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Exploring curriculum approaches and issues: A descriptive analysis

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ABSTRACT

A curriculum is a set of guidelines used to attain an educational goal, and it has at least four key elements: objective, material, method, and evaluation. The purpose of this descriptive study is to describe several curriculum approaches that are commonly employed in teaching and learning activities. Furthermore, this study discusses curriculum changes, the reasons that influence such changes, and the obstacles that each curriculum change presents. The study first elaborates on the disciplinary curriculum approach, emphasizing the idea of exploring a certain subject of science through single-focused lenses without integrating it into other connected sciences. Following an examination of the disciplinary curriculum approach, the study gives considerable information on multidisciplinary and interdisciplinary curriculum approaches that have the potential to improve students' critical thinking skills. This study concludes by delving into curriculum change as well as its motivating factors and challenges.

Keywords: *Curriculum development; Curriculum approach; Curriculum changes; Higher education.*

1. Introduction

The issues of curriculum development in higher education are constantly intriguing to examine and discuss, as the evolution of higher education is very dynamic and constant. Curriculum changes continue to occur as a result of advancements and changes in the worlds of education and work, which always require college graduates to possess qualifications, experience, knowledge, and a high-quality education in order to compete in an increasingly competitive job market (Habiburrahim, 2018). As a result,

education professionals, particularly curriculum experts, continue to develop learning techniques that are believed to be capable of enhancing the quality of human resources through a variety of curricular approaches.

Additionally, experts acknowledge that there is no super curriculum capable of nurturing the best generation studying several years at a university. There is also no guarantee that a world-class curriculum developed by a renowned university can be successfully replicated at other universities and countries. This is due to a variety of circumstances, including the universities' or countries' facilities and infrastructure, human resources, and other varied supporting features.

Curriculum experts, in addition, claim that the curriculum is a method of instruction that enables educators and students to establish a learning objective to be accomplished as a result of the teaching and learning process. Thus, the curriculum as a vehicle for teaching and learning can be created around specific objectives and in accordance with a given society's culture. This descriptive analysis aims to outline numerous curriculum approaches that may be used at the secondary and postsecondary levels as well as curriculum changes and their driving factors that may always occur.

2. Disciplinary curriculum

The meaning of disciplinary learning is described as a method for organizing and studying occurrences (Dressel & Marcus, 1982). The debate over disciplinary-based learning continues to run rampant, with theorists on both sides. On the one hand, disciplinary-based learning advocates that each discipline provides a set of rules through which students learn to view the world; for example, biology practitioners view the world through the nature and constellations of knowledge within biology (Lattuca, 2002; Rainey, Maher, & Moje, 2020). When disciplinarians are conducting knowledge development projects, they believe that each of their projects has to be viewed through the lens of a given discipline. In essence, discipline is linked to knowledge because it knits together chemists and chemists, psychologists and psychologists, historians and historians. It "connects academics with academics, who share a certain specialty, be it knowledge-based or skills-based" (Clark, 1983, p. 29).

Lattuca (2001) also ascertains that discipline-based knowledge emerged in the US throughout the latter quarter of the 20th century, peaking then and eventually declining. The study uncovered that, at that moment, students were being introduced to different subjects at the elementary school and college levels, as well as being taught to understand and recognize a specific academic value through inquiry learning, which was discipline-based. Multiple academic researchers have investigated what learning is like in schools, and it turns out they are organized around the following subjects: science, technology, engineering, and mathematics (STEM) (Beberman-Shalev, Sabbagh, Resh, & Kramarski, 2011; Tchudi & Lafer, 1996).

Many experts believe that providing a foundation in either higher education or vocational/professional learning to students is a good first step (Tran, 2013; Valles,

2012). Scholars are empowered to apply their specialties and focus to areas of expertise with an expectation that this will lead to a more profound, more valuable, and broader understanding of their given subject matter.

The major goal of professional and vocational education, according to Anderson (2009), is to prepare students to master particular skills in order to contribute to the growth of their country. Anderson's description of the goals of academic and career training encourages increased productivity and profits in industry by (1) helping businesses meet their growing skill needs and obtain more competent workers by training the current generation and (2) ensuring students leave schools with the necessary training to earn a living and contribute to economic prosperity (skills for work).

Also notable is the USA's advancement of disciplinary education, in which students study for academic progress in helping science develop as well as for developing citizens' ability to participate in the country's economic life (Chettiparamb, 2007). In comparison, Karseth (2004) believes that a discipline should be a form of apprenticeship into ways of knowing that are extremely strong and that teaching students how to master conceptual structures and styles of reasoning is key. Through this approach, the goal of education is to train everyone to become professional scholars by making them skilled in the essential material of their particular academic area (Karseth, 2004).

A lot of notable literature showcases the effort to investigate the contribution of disciplines. For example, Turner (2000) contends that disciplinary education has the capacity to educate students in a manner that prepares them to do a particular skill with a level of proficiency that cannot be acquired by general education. Turner believes disciplines are "collectives that identify their special interests, but that are also divisions of labor that are dedicated to the production of people who are taught in a specific way'" (p. 55). He further argues that "disciplines might help supply standardised training, which teaches students what they will need to know to succeed in the market" (p. 52). In contrast to Turner's views, Henkel (1999) claims that learners will gain both personal abilities in community building and career self-empowerment through engaging with the essential values of disciplines. He has made the statement that learning from the key ideas, concepts, theories, and controversies of a field enables people to gain a better understanding of subjects, develop valuable skills, and get training to do a better job in the workforce and grow the economy. Though it may prepare people for the job market, it may also be fantastic preparation for work. Many scholars believe they fulfill their obligation to their pupils' best by doing this.

Though discipline learning has plenty of positives, it is not without disadvantages. Opponents say that learning disciplines can forget about information that is outside their boundaries, since "the restriction of its limits influences a discipline to only be aware of the quantity of knowledge accessible to it" (Chettiparamb, 2007, p. 9). Many say that

the "actual world" should be viewed from many perspectives rather than just one static dimension (Becher, 1989).

3. Multidisciplinary curriculum

The phrase ‘multidisciplinary' has various definitions, depending on what each individual has in mind for study. For example, Hammer and Soderqvist (2001) write that interdisciplinary "references typically refer to when people bring different theories, skills, data, and insights into a single problem" (p. 2). A similar definition comes from Chettiparamb (2007), who defines multidisciplinary as "a juxtaposition of many disciplines, sometimes with no obvious link between them, e.g. music + mathematics + history" (p. 19). From the perspective of developing and conducting research that utilizes a variety of methodologies to explore one subject or that promotes interdisciplinary partnerships, the term ‘multidisciplinary' can be used to describe what is being done (those that have connections with each other and those that have not). A multidisciplinary curriculum represents the basic efforts of various disciplines working together to address a problem without breaching disciplinary boundaries, as explained by Newhouse and Spring (2010).

Davies and Devlin (2007) claim that, in the case of a multidisciplinary curriculum, the various disciplines are considered to be independently separate. Higher education is usually focused on a single topic, but the introduction of additional courses, like those that expand the student's intelligence, gives students more flexibility. Students who take up a certain field of study should also explore subjects of allied disciplines, say Davies and Devlin. For instance, an accounting student might study some finance disciplines, as well as economics, in addition to their main concentration. Students could be interested in subjects in areas outside of their major, such as history or music (see Figure 1). Students may consider this interdisciplinary idea while making decisions about their course selections. It emphasizes the importance of learning relevant content in addition to their major and is designed to help students better utilize their time in school.

There have been multiple studies conducted on interdisciplinary learning. Students who learn many different things are more likely to be better learners and thinkers, and Charlton (2006) agrees that it is essential to teach multi-learning and thinking skills to students while not disregarding other beneficial study methodologies. In order to prepare students for future jobs or further education, multidisciplinary study aims to help students acquire cognitive flexibility (Charlton, 2006). Higher education should provide an opportunity for students to learn about multiple fields and their related information and skills. Learning these interrelated subjects as early as possible allows students to broaden their horizons as they choose a field of expertise.

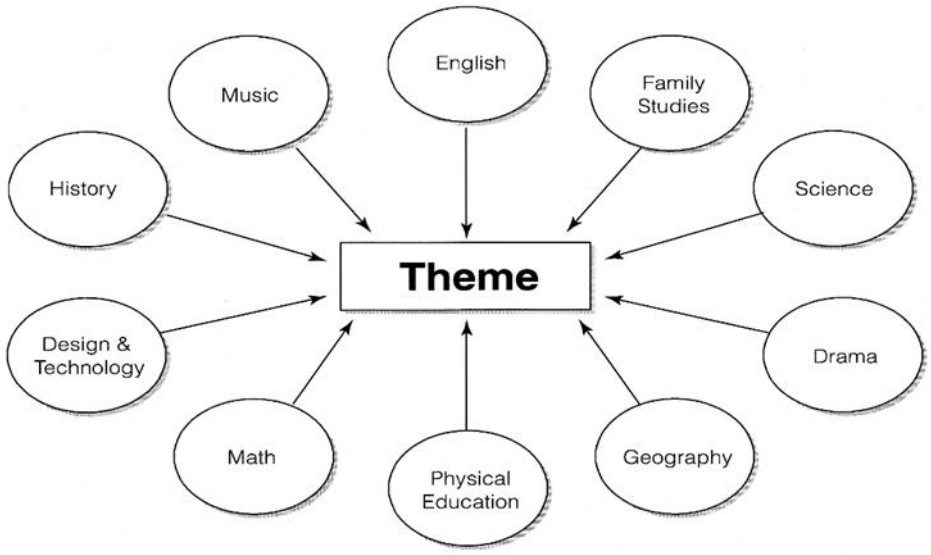

Figure 1. Multidisciplinary approach
Adopted from (Drake & Burns, 2004, p. 9)

Figure 1 above demonstrates the link between many topics that revolve around a similar subject. The information points to the fact that many multidisciplinary methods emphasize individual fields. Students learn to appreciate the interplay between the many sub-disciplines through understanding their relationship to the actual world through the framework of multidisciplinary learning, said Drake and Burns (2004). Drake and Burns think that teachers should provide a multidisciplinary approach, where students learn through several methods and acquire skills, information, and attitudes.

4. Interdisciplinary approach

A closer look at the meaning of "interdisciplinary" reveals that it means utilizing several ways of researching one subject. According to Jacobs (1998), interdisciplinary is "a knowledge view and curricular approach that purposefully applies methodology and terminology from more than one field to analyze a central theme, issue, problem, topic, or experience" (p. 8). Both Chettiparamb and Newell have made similar perceptions in regards to interdisciplinary work. In her definition of interdisciplinary studies, Chettiparamb (2007) includes a description of the interactions between disciplines, explaining that an interdisciplinary course is defined as one in which several disciplines are involved and the goal is to look at a common problem from different angles. The interactions are dynamic and multifaceted, ranging from a common technical framework to diverse ways of managing and developing education. According to Chettiparamb (2007), when such disciplines intersect, anything from simple transmission of ideas to reciprocal integration of organizing concepts, techniques and processes to epistemologies, terminologies, and data can occur. This can result in the organization of research and education in a very big field.

Newell (2001) adds that interdisciplinary learning involves a broad view of the world through using the knowledge of several fields and combining it into a single

unified concept. Interdisciplinary study uses a more complete perspective, synthesizing several disciplines, to form a better understanding. The interdisciplinary study also deals with studying complex topics that other disciplines struggle to examine alone. This is because they tackle the topic from a number of perspectives, rather than only utilizing a single disciplinary methodology. Newell (2001) describes interdisciplinary research as a process in which researchers must answer a question, solve a problem, or explore a topic that cannot be covered sufficiently by a single discipline or profession. Hammer and Soderqvist (2001) say "interdisciplinary" means people and ideas from several fields all working together to come up with solutions. A main component of this project is the merger of two distinct disciplines, physics and education, under the framework of education technology. In line with Hammer and Soderqvist's definition, Newhouse and Spring (2010) go on to define ‘interdisciplinary' as a rational connection between disciplines that generates reciprocal interactions. This unity encourages common methods, knowledge, or perspectives.

In addition, Klein (1990) and Hammer (2001) advocate for a unified curricular approach, which "invokes a common epistemology of convergence" (p. 11). Interdisciplinary studies incorporate the information and thought patterns of two or more disciplines. This makes it possible for learners to deepen their comprehension, for example, investigating phenomena, posing further questions, and finding answers to a problem (Mansila & Gardner, 2003).Numerous interdisciplinary thinkers agree that the benefit of integration is the ability to use subjects and disciplines as tools for a new purpose (Klein, 2002, p. 9). Integration is also known as a crucial idea within the interdisciplinary procedure (Lattuca, 2001) since it incorporates knowledge and thinking methods from different academic disciplines to more completely understand the topics being studied (Mansila & Gardner, 2003). Golding (2009) further states that in interdisciplinary subjects, students investigate and combine several disciplines and areas of competence, as they would integrate multiple perspectives (p. 3). Interdisciplinarity focuses on "process and skills" rather than on knowledge and facts (Newell & Klein, 1996, p. 164).

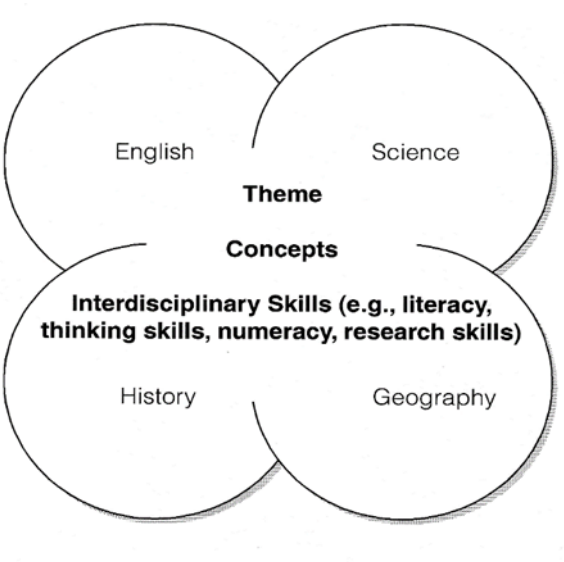

Figure 2. Interdisciplinary approach
Adopted from Drake and Burns (2004, p. 12)

In the interdisciplinary approach, teachers design curricula that are relevant to all students by focusing on learning experiences shared by several subject areas. Using the evidence of projects designed and built by students as demonstrations, Drake and Burns (2004) highlight the value of interdisciplinary learning and the importance of it to students in the learning process. As a creative activity, students read a tale about kites and electromagnetic. Students may have learned about proportional and ratio-based ideas while studying electromagnetism, which is important for building a kite. In addition to this interdisciplinary approach, Drake and Burns say that students have acquired considerable general skills in cooperation and teamwork, as well as research, and design.

5. Curriculum change and its influencing factors

Various studies reveal that when curricular reform occurs, the process aims to strengthen and augment the creation and utilization of academic knowledge (Barnett, et al., 2001). The push for curriculum reform in higher education is viewed as a realistic and long-term strategy for increasing the quality of education (Ladwig, 2010; Akala, 2021). Ladwig claims that modern curriculum development is anchored in a commitment to progress and reform because development and education means change in modern times. Ladwig's statement points to a mission of impacting students' futures through innovative curriculum changes.

With their standardized curriculum and training, higher education institutions have the ability to create graduates who are skilled and knowledgeable enough to do well in their lives. Orrell and Higgs (2012, p.41), state that "universities have the potential to be sources of solutions to economic and social problems and challenges, such as producing a properly educated and skilled workforce, reducing inequality and unemployment, and

serving as sources of new knowledge that contributes to the advancement of economic endeavors and the well-being of the general public".

At the heart of curriculum improvement is a primary priority that a university gives students a chance to study and succeed both socially and economically. Furthermore, teaching and learning at a university can be enriched significantly by regularly evaluating the curricula and courses that are offered. To promote any meaningful changes, it is important to have a clear understanding of why they are happening. Ramsden (2003) argues this stage is the starting point. What sort of alterations do we like to see? To better understand these topics, Clark proposes doing a critical review of the most major elements influencing curricular reform, including government and university policies and the relevant labor market or industry trends.

6. Government and university policy

University curricula have experienced major revisions because of political changes and government policy. Many countries, including Indonesia, have been obliged to accept the realities of our globalized society. To boost their countries' economies, governments all around the world support educational initiatives relating to human capital (Rizvi & Lingard, 2010). In Aceh, Indonesia, for instance, the implementation of Islamic law in this region has affected the Acehnese education systems and approaches. The new policy has moved the focus of faculty objectives, making it more particular. This change allows graduates of the university to master both general and Islamic education.

In responding to these government needs, the English Education Department of Universitas Islam Negeri (UIN) Ar-Raniry fosters strong cooperation with both the national education ministry and the religious affairs ministry in formulating suitable curricula for students studying at this Islamic higher education institution. It is expected that students will have a wide range of opportunities to study sciences while retaining their core beliefs through the enrichment of their Islamic education and teachings.

In a broader perspective, the English Education Department sees this policy as an opportunity to strengthen the curriculum in order to better prepare Acehnese youth for the future. The change could be very important in improving the Department's mission of nurturing graduates who have qualifications in the English language and in Islamic related teachings. This government and university policy has brought about significant reformation in developing the department's curriculum. It is believed that this curriculum reformation could improve the quality of human resources, particularly in this region in the near future.

7. Adapting to labour market

People have moved to introduce elements of work into classrooms, reflecting the changing workplace outlook (Darling-Hammond, 2010; Down, et al., 1999; Gruba, Moffat, Sondergaard, & Zobel, 2004; Hess, 2010). The research by Darling-Hammond

(2010) indicates that as societies have become more complicated, nations in all parts of the world have placed more importance on getting their students to be able to address these challenges with new technologies and the skills to work cooperatively to overcome any problems. To accomplish this, the goals and curriculum of schools are being redesigned. Moreover, certain universities, especially in Australia and the UK, have highlighted that holding certain knowledge and abilities can help enhance the employment chances of graduates, which confirms that broader traits such as being well-rounded are now fundamental to some university curricula (Gibbs, 2012; Knight & Yorke, 2004). Schools and courses must be changed to accommodate students' future job opportunities. As such, educational institutions need to ensure their curricula address the market trends, which will help graduates' employment prospects.

A department-level curriculum change is seen as a beginning point for empowering education, and will enable schools to better serve the interests of their various stakeholders, including to support graduates who are moving on to be teachers or other professional workers, helping them expand their job prospects (Muluk, Habiburrahim, Zulfikar, Orrell, & Mujiburrahman, 2019). Because English is thought of as an asset for many different jobs in Indonesia, students of the English Education Department are encouraged to both acquire proficiency in English and other current core competences that will enhance their future education and career opportunities.

8. Challenges of curriculum change

It is acknowledged that the introduction of new curricula has the potential to result in conflict (Burgess, 2004; Little, 1993; Zembylas, 2010). Research demonstrates that school change generates several issues, such as conflict, opposition, unpredictability, and a decline in self-image (Zembylas, 2010). In a university context, the hardest issue is dealing with resistance to change (Harpe & Thomas, 2009). According to Arnold and Civian (1997), top academics in powerful and prominent positions can be a possible source of opposition. As such, change often results in loss, being anxious, and being put into a stressful situation (Fullan, 2007).

Supporting and protesting changes in the curriculum both occur frequently during the course of developing a new curriculum (Qun & Wanjin, 2007). Various scholars believe that higher education institutions have extreme difficulty when seeking to undertake changes to the curriculum. Wormley (2004) asserts that one of the biggest problems organizations encounter in implementing a new reform is dealing with a lack of time, dedication, cooperation, infrastructure preparation, and other important issues like having available resources. Most reformists agree that having a better understanding of the change process and a solid relationship with relevant individuals is the most important element for successfully managing change (Fullan, 1997; Harpe & Thomas, 2009).

To prepare for potential resistance to their efforts to implement change, Fullan (2007) advises leaders to cultivate relationships with many various individuals and

organizations, especially those who are skeptical of the necessity of change. Fullan proposes that curriculum developers must consider a big and small picture (in other words, to think about small, frequent changes versus one big change or a long-term shift) when planning any curriculum changes in order to minimize any potential disagreements in designing and developing a new curriculum. Large-scale changes to the course of study normally need a massive overhaul of the university as a whole, whereas even a little adjustment to the curriculum can only be made by the faculty or by each department. But whatever the reform may be, it frequently causes potential obstacles (Oliver & Hyun, 2011; Wormley, 2004).

9. Conclusion

This paper has highlighted various significant curriculum approaches that can be used in an attempt to empower the educational quality at higher education institutions. Those three curriculum approaches; disciplinary, multidisciplinary, and interdisciplinary curriculum approaches have their strengths and weaknesses. However, to improve the analytical skills of students at the tertiary level, an interdisciplinary or integrated curriculum is considered more appropriate. The integrated curriculum allows a student to see an issue from a different perspective, including linking religious values into the sciences and other general education or vice versa. With regard to curriculum changes and their driving factors, in addition, this research shows that the curriculum changes occurred due to changes in government policies and universities themselves and also adjustments to the current employment orientations. Finally, the research notes that curriculum changes also have an impact on several important aspects, including resistance from people having side effects from such changes and the unpreparedness of all stakeholders in facing new situations and conditions. Therefore, to ensure the changes run well, every stakeholder in higher education needs to foster strong cooperation in responding to any change that may be undertaken.

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