

## **An Analysis of Leadership with Changes in the 4ir Organizational Environment in the World of Education**

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### **ABSTRACT**

The development of the world of education in the Era of the Industrial Revolution 4.0 requires the integration of technology used in the world of learning. This of course needs to be followed up with the adjustment of the new curriculum in accordance with current developments. To be able to follow this development, higher education as a place to gain knowledge has an important role in producing superior human resources in this 4.0 era, so a curriculum is needed that is designed to keep up with the changing times that are constantly developing. This is where the role of the Leadership of a Higher Education is in carrying out their duties as a leader to bring this Higher Education to produce human resources who can adapt quickly to all the developments of the times.

**Keywords** : Leadership; Education; Industrial Revolution.

### **INTRODUCTION**

The opinion of (Cotet et al., 2017; Dhanpat et al., 2020; Malik, 2019; Nababan et al., 2020; Rosa, 2020) states that the 4.0 Industrial Revolution requires human resources to be able to always think and act creatively and innovatively. This is done to be able to compete and create jobs based on Industry 4.0. In this case the development of the times can provide a challenge for everyone to be able to always adapt so as not to be left behind, including in the world of education there are leaders and teachers whose job is to educate students to achieve national education goals (Eddles-Hirsch et al., 2010).

Educational theorists often refer to Education in the Industrial Revolution Era 4.0 to (Connell et al., 2020; Lase, 2019; Qurtubi, 2021; Willis, 2017) describe various ways of integrating cyber technology both physically and non-physically in learning. Education in the Industrial Revolution Era 4.0 is a phenomenon that responds to the needs of the industrial revolution by adjusting the new curriculum according to the current situation. The curriculum is able to open a window to the world through hands (Batchelor et al., 2018), for example utilizing the internet of things (IOT). On the other hand, teachers also get more references and teaching methods.

However, this is not without challenges for teachers to implement it. There are four competencies that teachers are expected to possess. The first is critical thinking and problem solving skills. It is the ability to understand a problem, get as much information as possible so that it can be elaborated and bring up various perspectives to solve the problem. Teachers are expected to be able to mix learning and export these competencies to students. Both

Communication and collaboration skills. These skills are inseparable from information technology-based abilities, so that teachers can implement collaboration in the teaching process.

Third, the ability to think creatively and innovatively. It is hoped that new ideas can be applied by teachers in the learning process so as to spur students to think creatively and innovatively. For example in carrying out tasks by utilizing technology and information. Fourth, technology and information literacy. Teachers are expected to be able to obtain many references in the use of technology and information to support the teaching and learning process.

For universities, the Industrial Revolution 4.0 is expected to be able to realize intelligent education through increasing and equalizing the quality of education (Batchelor et al., 2018; Benešová & Tupa, 2017; Bloem et al., 2014; Ing et al., 2019; Oztemel & Gursev, 2020), expanding access and relevance in realizing world class. To realize this, learning interactions are carried out through blended learning (through collaboration), project-based learning (through publications), flipped classrooms (through public interaction and digital interaction).

In this case, Leadership in Higher Education has an important role to be able to lead these Universities to produce human resources who can adapt quickly to all developments and changes in the Industrial Revolution 4.0. It is unavoidable that every change will require every leader to be able to immediately change direction as a way of anticipating and adapting to change, moreover this world of education is fundamental in creating a reliable generation to build the nation into a great nation and become a developed country.

As stated by Tanjung et al (2020) regarding leadership which is also mentioned as leading activities (Baruth et al., 2015; Ejimabo, 2015; Shipman & Mumford, 2011), namely an effort made by someone by exerting all their abilities to be able to influence, encourage, guide, direct and move others to want to work with enthusiasm and confidence in achieve common goals. In the world of education according to Asabari (2020) states that leadership is an effort by higher education leaders to be able to influence, encourage, guide, direct, and mobilize their subordinates to be able to work effectively to achieve predetermined educational, learning and teaching goals.

It will be a challenge for a leader to always be alert in all changing eras, especially in the world of education which is currently facing the Industrial Revolution 4.0 era. Higher education leaders are required to be able to meet the needs of changes in the new curriculum that can accommodate all developments in today's world of technology and communication. So that with this new curriculum change it is hoped that it can balance with all the developments or changes that exist. However, if examined further, what kind of leadership can be applied in the world of education in facing the Industrial Revolution 4.0 Era. The purpose of this study is to find out an analysis of leadership with environmental changes in the Industrial Revolution 4.0 Era in the world of education.

## **METHOD**

This research is a qualitative research where researchers conduct research on real conditions and natural objects, according to Sugiyono (2013: 15) qualitative research is research based on the philosophy of post positivism, used to examine the conditions of scientific objects, where the researcher is the key instrument. The method used in this research is to use literature review which is objective, systematic, analytical and descriptive.

## RESULTS AND DISCUSSION

### 4IR Era Leadership

Conclusion from the answers of Paolo Gallo and Vlatka Hlupic (2019) regarding the question "do we need a new type of leadership for 4IR?" Are as follows:

"4IRs have a detrimental effect on leadership: old models, toxic leadership and organizations based on fear and control don't work. A new model is needed, one in which leadership has not only a working radar to understand what is happening throughout the company, but also a moral compass to point the ship in the right direction, guided by ethical choice and responsibility. Not just change, but true change towards humane leadership, where trust and respect permeate the organization."

The question of whether there is a need for a new type of leadership in 4IR also sparked Otto Scharmer, Joseph Jaworski and Peter Senge to produce Theory U. This theory was triggered by their thoughts on the need to transform from the individual to the organizational level. They understand that the existing approaches/methods do not completely answer the changes required by highly complex developing environments such as 4IR. Theory U provides answers for individuals, organizations and social systems to overcome challenges that were previously difficult to overcome. Theory U can be used to drive change and drive innovation.

In the world of education, which must always follow the development of science and technology, of course this is a must for leaders in the world of education to be able to make changes and always innovate. The tendency of leaders when facing a problem is to want to solve it quickly. This urge is a common habit present in almost every individual. However, when a leader uses the same mindset, the resulting solutions tend to be temporary. Solving the problem will not be complete and will happen again. In other words, the solution that is often thought of only relieves the symptoms or symptoms of the problem. But the roots themselves escape settlement. Theory U invites us to reform/transform ourselves as individuals or as leaders in organizations. Changes that have a big impact and innovation are the results that will be obtained when we answer the challenges of adaptive problems with the U theory approach. We will use the term U process because in practice U theory is a process or a collection of activity movements. There are three core movements in the U process, namely *Observe, Retreat-Reflect and Act in an instant*.

The essence of the first movement, *observe*, is the process of observing, hearing and feeling by 'entering' into the actors / 'actors' in the ecosystem. This process requires an open mind to hear, feel and see from what point of view what happened on the part of the perpetrators. The *observe process* will only occur optimally when the leader stands on the balcony and is able to see from a different perspective what is happening (the leader is at *consciousness level 4* and above). The ability to '*observe*' is one of the main keys to the success of the transformation process. If we enter the world of education, this '*observe*' activity should have been carried out by university leaders. Higher education leaders must be able to open their minds to be able to hear, feel and see from the perspective of employees, educators, lecturers and students. The *observing activity* carried out by the leader will be optimal when the leader can stand above and then see all different perspectives (perspectives) about what is happening, so that this activity becomes the main key in the transformation in higher education.

The next process is *retreat* and *reflect* is the release and self-cleansing from blockages that limit thoughts, *limiting beliefs* and obstacles that come from within. *Reflect* is a process that connects individuals with what has been hidden in their humanism and spiritual layers. This connection is at the *bottom* or the most basic niche of the U process. When we realize what is the purpose of life (life mission), what is calling ourselves ( *what life is calling* ), then all the knowledge and enlightenment that are in our layer of consciousness will appear to the surface . In summary, *life purpose* consists of three components, namely *Knowing* , *Doing* and *Being* . In *knowing* , a leader understands essentially what exactly is his job. *Doing* is the answer to the question of what motivates and encourages a person. How does he want to devote his time? Where does the attention and energy go? *Being* is the answer to the uniqueness that exists in a person. What are his strengths? what talents does he have? What does he believe to be his true self?

From the core of this second movement, it continues to what is called *Acting in an instant* , namely the process of taking spontaneous action in trying and perfecting new approaches to make changes. This action is a breakthrough based on a new mindset of individuals and leaders. What was once thought impossible is now a new possibility. Underlying this new possibility is the courage to get out of the *comfort zone* . This action also comes from shifting the focus of our consciousness by starting to 'dare' to question what has been our assumption so far that is out of sync to answer the challenges we face now and in the future. Real action is spontaneously carried out *incrementally* or step by step. Criticism and *feedback* channels are created to improve further actions. The *Acting in an instant process* cannot be carried out without the preliminary *observe* and *retreat* .

As environmental complexity increases, leaders in the world of education who facilitate change need to adjust their focus from WHAT (results), and HOW (methods used), towards WHO (internal conditions of the actors). In other words , fully understanding the 'interior essence' of all parties involved in the dynamics of change, becomes vital for a leader who wants to navigate change successfully. Without changes in the interior, changes in the exterior environment will be difficult to achieve. Interior conditions or often also referred to as self-*iceberg* are layers of *thinking-feeling*, *beliefs*, *values*, *identity* and *needs* of a person.

The U process invites us to develop ourselves in harmony with the most potential future possibilities and invites us to operate from a new awareness platform. The U process also helps us recognize our *blindspots* . The definition of a *blind spot* is what we do not see or feel as our own limitations, shortcomings or mistakes (but others can see and feel it ). *Blindspots* control how a leader has intentions *and* directs *his* attention. The most important thing from a leader is not only what results are achieved and what is done. But what is in the " *interior condition* " or conditions within a leader. Because this is the place or source where all the attitudes and actions of these leaders come from. The same situation faced by two individual leaders can produce very different thoughts and responses. This difference in response is influenced by what is happening within the leader.

The U process also helps us to enter the 'slowing down' and 'silence' spaces. This space is a place for leaders to 'listen' to the operations of each actor in their environment. This includes opening up his self-awareness to being 'on the balcony' and being able to 'observe' himself while he is 'in action'. This condition is awareness that is above consciousness.

### **Analysis Regarding Educational Leadership in the Industrial Revolution Era 4.0**

In implementing Theory U, leaders in the world of education who have a transformational leadership spirit prefer to develop collaborative ways of working rather than hierarchical ways of working, through individual learning and organizational learning. Collaborative work will obtain synergistic results, namely results that are greater than the sum of individual work results. Whereas the hierarchical way of working sometimes has to go through quite a long and time-consuming process, and sometimes it is only to fulfill formal interests and pays little attention to substance and rational accountability.

Higher education leaders who have a transformational leadership spirit in the world of education can build high commitment in all lecturers, teaching staff and employees to encourage sensitivity to the development and development of tertiary institutions, develop a shared vision, distribute authority and build a tertiary organizational culture .

Apart from that, to answer the same question about whether a new type of leadership is needed in the 4IR era? Therefore, indeed in the era of the industrial revolution 4.0, it certainly requires a leader who can create a change for the better for the future. Good leadership can be the main capital in making a change in this industrial revolution 4.0 era. In leadership theory, there are many leadership models that can be applied. One of the models used is the transformational leadership model, where this model emphasizes the role of the leader in making fundamental changes in an organization he leads so that bureaucratic performance in the organization becomes more effective and efficient. efficient.

Transformational leadership is a process that changes and transforms individuals, related to values, ethics, standards, and long-term goals. According to Bass, it is said that the definition of transformational leadership is as a leader who has the power to influence subordinates in certain ways . With the application of transformational leadership, subordinates will feel trusted, valued, loyal, respect their leaders.

With regard to transformational leadership, Bass also says the following: “ *Transformational leaders transform the personal values of followers to support the vision and goals of the organization by fostering an environment where relationships can be formed and by establishing a climate of trust in which visions can be shared* ”. Furthermore, operationally Bass interprets transformational leadership as “ *Leadership and performance beyond expectations* ”.

So, transformational leadership, the term transformational stems from the word "to transform", which means transforming or changing something into another, different form. A transformational leader must be able to optimally transform organizational resources in order to achieve meaningful goals in accordance with predetermined targets. A transformational leader must also be able to create innovations and changes according to the times.

According to Bass, the dimensions of Transformational leadership are:

1. Idealized Influenced, behavior that generates respect and trust from the people they lead.

In this case, leaders who have charisma are made role models, idols and role models by their subordinates. In addition, leaders must also have vision, ability, expertise and actions that prioritize the interests of the organization and the interests of others rather than personal interests. In the world of education in the era of the industrial revolution 4.0, leaders who have charisma can use or exploit it for better changes. Leaders who have charisma will be respected by people and from this they can also easily influence and direct subordinates to act according to what the leader wants because they are used as role models by their subordinates. On the other hand, being a leader in the world of education in the era of revolution 4.0 must also be good at taking advantage of opportunities. Leaders must be good

at influencing their subordinates through direct communication by emphasizing the importance of values and other things that are needed and their relation to the times.

In the world of education in the era of the industrial revolution 4.0, leaders must understand the existing conditions. Before creating an innovation in an educational setting, leaders must also understand the conditions below first, see the needs from below, such as by involving other stakeholders in the educational setting in preparing the vision, mission, goals, educational strategic plans, and work programs planned for education system. In addition to the needs from below, it is also adapted to the current developments, namely being able to take advantage of technology in an educational setting. In addition, leaders must always prioritize quality in a planned, systematic and sustainable manner, develop personal characters that are commendable, honest, trustworthy and have high integrity, and are able to solve problems with a polite, gentle and wise approach. In addition, it has paternalistic traits, namely firm, wise in making decisions and maternal characteristics (maternalistic), namely gentle, willing to sacrifice, peaceful, a place to pour out one's feelings so that one can keep up with the times which can face existing problems with a cool head and heart. serene.

2. Inspirational Motivation, always providing challenges and meaning for the work of the people they lead. Inspirational Motivation is the behavior of leaders who are able to communicate high expectations, convey a shared vision in an attractive way by using symbols to focus the efforts of subordinates and inspire subordinates to achieve goals that result in important progress for the organization. Leaders are required to be able to help increase follower passion and motivation to fulfill goals (Kendra, 2013). In addition, leaders must provide flexibility to participate optimally in terms of ideas, provide a vision of conditions for the future in accordance with the times that can provide clear and transparent expectations. Being a leader in the world of education in the era of the industrial revolution 4.0 must also have clear goals (vision) and be achieved through missions. It must be clear what educational program will be achieved, the learning system that will be used and must make a SWOT analysis of the missions or programs to be achieved. After the leader has conceptualized these things, he must also communicate to his subordinates about the programs and things that will be achieved and relate them to the times. More emphasis is also placed on developing a conducive, informal, relaxed work atmosphere, supported by strong intrinsic motivation as a basis for increasing work productivity, mutual trust, tolerance, enthusiasm for progress, and awareness to share in creativity and new ideas as well as a strong commitment to always ahead. In addition, caring for and developing the creative values of the subordinates. In the world of education in the era of the industrial revolution 4.0, leaders must also create a collaboration in the world of education, namely involving other stakeholders to participate in developing a better education system. Pay more attention to the competencies of students in order to create golden generations.
3. Intellectual Simulation, always exploring new ideas and creative solutions from the people they lead.

Intellectual Stimulation is a leader's behavior that is able to increase the intelligence of subordinates to increase their creativity and innovation, increase rationality, and solve problems carefully. In the world of education in the era of the industrial revolution 4.0, besides the leader being able to determine the direction of the organization's goals, the leader must also pay attention to the condition of his subordinates so that his subordinates do not

feel burdened with the innovations that have emerged, but how leaders can provide opportunities for subordinates to provide innovation. The goal is for leaders and subordinates to be aligned in achieving organizational goals. Leaders must also encourage followers to explore new ways of doing things and new opportunities to learn. Through this intellectual stimulation, leaders must be able to stimulate the creativity of subordinates and encourage them to find new approaches to old problems. In addition, leaders must also find their own way of creating innovation or new ways. For example, in the world of education in the era of the industrial revolution 4.0, leaders are required to use Artificial Intelligence (AI) systems in the education system. It can also be from learning methods and learning curricula that must be addressed. Besides that, it can create educational policies that are not burdensome to other parties but there is harmony and the needs of all

4. Individualized consideration, giving special attention to the needs of achievement and the needs of the people they lead.

Individualized Consideration is the behavior of leaders who give personal attention, treat each subordinate individually as an individual with different needs, abilities and aspirations, and train and provide advice. Individualized consideration of transformational leadership treats each subordinate as an individual and accompanies them, monitors and develops opportunities. In order to foster supportive relationships, transformational leaders must be able to keep the lines of communication open so that followers feel free to share ideas and so that the leader can first-hand know each follower's unique contribution. Leaders in the world of education in the era of the industrial revolution 4.0 must have characteristics that are responsive to the times and changes in the educational system. If the education system used is no longer effective, then it must create or create an educational system that understands the needs of students and others. Apart from this, leaders are needed who are responsive and concerned about the needs of their followers, oriented towards the development of professionalism both from teaching staff and from others related to education.

## CONCLUSIONS

Leadership in a tertiary institution has a very important role in dealing with all the changes and developments of the current era. This form of transformational leadership can be used as a basis for leaders in carrying out their leadership so that they can transform or transform something into another and different form. Transformational leadership is required to optimally transform all organizational resources to achieve meaningful goals in accordance with predetermined targets. In addition, Higher Education Leadership must be able to create innovations and changes that are of course related to the new curriculum that can adapt to all the current developments.

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