Experiences and Results of the Utilisation of Tracer Studies in the Curriculum Development in Indonesia[1]

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Abstract

Contribution of higher education to the labour market has always been questioned especially when it comes to the readiness of the graduates for smooth transition from study to work and their ability to survive in the labour market. Graduate competencies are, in fact, considered more important in the recruitment process than the degree itself therefore the responsibility of the readiness lies in the hand of higher education institutions. It is therefore important to design a curriculum which will respond tothe needs of the labour market. Indonesia, a country with more than 4000 higher education instituions has just been introduced to the IQF-based curriculum in 2015, where each level of education (from primary up to post graduate level) is measured for a certain qualification fit for the level. The design of the curriculum follows certain steps where tracer study serves as one of the initial steps.

This paper will present the utilisation of the result of tracer study in the curriculum development of a study program. List of competencies in the tracer study serves as tools in measuring competencies of the graduates in their respective workplaces. Indonesian standardized questionnaire on tracer study lists 29 competencies. For the purpose of developing this outcome-based curriculum, the list will also be discussed to provide a clear picture of those required by the labor market. The results of competency mapping can be used to develop a curriculum that is close to the demand of the labour market.

Kontribusi pendidikan tinggi ke pasar tenaga kerja selalu dipertanyakan terutama ketika menyangkut kesiapan para lulusan perguruan tinggi dalam melewati masa transisi dari pendidikan tinggi ke dunia kerja dan kemampuan mereka untuk bertahan di pasar tenaga kerja. Pada kenyataannya kompetensi lulusan dianggap lebih penting dalam proses perekrutan tenaga kerja dibandingkan dengan gelar atau latar belakang pendidikan. Oleh karena itu penting sekali bila perguruan tinggi merancang kurikulum yang dapat merespon kebutuhan pasar kerja. Indonesia, negara dengan lebih dari 4000 lembaga pendidikan tinggi baru saja memperkenalkan kurikulum berbasis KKNI pada tahun 2015, di mana setiap tingkat pendidikan (dari tingkat dasar hingga tingkat pascasarjana) masuk dalam kualifikasi tertentu yang sesuai untuk tingkat tersebut. Rancangan kurikulum dibuat bertahap dan tracer study adalah salah satu langkah awal dalam pengembangan ataupun peninjauan kurikulum.

Tulisan ini akan menyajikan pemanfaatan hasil tracer study dalam pengembangan kurikulum program studi. Daftar kompetensi dalam tracer study berfungsi sebagai alat dalam mengukur kompetensi lulusan di tempat kerja masing-masing. Kuesioner standar Indonesia berisi 29 kompetensi. Untuk tujuan mengembangkan kurikulum berbasis hasil ini, daftar ini juga akan dibahas untuk memberikan gambaran yang dibutuhkan oleh pasar tenaga kerja. Hasil pemetaan kompetensi dapat digunakan untuk mengembangkan kurikulum yang tidak jauh dari pasar tenaga kerja.

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Introduction: tracer study in Indonesia

Indonesia's acquaintance with tracer study has started in mid 90es with the first accreditation of study program the institution was asked to trace the whereabouts of its graduates. This is the beginning of the quality assurance program which measure the outcome of the study program. As part of higher education institutions (HEIs)' responsibility to the community, institutions of higher learning was not only responsible for the learning program or the output of the program, i.e. graduates, but also whether its graduates survided in the labour market or whether they could use the knowledge and skills they acquired during studies. Questions like, among others, where the graduates worked, how much they earned each month (salaries and other incomes), their transition time (waiting time for their first job), their vertical and horizontal match between study background and work were some of the questions that certainly brought a shock to academia, especially because at that time they thought that responsibility of HEIs came to an end with the graduation of the students. Once the process was done, the responsibility was also completed.

Until today the questions concerning the whereabouts of the graduates have always given headaches to both administrators and lecturers because they have to give extra attention to the graduates who are not within their control anymore. Contacting and tracing them are two extra works with minimum results because the response from the graduates may not fulfil our expectations. Graduates are free whether or not to respond to their almamaters. However, because we need to get information from them, we have to do our best to have them respond. To date, less than 10% of the total number of HEIs in Indonesia works on their graduates survey for the purpose of institution development; the majority only pursues information from their graduates because it is compulsory in the accreditation process: the waiting time for the first job, the measurement of certain competencies by the users, the salary they earn and the vertical and horizontal match of their work to their study background., as required by the external quality assurance system run the *Badan Akreditasi Nasional Pendidikan Tinggi* (BAN PT-- Bureau of National Accreditation of Higher Education Institutions) once in every 5 years.

Only in 2010 the standardized methodology of tracer study was introduced by the government. Since, seminars and workshops were held in many places in Indonesia. Indonesia is a country with more than 4000 HEIs of various types, for example, university, institutes, academy (non degree program provision) with diverse qualities. Diverse qualities

and different strength in resources means different priorities in running the service. It is no secret that most of Indonesian HEIs give priority to the teaching activities, not the outcomes therefore they only trace the graduates when the BAN PT requires them to do so. Indonesian government, through the Ministry of Research, Technology and Higher Education has started to introduce tracer study system since 2010 with a career development system in higher education so that HEIs would understand the importance of preparing students for the next nt pace in live: work. In this program, standardized tracer study system was also briefly introduced to give a glance of the goal, ie. tracing the graduates to measure the success of graduates at work and whether higher education significantly contribute to their success.

Two years later, grants was given to selected institutions to carry out standardized tracer study in their institutions. With the limited number of grants, however, they did not give government enough data or a picture of the graduates' activities. After 3 years, the government gave more attention to tracer study and for the past two years, finally, the number of grants were doubled by 5 times each year. The grants motivated the HEIs to trace the graduates and now without grants, many institutions do the survey to get feedback from their graduates.

Relevance of higher education and work

In its regional report, the World Bank (2011: 4) states that there is an increase of income for workers with specific skills of those holding higher education degrees in low and middle income countries in East Asia because they promote growth: "... *skilled labor can be deployed flexibly, achieve high levels of productivity, apply existing technologies, and engage in innovation.*" Futher, the report explains the role of higher education in the growth:

> *That is why low- and middle-income countries throughout East Asia are assigning greater importance to higher education as a source of the scientific, technical, and analytical skills needed for higher productivity and technological catch-up (World Bank, 2011: 4).*

The following table 1 raises a question, though, what happens to hgiher education since the percentage of open unemployment for higher education graduates

Tabel 1: Open unemploment according to education level

NO	Education level	2015	2016	2017	2018
		Agust	Agust	Agust	February
1	Never attend schools	55 554	59 346	62 984	42 039

2	Lover than primary school	371 542	384 069	404 435	446 812
3	Primary school	1 004 961	1 035 731	904 561	967 630
4	Junior high school	1 373 919	1 294 483	1 274 417	1 249 761
5	Senior high school	2 280 029	1 950 626	1 910 829	1 650 636
6	Vocational high school	1 569 690	1 520 549	1 621 402	1 424 428
7	HE: Academy/Dnon degree program	251 541	219 736	242 937	300 845
8	HE: university	653 586	567 235	618 758	789 113
	Total	7 560 822	7 031 775	7 005 262	6 871 264

The above table shows the decrease of unemployment rate but it also shows that open unemployment by level of education at university level has increased compared to the previous year (https://www.bps.go.id). What has become of the relevance of higher education and work here? The law of higher education states that the objectives of higher education is (a). To develop students' potentials to become a religious to one God and possess a noble character, healthy, knowledgeble, able, creative, independent, skillful, competent, and cultured for the nation and to produce graduate who possess knowledge and or technology for the interest of the nation, and to increase nation competitiveness (Law Number 12/2012).

Graduate competencies

In 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 to tertiary education for a better future career. In the 1980ies   the training in higher education has become the prople's choice and this is made possible with the growing number of higher education institutions in Indonesia. The situatuion, as claimed by Teichler (2002) as higher education credentials are no longer exclusive or belong to 'the chosen few'. This is also emphasized by Brennan et al (1996) that higher education diplomas have 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.   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)

The superflous number of higher education graduates have raised question of the qualification. The question was raised because when it comes to the readiness of the graduates for smooth transition from study to work and their ability to survive in the labour market, many would doubt because industries' 'accusation' that they wold spend more money on further training for the graduates applying for the job due to insufficient competencies that graduate for successful work performance needed by industies.

This is when graduate competencies has to meet industries' requirements, that at least, HEIs gives them sufficient skills as required by labour market. The gap between HEIs' provision of competeencies and industry's requirementncies and industry's requirements have to be addreessed accordingly.

Tracer study and curriculum development

Tracer study, as the first step of curriculum development assists study program management in capturing the labour market signals. This is very important since almost all of graduates go to labour market after completing their studies. Only a small percentage will directly go and set up their business. Therefore information from the labour market should not be ignored or taken for granted.

Figure 1: Stages of Curriculum Development
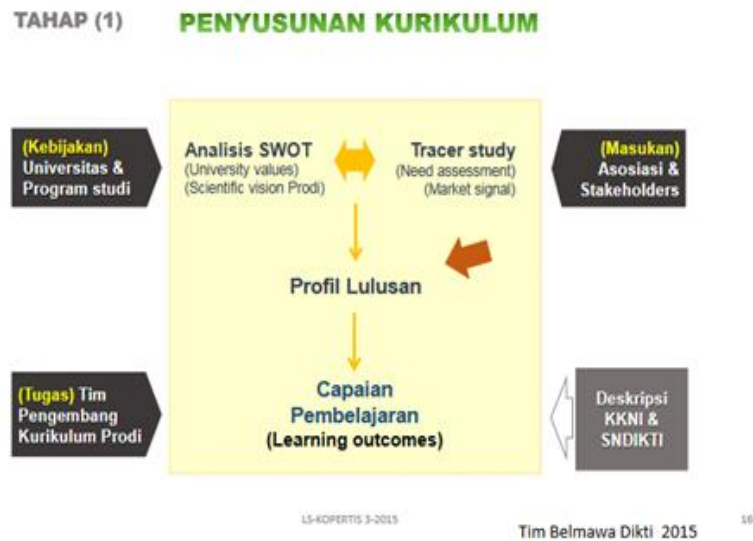
Curriculum development must be the central focus of the strategic planning activity of an institution. Designing a curriculum which portray the whole activities to achieve the targette learning outcomes in a study program is not easy moreover, recquirements from the labour market should also be in mind since they are the users of the graduates when they complete their studies. In order to run smoothly, a curriculum, must be equipped with teaching methods, assessment strategies, and other facilities.

The new curriculum of higher education in Indonesia is now known as curriculum refering to Indonesian Qualification Framework or IQF, which was legalized under the Presidential Decree Number 8/2012. It is the reference for the curriculum and each level of the IQF serves as the basis for building the curriculum. For example, the undergraduate *Sarjana* (equal to bachelor degree) degree according to IQF is in level 6 therefore curriculum must be built by Complying to level 6 descriptors, ie "applying, analizing, designing, utilizing knowledge, technology, and arts, and problem solving. The keywords here serves as basis to develop a higher education curriculum with an outcome based or outcome-based curriculum. According to the IQF, learning outcome serves as (1) curriculum component and identification of graduate quality, (2) specific characteristic of a study program, (3) qualification level measurement, (4) reference for curriculum evaluation, (5) reference for recognition, (6) benchmarking of learning outcome of each level, and main component in the description of diploma supplement. Law number 12/2012 consists of the guidelines that

higher education institutions should follow concerning curriculum design. In verse 35, it is described that tcurriculum as a set of plan and arrangement of objectives, content, teaching material and methods in teaching and learning activities to achieve the goal of higher education and further, as described in verse 26, it says that the above mentioned should be developed by institutions of higher learning based on Higher Education National Standard in each study program so it covers the development of intellectual competence, noble attitude and skills.

Curriculum itself is described as a set of plans and settings about graduates' learning outcomes, and Kurikulum adalah seperangkat rencana dan pengaturan mengenai capaian pembelajaran lulusan, study materaks, process and grading used as management guidelines of a study program. The National Standard of Higher Education on the other hands governs, among others, the standards of graduate competencies. Therefore, 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. Evers, Rush, & Berdrow (in Khan and Law 2015) state that it is believed that having knowledge alone is not sufficient in today's society; students need to adapt to change and to apply their knowledge to solving problems.

Utilization of Tracer Study as Part of Curriculum Development at Fakultas Sastra Universitas Kristen Indonesia

At Fakultas Sastra Universitas Kristen Indonesia, the result of the tracer study is used to build a curriculum which will help students in gaining learning outcomes stated in the curriculum. The curriculum was strongly developed with the following fondations:

- Juridical and philosophical foundation: the values and views of the life of the Indonesian people and Christian values stipulated in the applicable laws and regulations: Pancasila, the 1945 Constitution, Law No.20 / 2003, Law No. 14/2005 Govt. Reg No.19/2005, UU No 12/2012, Ministrial Decree No. 8/2012, and Ministrial Decree No 49/2014.
- Psychological foundation: related to the intelligence, interests, talents, and motivation of students that influence their success in mastering the expected competencies.
- Sociological foundation: Educational institutions should interact with the community and graduates from educational institutions are expected to develop themselves, the

community, and their environment. For this reason, the graduates produced must have strong character, high level of intelligence, and reliable vocational skills.

Profile of the graduates are shaped through the following
- Vision, Mission: From UKI to study program
- Target (to create graduates who have a fundamental understanding in the fields of language, literature, and culture as well as good translating skills from English to Indonesian and from Indonesian to English)
- Strategizing to achieve targets and goals
- Profile of the graduate: Bachelor of Literature graduated from the Faculty of Literature at UKI has the ability to speak English and uses English language and literary knowledge to become an assistant language researcher, translator, and become a creative writer for reportage and literary works; and using language competencies to enter into various professions such as editing, journalism, script writers, etc
- Based on IQF:3 aspects of competencies: work competencies, scope of work based on knowledge, and managerial aspect
- Because the association of English study program was not formed, FS UKI formulirized learning outcomes of the graduates
- In 2017, the Association of English Study Program was legalized and formularied learning outcomes of English study program and each institution may refer to minimum 3 learning outcomes from the list

Figure 2: Example of Learning Outcome fo Sastra Inggris of UKI

Competencies according to IQF	Competencies	Learning Outcomes of each
Working-reference aspect	Literature	9
Aspects of work that refer to knowledge	English (language)	4
	Linguistics	9
	Creative writing	4

	Translation	3
	Cross culture	5
Managerial skills	Work ability and life skills	13
Total		43

Conclusion

Tracer study as the first step to developing curriculum of a study program since the study program should start with capturing labour market signal and inputs from the stakeholders.The results of the study program tracer study are then used for graduate profiles which are very important in designing a curriculum.

The model of curriculum design of Fakultas Sastra Universitas Kristen Indonesia follows the model imposed by the Ministry of Research, Technology and Higher Education in order to in

Other study program can follow this model to put these learning outcomes in the curriculum learning outcome matrix so that both management and teachers can easily see the big picture of a curriculum and then use them to design lesson plans, decide teaching methodology and assessment strategies to achieve each learning outcome

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