9 ☐ i. Karena pekerjaan ini dapat dilakukan dari tempat saya tinggal seperti yang saya inginkan
10 ☐ j. Karena saya tetap dapat mengurus keluarga saya
11 ☐ k. Karena pada awal karier saya harus menerima pekerjaan yang hampir tidak berhubungan dgn. pendidikan saya.
12 ☐ l. Lainnya *(sebutkan)*_____

13 ☐ m. Tidak, saya menganggap pekerjaan saya ini berhubungan erat dengan pendidikan saya

G5 **Secara umum, sejauh mana pekerjaan Anda memenuhi harapan-harapan Anda sewaktu kuliah dulu?**

Tidak memenuhi harapan sama sekali			Lebih dari yg diharapkan		Saya tidak memiliki harapan apa-apa
1	2	3	4	5	
☐	☐	☐	☐	☐	☐

G6 **Sejauh mana program studi yang Anda ambil membantu Anda dalam hal-hal berikut?**

Sangat kurang				Sangat besar	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. memulai kerja?
☐	☐	☐	☐	☐	b. menemukan pekerjaan yang memuaskan?
☐	☐	☐	☐	☐	c. menyiapkan Anda dengan kompetensi yang dipersyaratkan oleh pekerjaan Anda?
☐	☐	☐	☐	☐	d. mengembangkan keterampilan kewirausahaan?
☐	☐	☐	☐	☐	e. pengembangan kepribadian?
☐	☐	☐	☐	☐	f. karier di masa mendatang?
☐	☐	☐	☐	☐	g. Lainnya: *(sebutkan)* _____

H. Orientasi dan Kepuasan Kerja

H1 Secara keseluruhan, apakah Anda puas dengan pekerjaan Anda sekarang?

Sangat tidak puas				Sangat puas
1	2	3	4	5
☐	☐	☐	☐	☐

H2 Sebutkan sejauh mana Anda menempatkan/memprioritaskan hal-hal di bawah ini pada saat Anda lulus *(A. kolom kiri)* dan sekarang *(B. kolom kanan)*

A. pada saat lulus					**Prioritas**	**B. Sekarang**				
Tidak penting sama sekali				Sangat penting		Tidak penting sama sekali				Sangat penting
1	2	3	4	5		1	2	3	4	5
☐	☐	☐	☐	☐	a. Prestise	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	b. Pengembangan kepribadian	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	c. Kehidupan sosial	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	d. Keluarga	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	e. Uang	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	f. Pencapaian akademik	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	g. Pekerjaan	☐	☐	☐	☐	☐

H3 Seberapa pentingkah hal-hal di bawah ini menurut Anda pribadi (Bagian A) dan tuntutan pekerjaan Anda sekarang (Bagian B)? *Bila Anda tidak bekerja, cukup jawab Bagian A*

A. Menurut Anda pribadi						**B. Tuntutan pekerjaan**				
Tidak penting sama sekali				Sangat penting		Tidak penting sama sekali				Sangat penting
1	2	3	4	5		1	2	3	4	5
☐	☐	☐	☐	☐	a. Bekerja mandiri	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	b. Kesempatan untuk studi lanjut	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	c. Kesempatan untuk menggunakan pengetahuan dan keterampilan yang didapatkan sewaktu kuliah	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	d. Jaminan dan fasilitas yang diberikan oleh pekerjaan	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	e. Pengakuan masyarakat dan status sosial	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	f. Kesempatan mengemukakan ide	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	g. Lingkungan pekerjaan yang kondusif	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	h. Kesempatan untuk terus belajar	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	i. Gaji yang besar	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	j. Tugas-tugas yang menantang	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	k. Prospek karier yang baik	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	l. Waktu luang yang cukup	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	m. Kesempatan untuk melakukan sesuatu bagi masyarakat	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	n. Pengaturan waktu yang baik untuk pekerjaan dan keluarga	☐	☐	☐	☐	☐

I. Data Pribadi

Isilah pertanyaan berikut mengenai pribadi Anda agar kami dapat menginterpretasikan riwayat pekerjaan Anda seakurat mungkin

I1 Jenis kelamin

1 ☐ Perempuan
2 ☐ Laki-laki

I2 Tahun lahir (contoh 1980)

Tahun 19 ☐☐

I5 Pendidikan tertinggi orang-tua dan suami/istri

Ayah	Ibu	Suami/ istri	
☐	☐	☐	SD
☐	☐	☐	SMP
☐	☐	☐	SMU/SMK
☐	☐	☐	Universitas

I6 Anda tinggal dengan siapa

Sewaktu kuliah	Sekarang	
☐	☐	Orang tua
☐	☐	keluarga
☐	☐	di rumah sendiri
☐	☐	Kos/kontrak

J Bila Anda menoleh ke masa lalu...

J1 Bila Anda dapat kembali ke masa lalu, Anda akan....

Sangat tidak setuju				Sangat setuju	
1	2	3	4	5	
☐	☐	☐	☐	☐	a. memilih program studi yang sama.
☐	☐	☐	☐	☐	b. memilih UKI sebagai tempat Anda menuntut ilmu.
☐	☐	☐	☐	☐	c. memilih program Diploma saja
☐	☐	☐	☐	☐	d. memutuskan untuk tidak masuk universitas.

J2 Dengan pengalaman kerja Anda, berikanlah masukan untuk UKI secara umum dan pengembangan program studi secara khusus?

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Terima kasih atas partisipasi dan kerja sama yang baik.