
Competence Based Education in Indonesia

Evaluating the Matrix of Competence-Based Education in Indonesian Higher Education

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Introduction

Competence Based Education (CBE) is gaining ground in vocational and higher education in western societies. Successfully connecting the education initiatives with labour markets and societal demands, the concept has not stayed unnoticed within the realm of international education reform.

Over the past five decades, the concept of Competence Based Education (CBE) has slowly made its way into the realm of vocational and higher education. Steadily gaining in importance within the sector of international education reform, CBE has become a spearhead within a wide variety of education reform processes. Many western education institutes are implementing, or are making the transition towards a Competence Based Curriculum (CBC). Although Competence Based Education is perceived not to be without its' flaws, and encounters fierce criticism in western societies, the overall tenor is positive. Due to the fact that the concept has proved to be an efficient method for connecting education to the "world of work", the success of Competence Based Education has caught the attention of International Development.

Disseminated as a new tool to strengthen local labour markets and economies, currently multiple initiatives are being deployed to support developing countries in reforming their education system towards Competence Based Education (Christie 1997; Mansfield 2004). Often serving the objective of the development of an international competitive economy and workforce, increasingly, education initiatives are promoting the incorporation of Competence Based Education in developing countries. Indonesia has not been an exception. Searching for opportunities to improve its' education by introducing western developed forms of Competence Based Education, triggered by the developments within international education and aiming for increased economic development, education policies changed towards promoting the adoption of CBE within the country's public vocational and higher education. Supported by a Dutch funded Higher Education capacity building programme, nine Indonesian Higher Education Institutes receive support in introducing Competence Based Curricula in various pre-selected study programmes.

Although the education reform programme, aiming to incorporate CBE in Indonesian Higher Education Institutes assumed that Competence Based Education can be introduced successfully within the Indonesian contexts, problems have been encountered in comparable curriculum reform projects in Uganda and Ethiopia (Mulder and Gulikers 2010). As the majority of the initiatives focused on introducing CBE are fairly new, little research has been conducted on the success of introducing the western developed education concept in the non-western, Indonesian society. This study aims to contribute to this discussion by evaluating the feasibility of the Matrix of Competence Based Education

in relation to the education context of non-western developing countries, maintaining a specific focus on Indonesian Higher Education.

Theoretical Framework: The Matrix of CBE and a Comparative Education perspective

Ever since its' introduction the concept of Competence Based Education has been subject to ambiguity. It has been generally agreed that education should become increasingly relevant to the demands of the changing society, as technological and economic developments cause labour markets to change. The urge for new types of flexible, skilled employees demands the development of competent graduates (Burke 1989; Gadotti 2009; Mulder and Gulikers 2010). Although a general consensus on the need for broadening education could be found, capturing the concept of "competence" in a single definition proved to be difficult (Mulder, Weigel et al. 2006; Ellstrom and Kock 2009; Watkins and Cseh 2009; Mulder and Gulikers 2010). Over the past two decades Competence Based Education has increasingly gained ground within the realm of vocational and higher education and various approaches of the concept of Competence are, and have been, used in different parts of the world. Being increasingly contested, a shift from a behaviourist, output-based approach towards a more holistic constructivist perspective can be observed (Parker and Walters 2009). The development of creative professionals, able to critically engage in both professional and interpersonal processes, is gaining ground.

Developing a coherent, comprehensive definition of Competence Based Education proves to be challenging. As the discussion on what CBE should exactly entail remains limited to a small group of academic scholars, education practitioners are largely left without practical tools to start implementation. Acknowledging the need to provide a comprehensive definition, including practical guidelines for holistic implementation, within various projects an instrument has been developed to assess the actual and desired "competentiveness" of programs in vocational education in The Netherlands (Wesselink, Mulder et al. 2006; Wesselink, Biemans et al. 2007; Mulder, Gulikers et al. 2009; Mulder and Gulikers 2010; Sturing, Biemans et al. 2010). Complying with a coherent set of eight pre-defined principles of Competence Based Education (Annex 1), the "competentiveness" of a curriculum can be measured through four levels of implementation. The cells of the matrix were defined and variables have been added to make the assessment more objective. Allowing program teams to assess a complete curriculum of the training programme, the Matrix has been developed to serve a practical purpose.

Over the past years, the matrix of Competence Based Education has increasingly drawn international attention and has been translated in a wide variety of languages (English, German, French, Spanish, Portuguese, Chinese, Dari, and Bahasa Indonesia). A problem, which can be underestimated however, is that the models for competence-based education are developed in Western societies. This also holds for the Matrix and application of the predefined principles in non-western developing societies may lead to implementation difficulties. Although the education reform programme, aiming to introduce CBE in Indonesian Higher Education Institutes assumes that Competence Based Education can be introduced successfully within the Indonesian context, as argued by many scholars within the realm of Comparative Education, the introduction of any educational concept in a non-western context will encounter serious challenges in relation to the local, non-western cultural norms and values, which in many cases might not match the prevailing western visions on education (Masemann 1999; Crossley 2000; Grigorenko 2007; Ee and Seng 2008; Nguyen, Elliott et al. 2009). Although the need for deep contextual roots within education reform is generally agreed on, still many educational reform programmes are based on western educational concepts and fail to address the need to adapt the concepts to the context in which they are implemented. As Nguyen, Elliott et al. stated:

"In the rush to adopt and import educational theories and practices based on western thinking, cultural aspects of the pedagogy have often suffered serious neglect. Adopting policies across cultures without recognising their distinctive social and cultural dimensions runs the risk of 'false universalism.'" P109 (Nguyen, Elliott et al. 2009).

Since the introduction of CBE in developing countries' education systems is fairly new, little has been written about the effect of changing the education systems towards a Competency Based Curriculum, and for that reason, little is known about the effectiveness and possibilities of transforming the

curricula of non-western education institutes towards a Competence Based Curriculum. Based on the findings from previous research in the field of Comparative Education, it could be assumed that it is very likely that the introduction of the “western” concept of Competence Based Education will encounter challenges during its adoption in a “non-western” context (Masemann 1999; Crossley 2000; Grigorenko 2007; Ee and Seng 2008; Nguyen, Elliott et al. 2009). Searching to contribute to the international discussion on introducing western developed education in a non-western society, specifically referring to the introduction of CBE within Indonesian Higher Education, this research aims to provide an additional perspective on competence development in a non-western society and education system. Whereas current research on the international implementation of Competence Based Education often remains superficial, only managing to capture issues within the realm of implementation of the concept, failing to address deeper societal issues, the importance of local, societal embedded practices is often neglected. Aiming to avoid a repetition of the colonial history, introducing western developed education concepts without taking into account local cultures and practices, a deeper understanding of societal and cultural issues related to Competence Based Education is a precondition before introducing it in a non-western society.

Research Design: Capturing a complete perspective on the three cases through a holistic framework for analysis

As many scholars within the subject of comparative education have argued, to be able to understand an educational system, or educational phenomena a sound understanding of the context in which the system or phenomena take place is a precondition (Arnové 1999; Crossley and Jarvis 2001; Bray and Yamato 2003; Crossley 2008). Specifically, Van der Werf, Creemers et al (2000) argued that the Indonesian society is of such a complex nature that issues within the context cannot be addressed through a single-level approach. A comprehensive framework is a prerequisite for guiding the analysis of education phenomena within their context. Although within the realm of comparative education, the need for a comprehensive context analysis is generally agreed on, most scholars focus on the analysis of the global and national level in which educational phenomena take place. Educational phenomena and their context are interrelated and generate change within one another. Since the state, and its international relations, have always been a strong factor in initiating and implementing reform, the focus of much of relevant research has been limited to this level. Although acknowledging the major importance of the national and international perspective, Bray, Yamamoto and Crossley advocate for a broader focus, emphasising the importance of the micro level (Crossley 2000; Bray and Yamato 2003). This broader approach of educational phenomena supports the perception that educational change is not only initiated from the national and global level but reform could also be found right at the smallest level, in the classroom (Samoff 1999).

Subsequently, the context for the analysis of educational phenomena is being broadened by combining the macro and micro level in a single analysis. Although the identification of the different levels of analysis has enlarged the scope of the concept of “context”, it is evident that the focus on just two levels will still narrow the context down to an unacceptable size. The effect of education on the society, and vice versa, is often so much interwoven with its’ context that it proves to be difficult to completely understand the full scale of education affecting society (Terrence, Arnove et al. 2001). Ambiguity, embedded in concepts as Macro and Micro, often fail to address absolute levels of analysis and often cause unintended, or intended, room for confusing interpretations. Allowing a thorough understanding of the full array of the contextual levels, not limiting itself to the single view of the policy makers or teachers, a more complete framework has

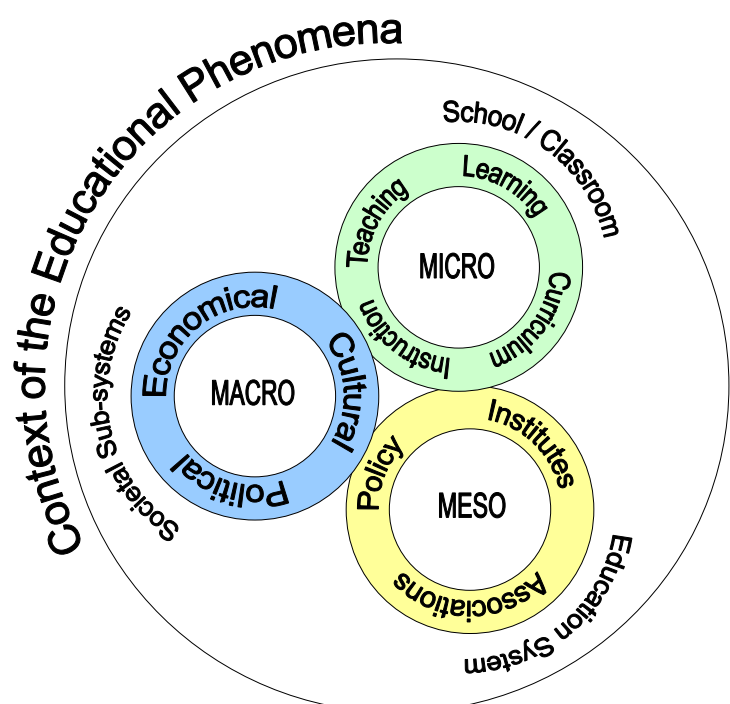


Figure 1: Framework for the Analysis of Educational Phenomena

been developed to guide the analysis (Figure 1: Framework For the Analysis of Educational Phenomena). Providing the necessary preconditions for further analysis of the Matrix of CBE, the Framework of Analysis of Education Phenomena guided the inquiry of primary and secondary data. As the introduction of CBE in Indonesian Education is a fairly recent initiative, little written data on the subject were available. Acquisition of relevant primary data has been essential in gaining a thorough understanding of the current status of Indonesian Higher Education in regards to the application of the Matrix of CBE.

Sketching the Indonesian contextual factors in relation to its' Higher Education system is not an easy process. As the country's sheer size, geographical and cultural diversity does not allow it to be captured into a single contextual analysis, limited by its' scope, and enhanced by the objective to gain a deepened insight into the factors at play, this research does not aim to provide a shallow overview of a broader set of issues, but tries to search for idiographic explanations. Although limiting the national representativeness of the research, by focussing on three, carefully selected, cases, a more in-depth understanding of the specific contexts can be achieved. Using the Framework for Analysis of Educational Phenomena the wholeness of three cases will be captured through a qualitative study, providing an in-depth understanding of the limiting and enhancing factors within their specific context.

Three faculties of two Public Universities in different provinces were selected to function as cases for the study. Providing sufficient similarities to allow comparison of the data to take place, the differing geographical, societal, institutional and cultural characteristics of the three faculties managed to capture essential elements of the diversity of the Indonesian context.

To gather a broad perspective on the Indonesian Higher Education system, a combination of data collection methods were used to allow the development of a comprehensive contextual analysis. During the extensive periods of field work at the universities in Yogyakarta and Kupang,

- (i) pre-structured qualitative interviews with alumni, students, lectures and faculty managers were conducted,
- (ii) formal and informal observation of the daily practices of students and lecturers were implemented,
- (iii) formal classroom observations of both theory and various practice activities took place and,
- (iv) available secondary data on education policies were collected.

The transcribed interviews and observations were coded. Combining secondary data and the data from the three cases and their four individual informant groups, restructuring and summarizing of the findings resulted in a clear perspective on the Indonesian Higher Education context. Based on the frequency of appearance, the specific issues have been rated in importance and a selection of the major issues has been translated into the final contextual analysis.

The Indonesian Higher Education context and its relation to the 8 principles of CBE

Providing a broad perspective on the Indonesian Higher Education system in relation to its context, the wide range of issues resulting from the contextual analysis have been utilized to critically reflect upon each separate principle within the Matrix of Competence Based Education. Challenges and opportunities from within all three levels of analysis are categorized and addressed under the relevant individual principles of CBE to provide a comprehensive overview of their relevance and contextual challenges.

Principle 1: The competencies that are the basis for the study programme are defined

Driven by international agenda on skills development, with the objective to support increased economic development through labour market relevance, the Indonesian government initiated the introduction of Competence Based Education within national education policies. Led by a strong government directed process, activities have been deployed to develop sets of National Competence Profiles to serve the various study programs of the Public Universities and Polytechnics. Utilizing the current on-going process of awarding the status of "Autonomy" to the Public Universities, the introduction of a Competence Based Curriculum has become compulsory for all Higher Education Institutes. Although the presence of a supporting institutional framework and pre-defined competence profiles might be perceived as "creating a conducive environment" for the introduction of CBE, at institutional and classroom level competing perspectives can be observed. The large differences in satisfaction with the nationally defined Competence Profiles can be attributed to two main variables.

The geographical position within the country and the level of institutional autonomy proved to be decisive factors in determining the levels of appreciation. The strong, deeply rooted bias of national politics towards the Island of Java has not left the development of education policies unaffected. Historically the centre of power and economic development, investments in developing industries and education has been unevenly divided over the country and maintained a strong focus on Java. All Higher Education Institutes of high repute and the majority of public and private industries are situated in this part of the country. Developed by National Forums, comprising of representatives from the industries and education sector, the National Competence Profiles were developed with a strong focus on the preconditions at Java. The country's immense geographical and cultural diversity cause the generalization of learning outcomes into national competence profiles to be largely inappropriate for the majority of the country. Whereas, to a large extent, the informants from UGM, a Javanese university, indicated appreciation of the predefined competence profiles, the informants from UDNANA indicated that the nationally directed competences are lacking relevance to the local preconditions and cause the education programs to fail to address the needs of the local labour markets. Although room is provided for incorporating localized competences into the curriculum this is perceived as being insufficient.

Institutional autonomy, currently only awarded to four public universities at Java, provides the Higher Education Institutes with necessary legal framework to deviate from the nationally prescribed competences. Provided with the flexibility to adapt the Competence Profiles to the needs of the faculty, curricula at UGM are affected less by the national guidelines. In some instances, faculties can even be found to be not incorporating the Competence Based Curriculum into their study programs. Whereas the autonomous universities are less affected by the nationally defined guidelines, the universities lacking the status of autonomy are coping with a strong directive National Ministry of Education. Currently in the middle of the process of becoming an autonomous institution, UDNANA finds itself forced to rigidly implement the predefined national competence profiles.

Principle 2: *Vocational core problems are the organizing unit for (re)designing the curriculum (learning and assessment)*

The incentive to develop an internationally competitive economy has caused the Indonesian government to adopt a new perspective on Higher Education. Enhanced by international pressure the discourse of skills development has been guiding the latest development in Indonesian Higher Education. Catering for the public sector labour market and the, strongly increasing, private sector labour markets, the introduction of the Competence Based Curriculum is forcing the public Higher Education Institutes into a more output oriented education system. In order to incorporate the needs of the labour markets, inputs by public and private sector stakeholders in the industries has been put on the agenda. Translated into the compulsory National Competence Profiles, the strong bias towards the Javanese labour markets caused representativeness for all Indonesia's separate provinces to be limited. The majority of informants from all levels within the three researched faculties acknowledged that workplace demands are highly valued in guiding the development of curricula. With the objective to increase employment opportunities of their graduates, linkages with both public and private companies are being sought.

Incorporating the labour market demands has not been without its' challenges. The historically strong focus on the development of a Civil Servant workforce resulted in well-established connections between universities and the public sector and government-owned industry. Limited involvement of the private sector, both due to its physical absence in the remote provinces, and lack of interest of private companies to become involved in the education process, resulted in a strong focus towards the public sector demands. Enhanced by the fact that competences are often developed by educators (Power and Cohen 2005) competing agendas can be found affecting the development of curricula. Although the importance of addressing vocational core problems in the curricula is widely supported, the staffs of both UGM and UDNANA fear losing opportunities for holistic student development. As one of the informants stated: *"If we need to follow all the demands of the labour market, the curriculum would only be focused on skills. Students would not be able to think anymore."*

As the limited labour market involvement, due to the insufficient interest of both education practitioners and industries, contributes little to the development of the curricula, the legacy of a strong public focus causes the necessity of incorporating vocational core problems into the curricula to be questionable. For the majority of the students, obtaining employment within the public sector is the main incentive for enrolment in university. Rigid selection criteria for civil servants, not as much based on the sector of

graduation but mainly emphasizing the importance of a diploma obtained at a public university, result in a strong diploma oriented attitude. A tendency to favour employment outside the agricultural sector, preferably on the Island of Java (Jones 1976; Jones, Nagib et al. 1998), can be observed amongst the majority of the students at the faculties of agriculture.

Developing the curricula based on vocational core problems, drawn from the formal labour markets, proves to be problematic. Absence of a qualitative dialogue between Universities and the public and private sector resulted in large discrepancies between what the universities deliver and what the labour markets expect. Fuelling the “diploma disease”, employers do not comply with the education programs and, vice versa, Universities do not cater for the need of skilled professionals.

Principle 3: Competence development of students is assessed before, during and after the learning process

Although national examination structures for university graduation are in place, students from accredited public universities are not obliged to take part in the national exam. As the large majority of Indonesia’s university students study at private education institutes, the national examination caters for the majority of graduates. Exempted from national examination, the accredited public Higher Education Institutes are allowed to develop independent assessment methods. Determining the value of the diploma, the university’s accreditation score is often perceived to be connected to the quality of the graduates. Whilst the national accreditation of universities is presumed to provide sufficient quality measures, student assessment at public universities is tied to few national guidelines. As examination and assessment are developed by lecturer teams or individually, ample room for personal influence on examination methods is present.

Although new education methods have been introduced at all three faculties, the assessment methods at the faculties of agriculture at UGM and UNDANA remained largely unchanged. A general high satisfaction with the current assessment methods can be observed at these faculties. Both knowledge and skills are assessed through written examination at the middle and the end of subject’s period. Besides small written quizzes and limited lecturer observation during the theory and practical sessions, little evidence can be found of continuous monitoring of the students’ learning process. Mainly attributing the lack of practical assessment methods to insufficient practice facilities and limited time to allow testing of the large classes to take place, the majority of the informants stated that they do not test students’ practical skills and maintain a strong focus on testing theory.

A competing perspective can be found at the Faculty of Medicine at UGM. Ahead in the national developments, the faculty has been incorporating Competence Based Education for more than a decade. Supported by international initiatives, new forms of assessment have been introduced. Lecturer observation and a yearly skills assessment allow grading of students to be based on actual competence development. The faculty staff’s critical attitude towards the current forms of assessment shows proof of constant development. *“Testing skills only once a year only allows us to give feedback to the students once a year. This, of course, is not good for the learning of the students.”*. Dissatisfaction with the quality of student evaluation during the internship programme has caused the faculty to initiate a training programme for the internship supervisors and activities are being deployed to increase the amount of formal skills assessment sessions.

Provided with a sufficient institutional room for development of new assessment methods, except for limitations within the faculties’ facilities, few challenges seem to be present. Given the receptive preconditions it might be easily concluded that lecturer motivation is the main cause for limited introduction of contemporary forms of assessment. Although lecturer motivation, and willingness to invest time in developing their practices has often been indicated to be low, other, external factors could be identified. Labour markets largely define their selection criteria based on theoretical knowledge. Employment within the public sector can only be obtained after passing a theoretical test. This strong theory oriented labour market approach cause lecturers to maintain a strong focus on theoretical assessment.

Principle 4: Learning activities take place in different authentic situations

As meeting the demands of labour markets for more skilled graduates has evidently been influencing the agenda of Indonesian Higher Education, “skills development” has become entrenched in the faculties’ vocabulary. Although the importance of allowing students to obtain practical skills is generally acknowledged at all three faculties, distinct differences in their actual practices can be observed.

Whereas the Faculty of Medicine is seen as one of the leading national universities in skills development, organization of practice activities at the Faculties of Agriculture at UGM and UNDANA have received less attention. Identified as the main bottleneck for organizing practice activities, limitations in the faculty's facilities reduce the opportunities for skills development.

Faculties' financial resources are indicated to be a decisive factor in allowing learning activities to take place in authentic situations. Largely distinguishing school based practice, field visit, and internship programmes as the practice arena, specifically the school based practice activities have been subject to available resources. Supported by high tuition fees and international funding opportunities, both faculties studied at UGM have largely sufficient practice facilities. Facing completely the opposite financial preconditions, the limited and government prescribed allocation of resources restricts the practice opportunities at UNDANA. Unable to maintain its' laboratories, or to update the facilities to the latest developments within the industries, its practice facilities do not provide sufficient preconditions for learning in authentic situations. Whereas the practice facilities at the three faculties are differ greatly, the field visits and internship programmes display a large array of similarities. Field visits do not occur often and due to the incidental nature of the visits, opportunities for students to practice skills are not present. The lack of sufficient internship places and the capacity to guide students in their learning process, cause opportunities for real practice to be limited. The strong bias towards internship placement in the public sector fails to provide students with a complete perspective on the labour market. This limited connection to real work situations was indicated by the majority of the informants as affecting the students' abilities to apply their prior obtained skills in a realistic setting. The students are able to perform skills in the controlled environment of the university's laboratories and practice rooms, but lack the ability to perform in a working context.

The on-going struggle for obtaining the necessary practicum resources has slowly affected the lecturers' minds. Paralyzed by the constant absence of facilities, lecturers have lost the motivation to search for relevant practice activities. Although insufficient facilities are perceived as a major hurdle in organizing practical classes, at all three faculties, good practices can be identified in which lecturer motivation overcomes the limitations of the available resources. Creatively searching for alternative solutions a limited group of motivated lecturers managed to develop high quality practice activities.

Principle 5: In learning and assessment processes, knowledge, skills and attitudes are integrated

The traditional focus on the development of theoretical knowledge amongst the students, enhanced by the knowledge oriented selection procedures in public labour markets, is still very present at Indonesian public universities. As with the compulsory introduction of the Competence Based Curriculum practice activities are gaining ground, changes are slow and often encounter fierce resistance from mainly senior staff members. Framed by national education polices, formal guidelines prescribe the university curricula to consist of at least thirty to forty per cent of practice classes. Often addressed as separate subjects, linkages between practice activities and theory classes are rarely present. While the Faculty of Medicine of UGM proves to be an exception, and manages to create study programmes with strong connections between theory and practice, a general perception can be found amongst the staff of both faculties of agriculture that practice activities are not suitable to build theoretical knowledge. Dissatisfied with the opportunities to develop professional skills, a large majority of students from UNDANA and the Faculty of Agriculture at UGM indicated that the study programmes are not preparing them for their professional life and cause them to search for alternative sources to obtain the necessary experiences.

As skills have been on the formal education agenda for a longer period, only recently the concept of "soft skills" has entered the arena of public higher education. Addressing communication, management and interpersonal skills, they partly relate to the development of students' professional attitudes. Besides addressing the soft-skills, the development of "good Indonesian citizens" through the teaching of the five commandments of Panca Sila and the KKN (community service internship programme) could also be perceived as building of students' attitude. Introduced during the New Order regime of Suharto, and incorporated into the curricula of all public universities, the compulsory Curriculum Nasional (CURNAS) consumes a substantial part of the study programmes. Although the dissemination of a national culture through the education system can easily be perceived as disputable, little objection to this compulsory component of the curriculum was found amongst the informants.

The Indonesian approach to development of student attitudes through the CURNAS shows little resemblance to the prevailing western approach as perceived desirable by many scholars. In the western context, the approach to development of attitude is often accompanied by a philosophy of holistic development of pro-active individuals who feel the intrinsic motivation to personally contribute to the development of their professional performance. The Indonesian approach is substantially different. Utilizing education as a tool to maintain existing cultural and social structures (Bush and Salterelli 2000; Van Der Stouwe and Oh 2008; Sawchuk 2009), the building of a national identity is perceived to be of substantial importance. As it fails to develop a critical individual, the Panca Sila oriented CURNAS could easily be discarded by western-oriented approaches. At this point, it could be concluded that cultural differences cause friction in how educational concepts are translated into practice. Extremely valid for the paternalistic and collectivistic Indonesian culture, the curriculum of the Public Universities addresses the needs of the society. As employment structures remain hierarchical and social compliancy is embedded in the Indonesian society, demands for individualised education systems could be debated.

Principle 6: Self-responsibility and (self-) reflection of students are stimulated

Identified by the Ministry of National Education, Student Centred Learning (SCL) is supposed to become incorporated within the education programmes. In combination with changing lecturer practices, self-responsibility of students should be fostered through interactive pedagogies. Although the introduction of increased student responsibility has become a nationally directed policy, its' actual implementation in the universities is largely being affected by the historically strong presence of the state. The decades of political suppression by Suharto's New Order regime, steadily affected the nation's mind. Strategically dismantling all political opposition, loyalty to the state became of major importance for Indonesian citizens to survive (Oey-Gardiner 2000; Yeom, Acedo et al. 2002; Bjork 2003). Although governments have changed and democratization of society is receiving increased political attention, the culture of obedience has not left people's minds (Bjork 2004; Bjork 2005). In combination with the strong Indonesian paternalistic culture, fostering students' initiative and self-responsibility has proved to be, at least, challenging.

Large differences can be observed in the introduction of increased student responsibility and self-reflection within the current Higher Education programmes of the various faculties. Providing detailed insight into the different stages towards increased student involvement, the researched faculties all find themselves in different stages of the introduction of increased students' self-responsibility. Although various levels of student participation are present, at all faculties comparable issues were raised. Culturally defined practices cause students to be reluctant to deviate from lecturer prescribed activities. As one of the student informants stated: *"I will not say to a teacher when he is wrong. It is considered to be impolite in the Indonesian culture to debate with older people."* The strong lecturer oriented primary and secondary education solidify the students' reluctant attitude towards active participation. Enhanced by the large classes, the ignorant student attitude is too often used by lecturers as a justification for not incorporating student participation in their classes. In strong contrast to this perspective, the majority of the student informants indicated that the lecturers are not able to create the preconditions for active student participation.

The observations of a multitude of successful activities, fostering student initiative at the Faculty of Medicine of UGM, provides proof of the opportunities present within the Indonesian Higher Education. Two decades of intensive education reform has positively influenced student participation. Dealing with largely comparable preconditions at present at the faculties of agriculture, actively targeting students' practices, training of lecturers and the introduction of interactive work forms has successfully enhanced student participation. Sensitizing lecturers towards adopting an active role in the process is paramount.

Principle 7: Teachers both at school and practice fulfil their roles as coaches and experts in balance

Directly related to various principles, lecturer practices determine to a large extend the actual changes within an education system. Responsible for the translation of policies and institutional guidelines into practice, the role of lecturers in introducing Competence Based Education in Indonesian Higher Education Institute should not be underestimated. The historically strong theoretical orientation of university education in Indonesia has caused the large majority of the lecturers to be found adopting a lecturer centred, theory oriented teaching style. Unaware of alternative didactical and pedagogical work forms, the introduction of Student Centred Learning requires lecturers to suddenly change their

established practices. Combined with the passive lecturer attitude due to the years of suppressive policies, changing lecturing habits is not likely to occur easily. As Bjork stated: *"Policy planners have underestimated the degree of change necessary to convert a cadre of obedient civil servants into a collection of autonomous, independent-minded educators."* p211 (Bjork 2003).

Provided with few incentives, motivation of lecturers to change their practices is generally low. Insufficient salaries force University staff to maintain private side-businesses and cause them to be unwilling or unable, to invest sufficient time in their education practices. Civil Servant structures do not provide the university management with legal, and cultural, opportunities to effectively manage lecturer performance, and cause reluctance amongst lecturers to invest time in changing their practices. Limited training opportunities for lecturers further undermine the opportunities to adopt new classroom practices. Although a wide array of limitations is present, examples of good practices could be identified as well. Experiences from UGM's Faculty of Medicine reveal a series of positive effects. Searching for intrinsic lecturer motivation, a training programme was developed to equip lecturers with new pedagogical and didactical skills. Motivated by the new experiences and enthusiasm of colleagues, the opportunity to manage lecturer performance through the obtained institutional autonomy proved only to be crucial for a small minority of, mostly, senior lecturers.

Besides developing the lecturers' skills, attention should be given to the development of coaching opportunities during the internship programmes. *"Since the workplace is a site of learning, those who supervise need to be involved in the workers' learning."* p108 (Jarvis 2009). The majority of the company employees, responsible for guiding students, are not aware of the faculties' curricula and the position the internship programme has within the students' professional development. Incapable of coaching, training and supporting students during their practice activities, students are often only allowed to watch, instead of perform during their internship programme.

The current activities deployed to introduce the Competence Based Curriculum have mainly been focusing on policy and institutional levels. Whilst curricula are being developed along the prescribed national guidelines, limited attention has been paid to the upgrading of the lecturers' skills. Emphasizing the need for performance management, essential to force lecturers into adoption of new practices (Marginson and Sawir 2006), the current change process fails to identify opportunities present within the university staff. Institutional autonomy is being treated as the "holy grail" causing too much focus on the institutional reform, not addressing the needs of lecturers who are eager to adopt new practices. Aware of the demands of the new curricula, but unable to translate the new guidelines into classroom practices, lecturers are left empty handed.

Principle 8: A basis is established for a lifelong learning attitude for students

International debates about the concept of Lifelong Learning (LLL) have been on-going since the concept has been put on the international agenda by the OECD and UNESCO (Delors 1996). Lacking uniformity in definition and interpretation of the concept cause policies and implementation strategies to be very diverse and often unclear (Griffin 1999; Aspin and Chapman 2000; Field 2000; Tuijnman and Boström 2002). As opportunities for Lifelong Learning extend beyond the realm of formal education (Belanger 1994), to a large extent systematically organised learning activities, associated with formal education, are seen as providing the basis needed for further learning (Tuijnman and Boström 2002). As Edwards, Tuijnman and Boström argue, the development of a pro-active attitude is a major precondition for fostering a lifelong learning attitude amongst students. In other words, students need to "learn how to learn" (Edwards 2002; Tuijnman and Boström 2002).

Whereas the current curricula of all three faculties contain elements of building students attitudes, the strong focus on citizenship and nation building prevents the development of students' individual life skills. Not only should education prepare the students for their professional life, it should mould students into a prefixed shape of the "ideal" Indonesian citizen (Nilam 2003). The shift towards institutional autonomy increases the opportunities for Indonesian Higher Education institutes to move towards a more local contextualized curriculum, catering for specific labour market needs. Generally maintaining a strong focus on the public labour markets, the majority of the education programmes fail to address the skills needed for development of a Lifelong Learning attitude and limits itself to basic skills, life skills, and income producing skills to become useful members of their communities (Yeom, Acedo et al. 2002).

Amongst the student informants, without exception, the importance of Lifelong Learning was highly valued. Largely fuelled by the perception that the current education programmes do not sufficiently prepare them for their professional life, gaining practical skills in particular is perceived as taking place after completion of formal education. Tailored to the limited ability of graduates to perform tasks, within the public labour market training programmes are in place to allow new employees to obtain, and increase their practical skills. Largely directed by the public sector employers, limited opportunities are present for personal development within private sector, and through private recurrent education initiatives. As there are limited opportunities for employment within the public sector, the majority of the graduates obtain their income through entrepreneurial activities or employment in the private sector, and therefore are largely excluded from opportunities for further professional development.

It can be concluded that the learning environment is of crucial importance in the development of a Lifelong Learning attitude amongst the students. Playing an important role in this process, the Indonesian government has great responsibilities in the provision of a receptive learning environment. Largely determining the process of initial education and responsible for the major part of the provision of recurrent education, the success of fostering a Lifelong Learning attitude is dependent on national policies and public provisions. Closely linked to the preceding principle 6 and 7, the development of students' attitude is vital in their further learning process. Sorting a cumulative effect, good formal education will enhance Lifelong Learning because graduates will be able to develop a personal lifelong learning strategy, but on the other hand, those who did not receive decent education will lack the ability to utilize opportunities for recurrent education initiatives. In addition to the provision of formal education, increasing opportunities for recurrent education should be put in place by the government to allow graduates to stipulate their personal careers.

Conclusion and Discussion

Taking into account the identified contextual issues within Indonesian Higher Education, it becomes clear that dissimilarities between societal, cultural, economic and institutional factors in a western or Indonesian education context cause preconditions for the introduction of new education methods to be very different. Although a lot of the contextual factors mainly affect the introduction, and not so much the validity of the principles of Competence Based Education, it became evident that a substantial part of the concept itself should be critically reflected upon. Aware of the delicate balance between investing in the implementation or modification of the concept, the authenticity of societal factors should not be overlooked. In other words, changing contextual preconditions through training of teachers and introduction of new management structures should not serve the objective of preparing a society for Competence Based Education but should be utilized to adapt the concept to be used within the given pre-conditions. Referring back to the objective of the research, to contribute to a wider discussion on the feasibility of the concept within a non-western education and societal context, the thorough analysis of the context revealed three important issues which should be considered seriously while introducing CBE in Indonesian Higher Education institutes.

1. Nationally pre-defined competence profiles versus Indonesian labour market demands

As competency profiles have been nationally defined, and labour market and university representatives have been involved in the determination of vocational core problems, a formal basis for the introduction of CBE in the Indonesian Higher Education is present. Although the presence of pre-defined competence profiles could be perceived as a positive development and a first step in the direction of competence based study programmes, the process of defining the competences and their applicability proved to be highly debatable. The strong national directed core competences fail to include the enormous diversity of the country. As labour markets, and their demands, vary widely per geographic region, the majority of the education institutes are forced to design their curricula based on irrelevant competences. Whilst this is not causing major problems for the education institutes situated on Java, graduates from the more remote universities are facing a very different professional arena than they were prepared for in education. In close relation to the definition of the competencies for the study programmes, the identification of uniform vocational core problems is challenging. Whilst not covering the full scope of issues to be addressed within university education, the results from the research strongly indicate that the pre-identified labour market and, related to that, the defined vocational core problems do not necessarily represent the professional situation of faculty graduates. As the study programmes at public universities maintain a strong orientation towards employment within the public sector labour markets, relevance towards the actual employment opportunities for graduates is limited. The majority of the graduates from, especially, the faculty of agriculture find

employment outside the sector. Education programmes continue to educate young professionals towards a narrow, pre-identified, job-definition.

Defining the vocational core problems based on jobs related to the sector of the study programme will not sufficiently prepare graduates for their professional life. Economic and political factors influence employment opportunities and cause youth to adopt various strategies to obtain an income. Due to the fact that the majority of the graduates find employment outside the professional arena of their graduation, the definition of a set of relevant vocational core problems to guide the study programmes is impossible. As western types of Competence Based Education are moulded on a clear relationship between the labour markets and the education sector, developing study programmes based on pre-defined job profiles is likely to increase the efficiency of education. Within these clearly defined structures education programmes based on professional competences will enhance the quality of the graduates. In the Indonesian context such a clear connection between the education output and the labour markets is lacking. With the increase of the private labour markets and the insufficient absorption capacity of the public sector the majority of the study programmes have lost their relevance. Implementing education programmes with a strong focus on competence development for a narrow professional sector will be inappropriate. Competence profiles can be developed but need to maintain a broad focus and should be based on the demands of its' beneficiaries, which are not the labour markets, but the students.

2. Skills development: Who are the beneficiaries of Indonesian Higher Education?

Without doubt it could be stated that the development of vocation related skills development is one of the key features of competence development. Whether a holistic, or narrow output oriented approach is being adopted, the focus on graduates' practical abilities is of crucial importance. Related to the prior issue of lacking connections with the labour markets, the development of relevant professional skills proves to be challenging. Although, on large scale, complaints are voiced about the lack in practical abilities of the Indonesian university graduates, the diverse professional contexts in which students find employment inhibits the development of practice activities with increased relevance.

As the majority of the university staff are fully aware of the need for incorporating practice activities into their classes, the skills development of students should not necessarily hamper the implementation of CBE in Indonesian universities. Although facilities are currently often not sufficient, the university environment harnesses future opportunities for new ways of continuous, competence based skills development and its' assessment. The major challenges concerning the introduction, or increased focus on practice do not only lie within the university. The development of practical skills is perceived, by both labour market actors and universities, to be started after education. Current policies on the selection of new employees, especially in public sector labour markets are formally based on the theoretical score of the students. To increase the significance of the practical component in the overall education programme and in its' assessment, skills should formally be recognised by the labour market and the accreditation of the university diploma. Formal acknowledgement of skills and attitudes within the education and assessment process will be a tedious and lengthy process which will need structural changes within the public and private employment structures.

Affected by the theory oriented academic culture, the insufficient practice facilities, and the limited relevance attributed to it by the labour markets, increasing the importance of practice in the education programmes will be challenging. As employers continue to train their junior employees, and as the diverse professional needs of graduates can hardly be captured in single study programmes, a broader orientation of practices is a prerequisite. The currently strong focus on the development of vocation oriented skills within the Indonesian universities represents the output based perspective of competence development. As argued above, the specific Indonesian context demands a different approach. Narrow, occupational oriented competence development will be inappropriate for the learners' demands. A broad, holistic competence perspective, including a strong focus on the development of wider, interpersonal life skills is needed to allow the young graduates to cope with the foggy diversity of employment in Indonesia.

3. Development of student attitudes: compliance with the Indonesian culture?

Continuing the discussion on skills development, emphasising the importance of a holistic perspective has been frequently outlined in current literature. Jarvis stated "... practice is no longer just a matter of knowledge and skill, it is about the practitioner being confident, creative, having the right impulses, commitment and so on..." p104 (Jarvis 2009). Whilst this statement underlines the importance of a

broader approach to skills development within the Indonesian Higher Education, and supports the findings above, the introduction of interpersonal skills and “attitude development” within the Indonesian education cannot be compared with the building of attitudes in western societies.

The integration of the development of student attitude into the education programmes of Indonesian public universities proved to be a multi-interpretable issue. A strong duality in the concept of “attitude” could be observed. Whereas in the western context, the development of attitude is often accompanied by the philosophy of the development of pro-active individuals who feel the personal motivation to contribute to the development of their professional performance, in the Indonesian professional environment hierarchical patterns cause the concept of attitude to be interpreted differently. A conflicting perspective could be observed in which the Indonesian professional sector demands students who can obey orders from their superiors, especially as this obedient attitude is under criticism in the western philosophy. Currently, amongst the large majority of the interviewed students, lecturers and managers at both UGM and UNDANA the western concept of “attitude” is seen as necessary to be introduced. Although this does not serve the expectations of the labour market students should be equipped with the necessary critically reflecting attitude. It could be questioned whether the development of a pro-active students’ attitude is experienced as desirable by the Indonesian labour markets. Since there is much more at stake than exclusively catering for the labour market demands, a clear division should be made between the demands and expectations of local labour markets and the changing societal demands towards fostering a democratisation process. In short, it could be stated that students should be able to perform in both professional environments and should develop skills to maintain a critical and pro-active attitude towards their personal development. As in many western societies professional and personal attitudes are perceived to be integrated and contribute to the holistic development of an individual, the Indonesian context might demand a clear separation between professional and personal attitudes.

An adapted matrix of Competence Based Education?

The differing characteristics of the Indonesian society evidently affect the applicability of the concept of Competence Based Education. Employment opportunities and labour market structures, caused by the country’s geographical diversity and political heritage, are limiting the opportunities to determine relevant vocational profiles. Culturally embedded practices cause philosophies of individual development to deviate from the western ideologies dominating the paradigm of Competence Based Education. As the Indonesian context clearly demands a holistic approach, the 8 principles of Competence Based Education as developed by Wesselink, Biemans et al. (2007) provide sufficient room for manoeuvre to guide the local contextualisation of CBE. Adaptations should be made to the existing principles to provide the country’s Higher Education Institutes with a framework to critically reflect to their local conditions and to enhance the relevance of their education programmes.

Besides recommending context specific adaptations to the principles of CBE, the education reform initiative could easily be placed in the wider, global discussion on the desirability of moving education into a competence based direction. Debates on the individualisation of societies and increased economic incentives determining the education practices, sharply criticise the market oriented perspective of so many Competence Based Education initiatives. Introducing CBE in the Indonesian Higher Education system might be the trigger of a social and cultural change. Firmly embedded in western societal values, the concept is built on the strong philosophy of development of capable and critical individuals. Although the need for capable graduates, without doubt, is of major importance for any education institute, the need for a “critical” and “individual” perspective of Competence Based Education could be particularly contested within the Indonesian context. Historically cultural embedded paternalistic and collectivist practices dominate the Indonesian society and labour markets. If catering for societal and labour market needs, transmitting individual and critical values seems to be inappropriate for the current Indonesian society.

Providing a new perspective within the discussion on the feasibility of Competence Based Education it has become clear that adopting the concept in non-western societies, without carefully altering its’ relation to specific societal and labour market demands is likely to become ineffective and spreads an air of neo-colonialism. As Indonesian history has proved, education is a powerful tool. Harnessing the opportunities for reproducing or reshaping societies, policy makers should carefully balance the stakes at play. Opening up the discussion if CBE should follow societal demands, or should be utilized to disseminate new values of individualisation and democratisation, further research should be conducted to fully understand the societal impact of holistic development of students as an individual.

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Annex 1 – Matrix for Competence-Based Education

	Principle	Variables	Not Competence Based	Starting to be competence-based	Partially competence-based	Completely competence-based
1	The competencies that are the basis for the study programme are defined.	Putting together a job competence profile. Using a job competence profile. Interaction between education and vocational practice.	There is no job competence profile put together.	There is a job competence profile without participation of the vocational practice. This (vocational) competence profile has been used during the (re)design of the curriculum.	There is a job competence profile with participation of the vocational practice and this profile is fixed for a longer period of time. This job competence profile has been used during the (re)design of the curriculum.	There is a job competence profile with participation of the vocational practice and this profile is tuned frequently with the regional and local vocational practice including the major trends. This job competence profile has been used during the (re)design of the curriculum.
2	Vocational core problems are the organizing unit for (re)designing the curriculum (learning and assessment).	The extent to which the vocational core problems determine the curriculum.	There are no vocational core problems specified.	There are vocational core problems specified, which are used as examples in the (re)designing of the curriculum.	There are vocational core problems specified. These core problems are the basis for the (re)design of some parts of the curriculum.	There are vocational core problems specified and these lead to the (re)design of the whole curriculum.
3	Competence-development of students is assessed before, during and after the learning process.	Recognizing earlier developed competencies. Formal assessment. Formulating feedback. Flexibility in format and timing of assessment.	Assessment is the final stage of a learning process and takes place at a fixed moment.	Assessment takes place at several moments. Assessment is used for formal assessment and does not play a role in the learning process of students.	Assessment takes place before, during and after the learning process. Assessment is used for both formal assessment and competence development of students.	Assessment takes place before, during and after the learning process. Assessment is used both for formal assessment and competence development of students. Students determine the moment and format of assessment themselves.
4	Learning activities take place in different authentic situations.	Authenticity. Diversity. Relation with learning at school and learning in practice.	Learning in practice is of subordinate importance and there is no relation with learning at school.	Learning at school is in the lead. Sometimes, in some cases a relation is set up with learning in practice or experiences from practice.	Learning activities to a large extent take place in authentic settings, but the relation with learning at school is insufficient.	Learning activities to a large extent take place in diverse authentic settings and learning activities are clearly related to the learning activities in practice.

5	In learning and assessment processes, knowledge, skills and attitudes are integrated.	Integration of knowledge, skills and attitudes.	Knowledge, skills and attitudes are separately developed and acknowledged.	Knowledge, skills and attitudes are sometimes integrated in the learning process. Knowledge, skills and attitudes are assessed separately.	Knowledge, skills and attitudes are integrated in the learning process or in the assessment procedure, not in both processes at the same time.	Integration of knowledge, skills and attitudes is for both learning and assessment processes the starting point and therefore applied.
6	Self-responsibility and (self-) reflection of students are stimulated.	Self-responsibility. Self-reflection. Reflection on functioning in the vocational setting. Learning needs of the student.	Learning activities are characterized by external steering: students carry out assignments by means of elaborated instructions. There is no (self-) reflection.	In a limited part of the learning activities, students determined the way of learning themselves. There is hardly any reflection on the learning process and functioning in vocational settings.	Students themselves determined the way of learning, and time and place of learning, based on reflection on the learning process and functioning in vocational settings.	Students are after all responsible for their own learning processes based on their learning needs.
7	Teachers both at school and practice fulfil their roles as coaches and experts in balance.	Way of supporting the learning process. Support in the knowledge acquisition process.	There is no question of support. Knowledge transfer is central to the learning process.	To a limited extent responsibility for the learning processes is handed to students. Teachers support through guidance.	Students enjoy a certain level of autonomy in determining their own ways of learning. Teachers observe when students need support and offer it.	Teachers stimulate students to formulate learning needs and based on self-reflection determine their own learning process. During learning
8	A basis is established for a lifelong learning attitude for students.	(Labour) identity development. Development of learning competencies. Focus on future career.	There is no attention paid to competencies that are related to learning or (labour) identity development.	In the curriculum there is attention paid to competencies that are related to learning and (labour) identity, but these competencies are not integrated in the learning process.	During learning trajectories competencies related to learning and (labour) identity development are clearly related to vocational core problems and attention is paid to those competencies to a large extent.	During learning trajectories competencies related to learning and (labour) identity development are integrated and reflection on the future careers of students has taken place.