The Improvement of E-administration in Indonesia : An Analysis Based on U Theory and Quintuple Helix

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Abstract—E-administration in Indonesia has an important role in public service deliveries. It is more efficient, effective, transparent and accountable by using e-administration. However, lack of infrastructure, leaders commitment in an integrated way in all areas in Indonesia, human resource e-literacy and bureaucratic and working culture are still occurred in Indonesia.
This research uses qualitative method and descriptive analysis approach. Data and information are from literature review and interview some informans. By using theory u that consists of sensing, presencing, and co creating moreover by using Quintuple Helix then e-administration implementation in Indonesia can be improved.
Key words: e-administration, Indonesia, theory u, Quintuple Helix

I. INTRODUCTION

Electronic-administration (e-administration) is the use of Information Technology (IT) in administrating public service deliveries, including in Indonesia. E-administration in Indonesia some of them are already in transaction stage, or in another stages such as communication and information stages. One good example of e-administration that already in transaction stage is e-administration at taxation department of Indonesia. We already can pay taxes through www.pajak.go.id by ATM (Automatic Teller Machine), or by using our credit cards or debet cards or even mobile banking (using the internet).

The UN defines e-government or e-administration (e-government and e-administration will use in this paper as the same term) asœutilizing the Internet and the world wide web for delivering government information and services to citizens. According to a report in 2000 for the National Electronic Commerce Coordinating Council, government agencies can save up to 70 percent by moving services online, thus becoming more economically efficient. E-administration implementation benefit is improving efficiency, effectiveness, transparet and accountability public service deliveries. For example downloading taxation form from www.pajak.go.id, or buying train ticket from app store kai access in our mobile phone, paying electricity and water system from nearest supermarkets or through our m-banking. Moreover, the social benefits of adopting e-government systems include improved public services, increased citizen empowerment as a result of better access to information and increased accountability and transparency, which could then mitigate corruption, as cited by the World Bank.

The development of e-administration could also be viewed as a change in the way the government interacts with communities, businesses and its citizens.Everything can be easier, more efficent, effective, transparent and accountable by using the internet. How much money an agency at one local government get from public service deliveries admission fees in one day or every day can be seen by everyone through e-administration. Therefore, transparency occurs or it can minimize corruption (As Indonesia has still problem in this area).

In the 2018 United Nations E-Government Survey, Indonesia ranked 107th out of 193 UN member states, well behind Singapore (seventh), Malaysia (48th), Brunei Darussalam (59th), Thailand (73rd) and the Philippines (75th)(https://www.thejakartapost.com/academia/2018/09/17/indonesia-must-improve-its-e-government.html). One of the cause is Indonesia does not yet have a complete database with the total number of local governments that have implemented online services. Local governments work like silos even use internet especially in handling data and information for serving citizen. For example, when people need to renew their ID card they have their own data base, whilst the same people need to have their government insurance (BPJS), they also have their own data base. There is still not an integrated system in e-administration or still lack of data base integrated system.

Last year's UN survey on e-government/e-administrtion found developing countries could be divided into two groups. The first comprises those countries advancing e-government services despite relatively low national income. These include Bolivia, Ghana, Honduras, India, the Philippines, Vietnam and Uzbekistan.The second group is those countries that have not reached the level of e-government/e-administrtion development that other countries in the same income group have. Indonesia falls into this group, together with others such as Cape Verde, Guatemala, Guyana, Micronesia, etc. Thus, there is a huge potential for the development of e-government/e-administration implementation in Indonesia.

In Indonesia, the lack of resources and skills is not only ICT-related or e-literacy matter, but also aspects such as basic infrastructure, leader's commitment in adopting e-administration, bureaucratic work culture as challenges to effective e-administration implementation[1].

For example at DKI Jakarta local government service already conducted e-musrenbang (strategic planning through internet from the root or citizens input towards RT, RW, Kelurahan and Kecamatan or district). But other local

government such as Kota Cimahi at West Java has not use e-musrenbang in conducting their strategic planning process.

Although many local businesses have computerized their operations, the present ICT infrastructure in Indonesia serves less than 5 percent of the population, thus more could be done to exploit the capabilities of ICT for pro-poor development [2]. UN states the reach of ICT in Indonesia is also limited to a very small privileged group; there are only 8.7 Internet users per 100 people and 8.3 people per 100 have personal computers. However, a substantial number of people, 69.2 per 100, have cell phones. Accessing the Internet from their phones would enable these individuals to search for government information online and participate in public policy plans, programs and public decision-making processes[2]. People in Java Island already uses PT. KAI (Indonesian train company-Kereta Api Indonesia) app at their mobile phone – which is KAI ACCESS to get their train ticket. People in Indonesia already get use to fill in taxes form online and pay it through mbanking or ATM (Automatic Teller Machine) by accessing DJPonline app at their mobile phone or by accessing www.pajak.go.id.

The present ICT infrastructure in Indonesia serves less than 5 percent of the population. Moreover, some local government websites have serious problems in their User Experience Design (UED). This concerns the supply and demand of data - what data is needed and what information is available on a website[2].

Those areas relates on e-administration stages, As we know that e-administration is the use of internet to help government in improving public service deliveries. There are stages in e-administration, namely:

1. Information stage
2. Communication stage
3. Transaction stage
4. Metadata stage

II.   DISCUSSION

- Obstacles in Indonesian E-administration Stages

There is no contact information on most government websites [3]–one example of obstacle in information stage . Users seeking further information may thus need to start from scratch by searching for and contacting the relevant officer by email or phone. There is also no FAQ (Frequently Asking Question). One example of obstacle in information stage. There is also no standard response time for which users might expect the queries to be attended to or email be answered – meaning one obstacle in communication stage.

The other problem concerns incomplete databases; the availability of long-term data and the commitment to make regular updates on a database are often ignored. As there is no clear-cut information on why some data was not available, besides the more current releases, some might speculate that the incompleteness of the data might be presented on purpose; thus the only way to obtain the missing public data would be to purchase it from relevant government agencies [3].

Human resources also play a crucial role. As they are the controller and user of the internet system or e-administration itself. There will be obstacle when e-literacy of the user or their human resources are limited. Moreover, some activities such as web design and development are procured based on government tenders, and thus outsourced. These contractors work for a temporary period depending on when the budget for the next year is released, thus limiting the sustainability of data, information and software or system presentation. Internally, there are limited skilled human resources to manage it [3].

Despite those limitations, there are many Indonesian e-administration that already well managed in information, communication and transaction stages. There has been some success on the e-administration at local governments, Indonesian department and ministries, agencies and Universities. For instance, Lapor (report) is an anticorruption tool that allows citizens to report on the malpractices of Indonesia's government, which can be done through a website, mobile app or SMS. The team behind Lapor is the Presidential Working Unit for the Supervision and Management of Development (UKP4), initiated under the previous administration [3].

Another good example of e-administration in transaction stage is e-administration at Surabaya city [4] that already can renew Surabaya City ID Cards for ten minutes and they can pay the fee online (through ATM or mbanking).

Hence, there is promise of some improvement in e-administration in Indonesia. Perhaps, by first addressing more critical problems such as stamping out corruption within the system, Indonesia can work its way toward a more stable and efficient e-administration system that can be used for pro-poor development [3]

- Strategic Solution in Improving E-Administration in Indonesia: An Analysis Using Theory U and Quintuple Helix

THEORY U AND E-ADMINISTRATION IN INDONESIA
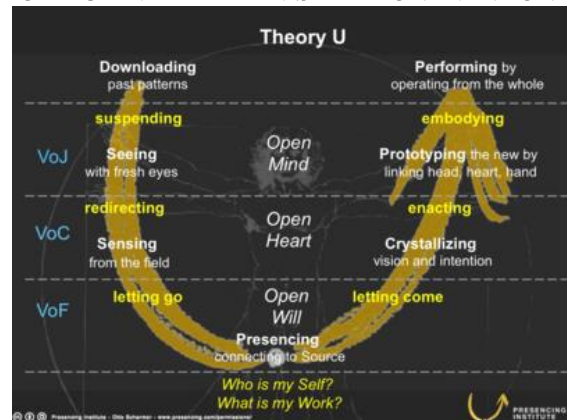
By using Theory U stages namely open mind to solve prejudices obstacles in e-administration –such as resistence

bureaucratic working culture. Secondly by using open heart to solve rage and hate towards the use of internet or Information and Technology and blaming each other for better public services. Thirdly, by using open will to solve problem in lack of leadership commitment in using the internet or e-administration as the improvement of public service deliveries, the fear of lack of budgeting problem or even lack of e-literacy in their human resources.

Scheme for theory U is below that explain how important the stage and aspects in Theory U namely open mind, open heart and open will in improving e-administration in Indonesia:
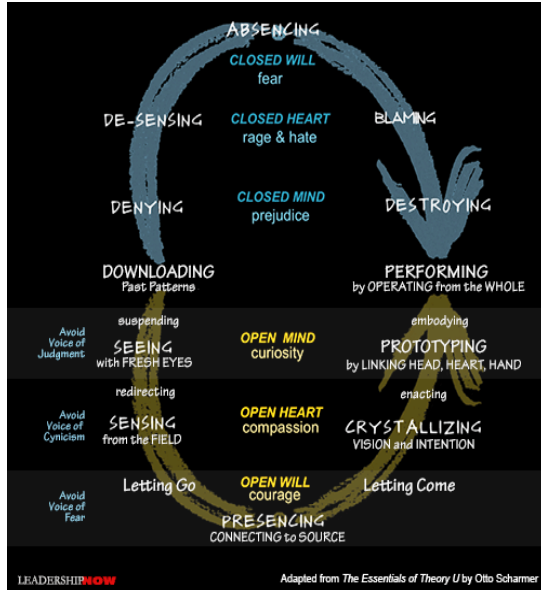
Moreover, there are stages in theory U and describe it below:
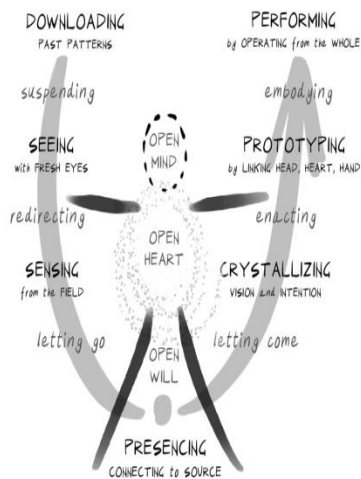
First stage is downloading. Meaning we do and think with usual activities or past activities or pattern. After that we suspend our activity to see with fresh eyes using open mind to conquer prejudice. This is important due to many bureaucrat and citizens resistence with old pattern because prejudice that e-administration might be too expensive, lack of expert to handling complain or even more inefficient in public service deliveries due to virus or hacking problems.

Further stage is sensing using open heart. This stage is to conquer rage and hate with compassion from all actors in e-administration' planning, implementation, monitoring and evaluation.

After that is presencing. In this stage is all actors in e-administration should have good capacity in literacy data, human and technology. Meaning presencing is open will to conquer fearness of using e-administration. This condition can cause by many aspects, for example people fear that robot or Artificial Inteligence (AI) will change human's role in every aspects. For example in an office then its customer service facility change human in that facility into AI with feeling, smile and hospitality like human. But actually, in reality human control AI through AI software.

The next stages namely crystalising, prototyping and performing are stage creating better e-administration in creativity, collaboration and more transormation senses. As cristalysing is vision and intention in e-administration's advantages and outcomes. And prototyping is linking head, heart and hand in improving e-administration in implementation stage. Meaning by linking those three aspects : head, heart and hand then innovation and transformation of using e-administration can occurs. For example connecting BPJS or health insurance at the hospital and birth certificate from Dinas kependudukan (People Agency) and ID Card, Family Card, Death Card from Kelurahan and Kecamatan (district) using e-kependudukan such as at DKI Jakarta e-administration.

These three stages, cristalysing, prototyping and performing are something in the future for better e-administration implementation. The position of thise three stages describe in this picture:
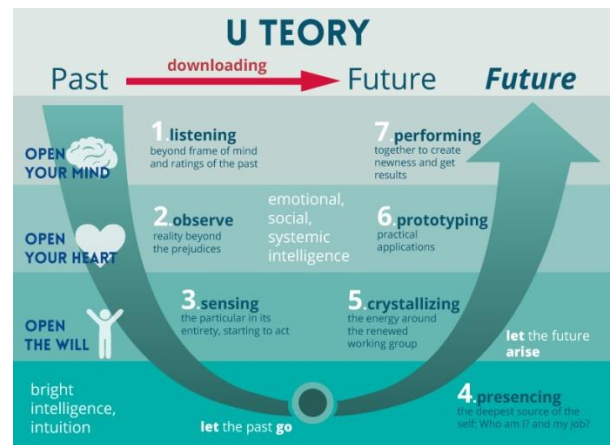
From that picture can be seen that U theory consist of :

1. listening using open mind to conquer prejudice of e-administration concept,
2. observe using open heart to conquer rage and hate of e-administration concept,
3. sensing using open will to conquer fear of using the internet or technology in e-administration
4. starting this stage which is presencing people and bureaucrats let the past go by questioning: who am I ? –as bureaucrats an citizens, etc and what is my job? Then in this stage people or bureaucrats or citizens will literate in data, human and technology literacy. They enrich themself with the essence of e-administration itself, its role and advantages due to people' bright, intelligence and intuition.
5. Cristallysing, in this stage the future of e-administration will arise by using open will. People has willingnes to adopt e-administration. This stage is beginning stage of one obstacle in Indonesian e-administration which is lack of leader's commitment in adopting e-administration.

6. Prototyping is practical application by using open heart. This stage in the future will successful by using open heart namely emotional, social, systemic intelligence. In this stage bureaucrats and people should see e-administration problem and its solutions systemically by using child mind and helicopter view. Therefore, problems in e-administration such as infrastructure, budgeting in e-administration, lack of human resource e-literacy, lack of bureaucratic work culture using e-administration can have solutions systemically using systemic intelligence, child mind and helicopter view. For example using public private partnerships or government to government collaboration in solving problem in budgeting, infrastructure and e-literacy through training and scholarships.
7. Performing with open mind by together to create newness and results. For example collaboration in paying taxes and electricity using Go Pay, Alfamart and Indomart supermarkets, OVO (Government, media, business).

- Qualities of Listening at theory U

Listening is very important activity. By conducting a good listening then data,information, innovation and creativity can we gain. There are relation of qualities of listening at our daily activity, including at stages of theory U. At downloading stage is listening 1 or listening from habits. Listening 2 at open mind stage is listening to noticing differences. Diferrences is good. Differences is input. Differences is advantage. We can learn from differences or we can adopt something from differences then we can have disconfirming new data in the future.

Listening 3 is empathic listening which is we see e-administration from another person eyes. For example the benefit of e-administration in Singapore that can make better public service deliveries. Then, generative listening as

listening 4. This listening is connecting to an emmerging future whole; shift in identity and self. For example questioning and have answers of question who am I ? and what is my job? Then we gain the answers from presencing or data, technology and human resource literacies. Lesson learn from other people' successfull story, benefit of artificial intelligence, advantage of 4D printer in China – whilst all of that using technology information.

Herewith, those four kinds of listening in picture below:

- Quintuple Helix Analysis

In this part, the writer will analyse why e-administration in Indonesia will better improve by using Theory U and Quintuple Helix. Quintuple Helix is presented by Johann Packendorff (2014). The philosophy of this theory is there are four actors that integrated to each other in implementing a programme or activity in order gaining more effective benefit. Those actors are: government (central and local), business, academics and media. This theory is completing triole helix and quadruple helix. David Campbell (2012) states about Quintuple Hellix by using these diagrams:
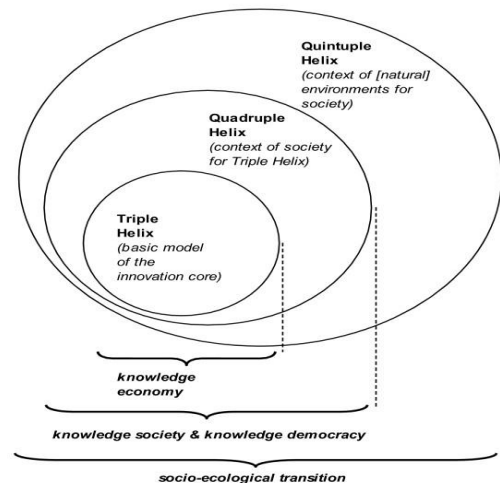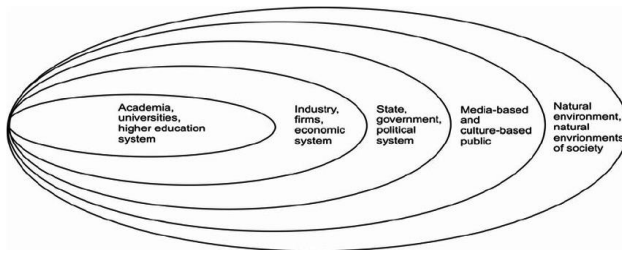
According to quintuple helix diagrams above, to have sustainable development where innovation can be cained its maximum benefits then it should has five actors to work together or collaborate together, namely state government, business, media, academics and natural environment society. As environment has significant important aspect then.

Carayannis [5] states as follows:

(1) The education system: The education system, defines itself in reference to'academia', 'universities', 'higher education systems', and schools. In this quintuple helix consists of students, lecturers, teachers, scientists/researchers, academic entrepreneurs that diffuse and research of knowledge.

(2) The economic system: The economic system, consists of 'industry/industries','firms', services and banks. This helix concentrates and focuses the 'economic capital' (for example: entrepreneurship, machines, products, technology, money in state.

(3) The natural environment: The natural environment is assets for a sustainable development and provides people with a 'natural capital' (for example: resources, plants, variety of animals, water, air etc).

(4) The media-based and culture-based public: The fourth subsystem, media-based and culture-based public, integrates and combines two forms of'capital'. This helix has, through the culture-based public (for example: tradition, values, etc.), a 'social capital'. On the other hand, the helix of media-based public (for example: television, internet, newspapers, etc.) contains also 'capital of information' – currently dominated by

Information Technology (IT) (for example: news, communication, social networks such as instagram, facebook, tweeter etc).

(5) The state government: The political system, as a fifth subsystem, is also of crucial importance, because it formulates the 'will', where to the state (nation-state) is heading toward in the present and future, thereby also defining, organizing as well as administering the general conditions of the state (nation-state). Therefore, this helix has a 'political and legal capital' (for example: ideas, laws, plans, politicians, etc.).

(6) In summary, the Quintuple Helix Model can be described in the following way : It is a theoretical and practical model for the exchange of the resource of knowledge and collaborate among actors, based on five actors, in order to generate and promote a sustainable development of society (Carayannis and Campbell, 2010, pp. 60–62).

(7) In this Quintuple Helix, the resource of knowledge moves through a circulation of knowledge from subsystemto-subsystem. This circulation of knowledge from subsystem-to-subsystem implies that knowledge has qualities of an input and output of and for subsystems within a state (nation-state) or also between states. If an input of knowledge is contributed into one of the five subsystems, then a knowledge creation takes place. This knowledge creation aligns with an exchange of basic knowledge and produces new inventions or knowledge as output. The output of knowledge creation of subsystems has therefore two routes (ways): (1) the first route leads to an output for the production of innovations for more sustainability in a state (nation-state); (2) the second route leads to an output on new know-how back into the circulation of knowledge. Through the circulation of knowledge, the new output of newly created know-how of a subsystem changes into input of knowledge for a different subsystem of the Quintuple Helix. About the input and output of knowledge, it can be said consequently:"On the one hand, knowledge serves as an input or resource for advanced societies and economies, which increasingly depend on knowledge. On the other hand, knowledge production (knowledge creation) also generates knowledge as an output, which then is being fed back (recycled) as a knowledge input" (Carayannis and Campbell 2006, p. 4). As a basic system consept. Therefore, in a Quintuple Helix means the five helixes exchange of knowledge in a state (nation-state), in order to promote knowledge-production-based sustainable development and collaboration in an integrated way.

III. CONCLUSIONS

E-administration in Indonesia has an important role in improving public service deliveries. Therefore, there are some strategic actions need to be improve in IT infrastructures, human resource's eliteracy, bureaucratic work culture, leaders commitments sectors. And U theory with stages with listening, observe, sensing, presencing, crystallising, prototyping,

performing and Quintuplex Helix can improve e-administration in Indonesia. Moreover, demographic bonus in Indonesia can be an opportunity to improve e-administration in the Indonesia 4.0 era. Quintuple helix theory should become critical success factor on improving e-administration. Especially in improving coordination among all actors in e-administration implementation in Indonesia. Those are media, government, business, academics and environmental concerned society.

IV. SUGGESTIONS

1. There is an urgent effort to integrate e-administration or e-government in all levels in Indonesia (local governments, all departments and agencies) even under decentralisation era
2. Indonesian human resources are still need free wifi spot in strategic areas all around islands in Indonesia
3. Training and on the job training are still very needed in Improving Indonesian human resources' e-literacy
4. Collaborative actions among public, private sectors, media, media, environmental society and academics are

strategically need to be improved by providing application at mobile phone for example in a program.

ACKNOWLEDGMENT

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