Reorientation of the Andragogy Concept and Its Relevance to Higher Education in Indonesia for Answering the Global Era of Information: Critical Review of Malcolm Knowles Perspective

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Abstract. Education problems have always been very unique discussions. In recent times, issues of modernization often emerge that are not only positive for millennial generations, but also negative. The current problem that often arises with regard to the rapid development of science and technology in this century is about the loss of moral and social values. Many critics came, especially to the output of higher education in Indonesia, especially highlighting their failure to produce qualified and competent graduates. This article will explore the concept of andragogy according to Malcolm Knowles and its relevance to higher education in Indonesia. The article used a qualitative library type research approach to form a comprehensive scientific synthesis. In general, Knowles's concept of andragogy is very relevant to the spirit promoted by higher education in Indonesia. This is due to many orientations that are suitable between the two. In addition, ideally higher education must refer to the concept of andragogy. However, higher education must be able to optimize the potential of students who have indeed transformed from the juvenile to adult phases. With the development of science and technology in this fast-paced information age, higher education graduates are expected to have personal competent and social abilities. To get both, a process that is appropriate to their character is needed as a person who is transforming into maturity, namely by implementing an educational process that is in accordance with the basic principles of andragogy of Malcolm Knowles. With education that optimizes motivation from within oneself, the competence and potential of each individual will be maximally developed. Thus, higher education can produce graduates who are truly able to compete in this information era.

Keywords: andragogy; higher education; information age

1 Introduction

The progress of science and technology is increasingly unstoppable today. The era of information that has been predicted long ago by many people is now increasingly showing its

existence. Thousands and even millions of websites that support education are increasingly easy to find. On the contrary, destructive content and SARA advertisements are increasingly free to roam in cyberspace. This millennial generation really faces an era of information that is fast-paced, all-sophisticated, completely accurate, although the possibility of the hoax news also haunts behind the growing social network. This phenomenon is happening and will continue to develop in an amazingly fast time, beyond our estimation long ago.

The competence and credibility of higher education is increasingly getting sharp criticism, because our millennial generation today is considered not very capable in choosing the right and proportional cyberspace content. Evidenced by the many issues of moral degradation, the issue of social network misuse such as "tick-tock" to youtube, dissemination of false news, even viral phenomena of various types of challenge on Facebook, Twitter, and is increasingly considered normal. The question that arises is of course about the problem of standards such as: are there logical and mature considerations before they do it all.

On the other hand, higher education in Indonesia is increasingly showing tremendous differentiation. In the world of Islamic Religious Colleges, there have been many recently transformed from the form of college to Institute. There are also some universities that already have good reputation, not only in Indonesia but also at the international level. Under the auspices of the Higher Education there have been many bonafit universities, recognized internationally by the quality of the campus. But that all turned out not to be a guarantee that their graduates truly fully reflect the quality that should be linear with their campus' grade.

The next question is of course still related to the implementation of higher education in Indonesia, for example: how is the learning process in Indonesian higher education today, and is there something wrong with the education system. Of course higher education in Indonesia should be carried out with a lot of consideration and adjusted to hundreds of official regulations from the Indonesian government. However, the 'failure' addressed to students or university graduates is more or less directing our focus on one thing, namely whether the learning in it has met the standard of higher education or not. In this case, the author emphasizes the discussion of the concept of andragogy of Malcolm Knowles and its relevance for higher education in Indonesia to answer the global challenges in this information era.

Technological advances affect all aspects of life, including education. Rapidly developing technology forces educators to change their position from instructors to educational facilitators for adult students [1]. Meanwhile, students as students who switch from the juvenile phase to the adult phase, are required to change their mindset from passive students towards active involvement and participation in the learning process [2]. Both of these will be implemented optimally when andragogy is used as a basic assumption of learning in higher education.

Higher education must reorient the learning process, adjusting the needs of students. Pedagogy as a basic assumption that applies to elementary and secondary education must be changed to the assumption of andragogy. Pedagogy itself is defined as the art and science of teaching children. This is based on the full responsibility of an educator to make all decisions about what students will learn, including how and when to learn [3]. This means that students will be very dependent on educators who determine the direction of learning. Their daily experience is not much assessed, and the main method used is more dominant using teaching, reading assignments, and ordinary presentations [4]. Students as adult learners certainly do not need such learning. That is why reorientation towards andragogy is very urgent to do.

2 Method

This article will explore the concept of andragogy of Malcolm Knowles and its relevance to higher education in Indonesia. The article used a qualitative library type research approach to form a comprehensive scientific synthesis of how higher education should be run. Of course this is related to how proper adult education is applied in higher education in order to be able to produce competent graduates who are ready to face the information era. In general, andragogy has several basic assumptions that can be used in the adult learning process. These assumptions are knowing the reasons for learning, self-concept, past experience, learning readiness, learning orientation, and learning motivation [5]. These assumptions are very appropriate for higher education students because they are considered able to provide a foundation for planning an adequate learning experience for adults. Educators who understand and are willing to apply these assumptions will have a greater chance of meeting the needs of students in learning [7]. Furthermore, it will be explored about several things related to the orientation of this article.

3 Results and Discussions

Before discussing Malcolm Knowles's views, it is necessary to describe the term andragogy. Andragogy comes from Greek aner or andr which means an adult and agogi which means to lead or guide. Sometimes agogi means the activity of leading / guiding or art and science leading / guiding, or art and science influencing others. Meanwhile, pedagogy comes from Greek paid (means children) and agogus (means to lead). On that basis, Knowles defined andragogy as art and also knowledge in helping adults in learning [8].

Knowles himself believes that adults learn differently when compared to children. This provides the basis for a typical field of inquiry. Through his investigation in the field of informal education for adults before, he has highlighted several elements of processes and arrangements. Likewise, his views on the development of adult education in the United States have helped him to reach some conclusions about the shape and direction of adult education. Over time, he then united these elements. The mechanism used is the idea of andragogy. Although the concept of andragogy has been used since the 1830s, Knowles was a figure who popularized its use in a wider scope. For Knowles, andragogy is based on at least five important assumptions about the characteristics of adult students that differ from assumptions about children's teaching where traditional pedagogy is applied.

3.1 The Principles of Andragogy of Malcolm Knowles

The five important assumptions in Knowles perspective of andragogy are self-concept, experience, readiness to learn, orientation to learning, and motivation to learn [9]. First is self-concept. As adults, adult self-concept moves from one personality that depends on someone to be an independent human being. The second is experience. When someone is mature, he gathers all the more and more experience and it will become an increased resource for learning. Third is readiness for learning. When a person becomes an adult, his readiness to learn becomes more oriented towards the developmental tasks of the social role he is carrying out. Fourth is orientation to study. When a person becomes an adult, the perspective of his time changes from one of the applications of knowledge that is postponed to an application that is immediately implemented, and accordingly the learning orientation shifts from being subject-oriented to being problem-oriented. Fifth is about motivation to learn. As adults, motivation to learn is more internal than external.

Knowles's view in terms of andragogy can be explained through the following two views. The first, as demonstrated by Merriam and Caffarella [10], andragogy of Knowles is an attempt to form a comprehensive theory or model of adult learning, which is consistent with the characteristics of adults themselves. In line with this, Cross also uses the same characteristics in a more specific form by offering a framework to discuss what and how to implement learning for adults [11]. From both, it can be said that the approach focuses on the life situation of adults and changes in their awareness.

Secondly, Knowles utilizes a relationship model derived from broader humanistic clinical psychology, especially good facilitation qualities as explained by Carl Rogers [12]. However, Knowles added several other elements that play a large role in the making of scientific curricula and behavior modification. This encourages learners to identify needs, set goals, enter learning contracts and so on. In other words, andragogy of Knowles is more centered on humanistic psychology than behavioral psychology [13]. From the two explanations, it can be concluded that Knowles puts forward a learning concept that should adapt to the needs and characteristics of adults.

In connection with the concept of andragogy, Knowles put forward the importance of self-directed learning. There are at least three reasons underlying why independent learning is a vital thing for adult learning. The first reason is people who take the initiative in learning (proactive students) learn more things and learn better than people who passively wait to be taught (reactive students). They are involved in learning more directed and with greater motivation. They also tend to be more retained and utilize what they learn than students who are reactive [14].

The second reason is that independent learning is more in line with our psychological development process. An important aspect of maturity is developing the ability to take on increased responsibilities for our own lives, which is to become increasingly independent. The third reason is that many new developments in education place a heavy responsibility on students to take more initiatives in their own learning. Learners who enter these programs without learning self-directed investigative skills will experience anxiety, frustration, and often failure, and so will their teachers [15]. That is what increasingly convinced Knowles that adult education must be based on independence orientation.

In addition, the author also added that there are long-term reasons that should not be forgotten, namely the purpose of education must be directed at developing investigative and research skills. To underline again the importance of independent learning, Knowles proposed five steps of comprehensive self-learning. First diagnose learning needs. Second formulate learning needs. Third identify learning resources. Fourth is choosing and implementing the right learning strategy. Fifth is evaluating learning outcomes [16]. These five steps are a general description of how independent learning should be carried out. Thus, the target of adult learning based on independence will be achieved systematically and directed.

3.2 Reorientation of Andragogy and its Relevance to Higher Education in Indonesia

As explained earlier that andragogy plays an important role in the learning process for adults, higher education which is in fact the advanced phase after secondary education should also apply the andragogical pattern. Studies need to be sharpened regarding the reorientation of the concept of andragogy that is appropriate to tertiary education in Indonesia, so that the right assumptions are obtained as the basic principles in its implementation. The relevance of the concept of andragogy with higher education in Indonesia can be found in this discussion on basic assumptions of andragogy and its application in higher education.

First is the assumption that adults must know why they need to learn something before deciding to study it [17]. By explaining the purpose of the task and the results of learning when completing the task, the lecturer can increase the likelihood that students will be more motivated to try to complete their assignments. In this regard, the faculty can choose to explain or provide outline of priority learning expectations to begin lectures. This will be one of the right methods to apply the basic assumptions in the classroom. Students will be more motivated when they understand what they will get from the learning process.

To sharpen this assumption, real case studies are the right means in developing assignments for students. Real case studies can be applied in life experiences and provide opportunities for students to collaborate and reflect on each other over time [18]. Contextual tasks will make their learning activities more relevant and enjoyable. Case studies, which also test student skills, can be an effective way of applying these basic assumptions, especially when applied to online learning environments [19]. So, when students are proactive in the learning process, they will have a strong interest in studying the course.

Second is the assumption that adults have a self-concept to be responsible in their own decisions, for their own lives [20]. Based on Dabbagh's [21] opinion, the self-concept of students is the main predictor of success. In this case the faculty can take into account students about how they access and incorporate their life experiences into classroom activities. This is because their experience as adults is a valuable learning resource [22]. Students want to be seen as someone who is able to overcome problems, and collaborative activities in this case will provide opportunities for them to demonstrate their abilities.

Third is the assumption that adults have different life experiences with children, which will form more heterogeneous learning groups. Encouraging students to connect their learning with real life can help them understand the lecture material better [23]. Lecture materials must be arranged in such a way that can help in the effort to exchange experiences, for example through group assignments and interactive discussions [24]. Students who actively participate and contribute to their learning will be increasingly involved and motivated in learning, and of course the learning success will be more successful [25]. In other words, lecture material and lectures should be designed to be flexible and can develop, rather than being rigid and textual.

Fourth is the assumption that adult readiness to learn must be directed to the development concepts. Watkins advises lecturers to ask students about specific experiences according to topics related to the content of the lecture and what is expected of the course [26]. For example, lecturers can ask discussion questions in class, and students are asked to respond to the question then ask other questions to their friends. A heterogeneous situation will raise many questions or problems that must be answered. In this process, students will find the right answers to respond to these questions. The answers from students can help the lecturer in seeing how prepared students are to study the course. Good learning readiness will better understand students about lecture material.

The fifth assumption is that students will be more motivated to learn when given concrete learning activities [27]. In other words, the curriculum must be process-based, not just material-based, so that there is meaningfulness in learning. Concrete learning will provide deep meaning for students [28]. Some apply concrete activities including case studies, group problem-solving activities, and conduct interviews. Faculties can consider focusing on making assignment-based learning activities. With this assignment, students will be helped to get a sense of how to apply the lecture material in their lives [29].

The last assumption is that students are motivated to learn intrinsically. Lecturers can help students' intrinsic motivation to learn by providing a learning environment that involves students and encourages them to actively participate in them [30]. For this reason, lecturers

must be sensitive to students who need to be appreciated, assessed, and respected. Implementing learning assumptions on an invaluable effort in shaping the learning process to be more conducive to adults [31], and of course this should be used as a guide to developing an adult learning environment.

From the explanation the author concludes that andragogy really needs to be applied in higher education because it is very relevant to the characteristics of students as adult learners. Andragogy in this case is a set of assumptions that can be used for all types of adult learning situations, including higher education in Indonesia. The advantage of applying andragogy, as well as the ability to adapt the assumptions previously explained, is to meet the needs of individual students in the learning process. Thus, the learning carried out will suit their goals.

3.3 Andragogy Answering Global Challenges in the Information Era

Today our society has experienced scientific and technological progress in various aspects of life. Many new things can be found quickly, even without having to leave the bed or seat. The internet is an extraordinary means to represent how fast technology is developing today. Responding to this, higher education which is based on andragogy should be applied. Independent learning as one of the basic assumptions of andragogy will occur when each individual takes the initiative, either with or without the help of others, in diagnosing their learning needs, forming learning objectives, knowing the learning resources, choosing and implementing the right learning strategies, and evaluating their learning outcomes own [32].

Research on independent learning reveals that 90% of adults do independent learning at least once a year and 70% of them are conducted in the wild [33]. The concept of independent learning can indeed be applied in many ways in this information era. Some people can choose the quick way by operating a computer, holding a mouse or moving their fingers on a smart phone to get what they need while others may prefer a more complicated and systematic way. Knowles himself proposed two concepts of independent learning. The first is independent learning which underlines the full authority of individuals towards all technical aspects and process approaches chosen in learning. Second, learning that prioritizes control over learning goals and assumes a sense of ownership in the learning process [34].

From this explanation it can be concluded that independent learning is all learning processes where students are decision makers and control their own learning process. Of course independent learning is a freedom that all students must explore. So, even though he may get stimulation or encouragement from others, new independent learning will occur when all of that comes from self-initiative.

The information era also requires adequate competence and credibility. In this connection, learning how to learn is a necessity. Smith defines learning how to learn as a discourse for adults to have or gain knowledge in order to function effectively in various learning situations that they experience themselves [35]. Next he added that learning about how to learn is an effort to have the knowledge or skills to learn effectively in the various situations [36]. Adult education is a very important learning process to involve their participation in each stage.

Student participation as adult students is carried out in all phases, starting from planning, implementing, to evaluating the learning that will be carried out. This detailed process illustrates that they will get a kind of guarantee that what they learn can function well later [37]. With the principle of understanding how to learn, and coupled with the possibility of accessing millions of sources of information in cyberspace, students will get adequate competence and capable credibility. As such, they will still be able to compete in facing the current global challenges.

Adults always face various problems throughout their lives, as well as the learning process they experience. Learning from everyday situations, opportunities, dilemmas, and life experiences is a sure process for students. As the results of Fellenz and Conti's study, learning from real life is very relevant to what should be achieved in learning [38]. Formal learning processes in classes that use traditional approaches are very out of date and not in accordance with the dynamics of the information era. Therefore, by maximizing contextual learning they will focus more on learning and mastering the competencies set according to the initial orientation.

From some of these descriptions it can be concluded that andragogy plays an important role for adult learning. Students in higher education today should be able to participate more actively in the learning process, so that they understand the true meaning of the learning process. Learning is an ongoing process that is oriented towards the optimal application of the knowledge gained in real life later. When compared with the situation in the past, the information era is more and very possible for students to do many great things. However, as educators, lecturers must be able to become facilitators with the right proportions for students, so that they can build the right meaning of learning in accordance with the needs and demands and challenges of the information age.

3.4 Discussion

Andragogy plays an important role in the learning process for adults, higher education which is in fact the advanced phase after secondary education should also apply the andragogical pattern. Studies need to be sharpened regarding the reorientation of the concept of andragogy that is appropriate to tertiary education in Indonesia, so that the right assumptions are obtained as the basic principles in its implementation. The relevance of the concept of andragogy with higher education in Indonesia can be found in this discussion on basic assumptions of andragogy and its application in higher education.

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From the explanation the author concludes that andragogy really needs to be applied in higher education because it is very relevant to the characteristics of students as adult learners. Andragogy in this case is a set of assumptions that can be used for all types of adult learning situations, including higher education in Indonesia. The advantage of applying andragogy, as well as the ability to adapt the assumptions previously explained, is to meet the needs of individual students in the learning process. Thus, the learning carried out will suit their goals.

The information era is identical to everything that is fast-paced. However, the development and advancement of science and technology not only have a positive influence on civilization, but also a number of negative effects. Of all the human populations in this world, millennial

generations are the ones who most closely deal with that. Thus, the role of higher education in producing competent generations is very vital. Therefore, higher education must not only be oriented to teaching or based on pedagogy, but must implement andragogical values that are in accordance with the character of students.

Ideally, higher education must refer to the concept of andragogy. However, higher education must be able to optimize the potential of students who have indeed transformed from the juvenile to adult phases. The six basic andragogical assumptions that need to be applied are learning independence, understanding learning objectives, using learning experiences, learning readiness, establishing learning orientation, and sharpening internal motivation. With the development of science and technology in this fast-paced information era, higher education graduates are expected to have competent personal and social abilities. To get both, a process that is appropriate to their character as a person is being transformed towards adult maturity, namely by implementing an educational process that is in accordance with the basic principles of andragogy

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4 Conclusion

In general, Knowles's concept of andragogy is very relevant to the spirit promoted by higher education in Indonesia. This is due to the many orientations that are suitable between the two. With education that optimizes motivation from within oneself, the competence and potential of each individual will be maximally developed. If higher education is able to carry out a process of defense that is relevant to andragogical values as Knowles says, then it is not impossible that higher education will be able to produce graduates who are truly capable of competing in this information era. The information age does not require anything from millennial generation except only one thing. That is the ability and willingness to always think and act dynamically along with changes and developments in the times.

The development and advancement of science and technology not only have a positive influence on civilization, but also a number of negative effects. Of all the human populations in this world, millennial generations are the ones who most closely deal with that. Thus, the role of higher education in producing competent generations is very vital. Therefore, higher education must not only be oriented to teaching or based on pedagogy, but must implement andragogical values that are in accordance with the character of students. The six basic andragogical assumptions that need to be applied are learning independence, understanding learning objectives, using learning experiences, learning readiness, establishing learning orientation, and sharpening internal motivation. With the development of science and technology in this fast-paced information era, higher education graduates are expected to have competent personal and social abilities.

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