Survey & Case Study: Indonesian Needs Changing
(New Era of Educational Research in the Mid of Pandemic)

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Abstract

We in a fact of Indonesia educator have been struggling in major of educational human resources, which come-up of the research methodology as a burden science aspect. In addition, the primidone of research method in education system was classroom action research and/or action research. This means, educator tend to conduct an action research for the safe zone rather than scaffold to another marry research method, outside of main research method. In other word, we can said that they want to play in safe level or action research for them, it is a concreate method that guaranteed-facilitated teaching and learning to achieve the best improvement. However, in fact, because of their research behaviour it will cause a hinder point such as in the pandemic, which someone unable or lack of research methodology paradigms, he or she will stuck or in crucial situation can be lost of knowledge development. Directly, student's will lost their improvement, and whole system of education. In further, by the purpose of this paper to reconstructed-and promoted research capacity of Indonesia educator through enlightens the knowledge of survey and case study uses, researcher concluded that, both survey and case study, were accordance to educational research foundation, which postulated to develop in sustainable capacity of educational human resources also administration. So that like in pandemic outbreak, besides conducting an action research, educators were able to synthesize-analyse-evaluate-develop knowledge based also teaching and learning, to meet the goal of national education.

Keyword: Survey and Case Study, Indonesian Educators, Needs Changing and New Era, Educational Research, Pandemic

Introduction

As reported in (Narmaditya et al., 2017), for student achievement, it is measured through high-stakes test scores, radiation and dropout rates from high school, and the proportion of students attending post-secondary institutions. Moreover, many of variables that can influence students' achievement success, but the most important are classroom teaching and learning disabilities. They also emphasized that the learner's activity needs to be improved by taking an active role in completing the learning task by working in small groups and explaining the ideas to others. The teaching and learning process not only increases student knowledge, but also develops students' creativity, critical thinking skills, and personalities that embedded in personality taking responsibility, social skills, tolerance, productivity and coping skills.

In gradual previous finding of (Sulaiman Syah, 2016)) stated that without refreshing or updating teachers' knowledge and skills, teachers in probability unable to attract students into learning engagement to provide students with appropriate hard and soft skills for competitive living in modern society. Therefore, teachers' knowledge and skills are necessary to be refreshed and updated since science and technology are growing so fast and the high

competitiveness of living in modern society. However, in other side, among the various opportunities available to teachers to engage in learning about their teaching, action research existed increasingly promoted for teachers in Indonesia as well as elsewhere in Asia.

Additionally while the Indonesian government and international education development organizations have collaborated on massive in-service teacher development initiatives aimed at improving teachers' skills and helping them obtain a bachelor's degree. These initiatives included efforts to train teachers to use active learning strategies in their classrooms, use action research in the classroom as a mechanism to critically evaluate the success of their classroom efforts, and, when necessary, take steps to modify their practices in order to improve student achievement (Sulaiman Syah, 2016b).

Meanwhile to (Glanz, 2016) from this research findings, he proposed that for the practitioner the lesson of conducting action research can be drawing into; "action research naturally emerges from the teachers' daily work, as teachers curiously ask questions about the effectiveness of their practice. Although natural and common sense strategies, action requires special professional preparation to apply properly. Teachers should read some. Teachers should spend sufficient time (six months to a year) familiarizing themselves with action research before problems arise in implementing it in their classrooms". The lessons above were developing based on the nature of school reform, such as; schools that are encouraged by their boards to improve are more likely to remain steadfast even as they encounter challenges and setbacks along the way. Instructional improvement initiatives should be supporting or nested within a larger strategic planning effort. Success is a multi-layered, gradual process not always assured, but improvements even though incremental do occur.

In short (Glanz, 2016b) provoke that "changing and building a new culture of learning and improvement certainly takes time and continuous commitment. This school is still in process of developing new ways of learning and improving. The results of the action research initiative in this study are tenuous because transformational change does not occur quickly. Still, it is also clear that action research is no panacea to transform practice in the short run".

Research capacity of educator is plausible needed to analyse, develop, and transfer the knowledge in sustainable development of human being. Otherwise, to promote that issue, researcher accommodated through the perspective of survey and case study, which interchangeable to the common grounded research approach which action research. That has been identically familiar, as an educator or company among education environment.

In accordance to the outbreak situation caused by pandemic, especially educator needs to accelerate their research competence either in normal or emergency situation like this recent time. Despite the facts' that Indonesia is archipelago country and development nation. By that fact, numerous of educator from basic to higher education remains hinder to conduct the research process, either in normal and chaos situation. The factor of hinder was various perspectives, and one of the hinder factors has been choosing purposeful method that meet to the research issue also circumstances. However, one of unique issue that ongoing conducting has an action research, which educator fundamental and familiar research method for decades. In short, this paper aimed to reconstruct and establish research base framework of educator to sustainable development in the urgent situation like pandemic.

Foundational of Education Research

Since research as the systematic action to the all aspect of human being affected. Research for scientific area was becoming compulsory to all of us. Nevertheless, the comprehensive research knowledge must determine from the narrow to broad area. In short, the kind of research method and methodology is the essential point to distinguish and so we will able to conduct in further action.

According to (Campbell, 2016) method is "the construction of what the researchers actively did in their study". Simply we can interpret as a tool and/or technique. In addition, the important is by the method it provide the picture of research process. Additionally, the example of method such as interviews, questionnaires, focuses groups and observations. While methodology is talk about how we implement a research. A way to discover and gain the knowledge also provided the ground to the research process. So forth, the example of methodology is qualitative and quantitative methodology by the development of scientific, it transform to the further methodology such as mix-method.

In spite of qualitative and quantitative (Daniel, 2016) said "over the years, debate and arguments have been going on with regard to the appropriateness of qualitative or quantitative research approaches in conducting social research". Both research approaches fall on a research continuum.
 a) While qualitative data instruments such as observation, open-ended questions, in-depth interview, and field notes used to collect data from participants in their natural settings. The emergent of theory from data allows the researcher to construct and reconstruct theories where necessary, based on the data he generates, instead of testing data generated elsewhere by other researchers. Despite the usefulness of a qualitative research approach for conducting research in problem-solving instruction in secondary school science education curriculum, there are still some criticisms about the efficacy of the approach;
 b) Quantitative: the first advantage of this research approach is the use of statistical data as a tool to save time and resources. He argues that a quantitative research approach is research that focuses on numbers and numbers in data collection and analysis. The data calculated and conducted by a computer using a statistical package for social sciences that saves a lot of energy and resources. The study of problem-solving education in secondary school science education within a given district or region can reflect the wider community in terms of samples, contents, and patterns. However, redundancy is another benefit that derived from using this research approach. Moreover, this research approach provides scope for the use of control and study groups.

In line (Kivunja & Kuyini, 2017) emphasized that therefore, in locating your research proposal in a particular research paradigm, the understanding is that your research will uphold, and be guided by the assumptions, beliefs, norms and values of the chosen paradigm. Epistemology has its aetiology in Greek where the word episteme, means knowledge. It focuses on the nature of human knowledge and comprehension that you, as the researcher or knower, can possibly acquire; to be able to extend, broaden and deepen understanding in your field of research. When emphasis on reason as the surest path to knowing the truth, then this approach called rationalist epistemology or logical knowledge. On the other hand, if you put emphasis on the understanding that knowledge is the best derived from sense experiences, and demonstrable, objective facts, then your approach leans towards empirical epistemology.

Epistemology is important because, it helps you to establish the faith you put in your data. It affects how you will go about uncovering knowledge in the social context that you will investigate.

Moreover, (Scales, 2013) in simple understanding of research foundation explained that Ontology and epistemology are, in essence, simple to understand. One of my favourite philosophy books, "Bluff your way in Philosophy" (out of print) refers to *Willardvan Orman* Quine who "once observed that all the important questions of philosophy were regularly asked. By four-year-olds, there is "What is it?" (Ontology); then "How do you know that?" (Epistemology) 3; so "Why should I?" [That definitely interpreted as a question of ethics]. Either in science thought epistemology is about theories of knowledge and the process to synthesise the knowledge of things. 'table', 'brain' and 'mind' examples below suggest, our knowledge of some things is easier to attain and more reliable than others. A key question in research is the extent to which we can have secure and reliable knowledge of something or, indeed, anything. While in ontology is the branch of philosophy, which is concerned with being and with what exists.

In depth (Scales, 2013b), said that for epistemology and ontology has developing through two concepts in each. In the side of ontology was developing to construction perspective and Objectivity. The simple example of objectivity such as [some people may argue that bad behaviour in schools is a reality and that all you have to do is count the examples of agreed definitions of bad behaviour (e.g. talking off duty; off site; shouting). You can then observe and count them and decide if the behaviour is better or worse than before]. Then constructivist is [some might argue that there is no agreed definition of what "bad behaviour" means in schools and that the perception and understanding of behaviour has changed over time. So the "difficult" child of one teacher could be the "lively and inquiring" child of another]. In short, by the example above, objectivism is an ontological position that asserts that social phenomenon and their meanings have an existence that is independent of social actors. While, constructionism is an ontological position that asserts social actors are continually accomplishing social phenomena and their meanings. In recent years, the term has also come to include the notion that researchers own accounts of the social world are constructions.

Afterward, it is absolutely in purpose when we conducting a research by thinking, reasoning, threating, analysing, assessing, and interpreting through addressing to the conclusion. By that background and the systematic sketch before, researcher needs to take a granted for making their research will develop of numerous positive changing, to their knowledge also other human being. Because of that, the value of research focus until produce in systematic pathway, it means that needed to consider and analyse deeply before take an action.

The term of value in scientific terminology was axiology. Which is describes' to the ethical issues that considered when sketching the framework of research. Evaluating and understanding concepts of right and wrong behaviour relating to the research is also priority to achieve and meet of axiology purpose. Therefore, the practical framework of axiology picture was developing in the research question (Kivunja & Kuyini, 2017b).

New Era of Educational Research

Continuously to address the issue of the research competence development to the educator, they needs to underline of: first, ability to perform activities; second, combination of knowledge, skills and personal characteristics that are related to education; third, skills and experience that determine productivity; fourth, the category of evaluation or teacher evaluation standard, and five, integral characteristic of the individual. In another critical argument, condemned that in factual several studies continuously carried out to find the significance of teacher competence for other particular variables such as student achievement, students' strategy for dealing with conflict, satisfaction with work and performance. However, after reviewing these studies, we found that there is a wide range of instruments used to measure teacher competence. Besides confirming the complex nature of teacher competence, the variation also suggests a need to develop a measure of teacher competence to assess teacher performance in both research and practice (Panggabean, 2016).

As (Ilanlou & Zand, 2011) the perspective line of educator development in systematic concept, which means related to research competency, determine by various factors such as cognitive, emotional and practical competencies. Cognitive competency here means self-cognition, learners-cognition, and cognition of teaching-learning process. Emotional competency is the competence based on interests, values and attitudes. In addition, practical competency refers to teacher's competence in relation with the students, classrooms, schools and the society. Those factors are related to the success of educational plans, which encouraging the educator to transform as the skilful scientific and professional skills. Through the highlight above, derived from bloom taxonomy foundation, it constructed teachers' competencies to emotional, cognitive and practical. Additionally, to enlighten our spirit to develop research competence, we needs to concern of the critical competency issue which must be developing, such as:
   a. Awareness modality and skill of analysing of different thinking skills and their application;
   b. Developing the knowledge on new learning and teaching methods and ability to applicate it;
   c. Capability in classroom management and specific communication skills with students;
   d. Needs to aware also analyse with communication and information technologies and the ability to employ them in teaching;
   e. Research skills;
   f. The ability to evaluate of the academic achievements.

Reinforced by (Ilanlou & Zand, 2011b) the others grounded factor such as Student oriented authoritarian, student oriented and intimacy oriented, subject oriented and intimacy oriented, subject oriented authoritarian; were relating to characteristic competencies. While awareness of psychology, teaching methods, new communication methods, social psychology, teaching psychology and communicating; were reflecting of scientific competencies. All those factors, needs to scaffold and develop by the educators in sustainable. In the tangible arrow of educator, such as development and learning psychology, awareness of the teaching- learning process, class management, teaching methods, controlling and evaluation [were concerning of general competencies]. Besides that, such as content mastery, providing the content in a proper order, organizing the content, mastery in employing training tools in practice, keeping accurate records, giving feedback to the students [were connecting to Specialized competencies].

1. Action Research

As (Teklin & Kotaman, 2013) clarified, "many research methodologies, whether quantitative or qualitative, have been positioning and beyond, applied and analysed accordingly. Consequently, any research methodology needs in epistemologically discussed to reduce its primitives, improve its applicability and define of dimensions and boundaries, also considered a rigorous methodology. For example, action research has been considering a famous contemporary method especially in education studies, due to its practical benefits for teachers, while lacking an adequate epistemological analysis according to research paradigms".

However, (Teklin & Kotaman, 2013b) "despite the aforementioned common grounds, only in action research does the researcher begin to conduct research as a practitioner and participant. Therefore, the interest of the practitioner is in the initiation of the research process. In post-positivist and interpretivist perspectives, the researcher can be an outsider who seeks to learn and understand. As stated earlier, action research is educative—its main purpose is to improve educational practice. In practical, Action research methods value devices such as the interview and observations to gather data, just as both the post-positivist and interpretivist approaches do. In addition, triangulation techniques are widely used in action research as encouraged by the post-positivist perspective to provide a wider perspective and support validity".

Meanwhile ((Thorgeirsdottir, 2015) analysed of the seven main models of professional development: training, observation, involvement in the development process, study groups, action research, individually guided activities and mentoring. Therefore, teacher is professional group that particularly synthesized their professionalism into three category of teacher's professional development: professional development programs, continuous professional development (CPD) and professional learning (PL). When we looked to professional development it is related to one-off training, involve development of techniques-ideas-and product; all action provided by the authorities. While, continuous professional development aimed to develop the breakout of the action from one of the institution; that action such as workshop-conference-involving long-term learning that mediated through variety of learning opportunities. Then, the professional learning category differs from the other two categories in that teachers themselves take responsibility for the goals, content and processes of their professional development rather than the school or other educational authorities.

2. Survey Method

As (Ponto, 2015)) argued that Survey research is defined as "the gathering of information from a sample of individuals through their answers to questions". Survey research can use quantitative research strategies, qualitative research strategies, or both. The main purpose of this type of survey research was to obtain information describing the characteristics of a large sample of individuals of interest relatively quickly. Survey research can utilize quantitative research strategies, qualitative research strategies, or both. The main purport of this type of survey research was to obtain information that relatively expeditiously describes the characteristics of a sizable voluminous sample of people of interest.

As (Irwin & Stafford, 2016) states "in how to the educator and educational stakeholder elevated their research capacity from the perspective of action research to other related research field". These guides intended to lead to the utilization of survey findings in decisions about policy and practice in schools and local or state edification agencies; however, offering guidance on how decision makers can utilize the results is not the focus. However, the resources needed to consummate some of the activities may make the series most germane to more astronomically immense school districts, state departments of edification, and other astronomically immense agencies. This first guide in the series covers survey development, the second guide in the series covers sample cull and survey administration, and the third guide in the series covers data analysis and reporting.

Table:
Three stages in the survey research process
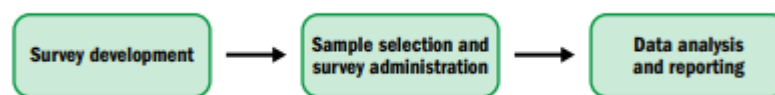
Moreover, ((Irwin & Stafford, 2016b) suggest that after identifying the desideratum for the survey implement by the stakeholders, elucidate the objective or objectives of the survey and the resulting data (for example, the objective may be to identify challenges in implementing online learning). The following suggestion such as:

a. Choice and convoke important stakeholders: first is influence the subject count the review testament destination (for exemplar maths direction former eruditeness standards). Second is distinguish stakeholders with expertness associated to the content also as those with survey evolution and analysis expertness;

b. Break a collaborative accord amongst stakeholders: appropriate stakeholders to voice their concern during the review evolution process and explicate how they see the review outcomes ratting their exercise and that of their organizations: 1. Allow copious age athwart aggregate appointments for stakeholder discussions on the focus of the review: 2. Set expectations for individual parts (such as reviewers and meeting facilitators) and stakeholders' committal to the process;

c. Distinguish subject matters of interest: Identifying topics of interest; first, as a group (or in small groups), make an initial list of all possible topics to be included in the survey tool. Second, pinpoint topics that meet in cover of using survey data;

d. Develop a table of specifications: drafted a table of specifications, also called a survey blueprint that shows each topic and subtopic to be included on the survey and group similar topics;

e. Choose the format for survey administration: with the stakeholder group, review the benefits and difficulties of administering the survey by paper and pencil, online, or phone.

3. Case Study

As the thought of (Stjelja, 2013) "the case study approach is valuable for social scientists as this approach allows researchers to examine real-life situations, develop theory, evaluate programs and develop suitable interventions. In brief, an important aim of the case study approach is to capture the complexity of a single case, and that achieved frequently by incorporating different levels of strategies, techniques, methods or theories". Meanwhile, to the applicable of a case study design, the types of this design such as:

a) Interpretive case studies used to explain the phenomenon, causal relationships, and to develop theory. Then, once of the phenomenon is too complex for experimental studies or survey design. In such interpretative studies, a detailed description of the facts of the case provided, along with a discussion of alternative explanations that are consistent with the facts;

b) The exploratory case study explores situations or interventions that do not have a clear or single set of results. These studies stand regularly used in a research setting that lacking detailed preliminary research, or specifically formulated research questions or hypotheses; and / or where a research setting limits the choice of methodology. Therefore, exploratory case studies are often used as a preliminary step to an explanatory case study approach due to their broad focus;

c) Descriptive case studies describe, as the name suggests, an intervention or phenomenon as well as the real situation in which it occurred. These case studies are very focused and detailed as they carefully evaluate a case based on a descriptive theory where questions or suggestions are carefully considered. Descriptive case studies are powerful in their own way as they greatly increase the accuracy of the completed study. They can help set the boundaries of the case and possibly provide abstract interpretations of the data and theory development.

When we dig to the deep, to analyse a case study practice, particularly a term of [case] is relating to both single and multiple case. So that to lighting our knowledge about both term before, this is a short explanation of (Stjelja, 2013b) that asserted such as; a single case study is discussing to critical case, unique case, longitudinal [one type of research focus and determined by multiple view point], and previously inaccessibly for an identification or research. While, multiple case studies proclaimed as [within and between] multiple research focus that allow to explore by research. Continuously, based on the purpose of conducting this method, case study by its purpose defined to intrinsic study that constructing through the understanding of a researcher itself- as opposed to the intention to understand some abstract concepts or general phenomenon. While in instrumental type, it is using to improve research understanding in theoretical framework also particular situation or particular research topic. Beside that, third type of collective case study; it is initiate of multiple cases which researching based on general understanding.

On account to the implementation of case study method (Minniti et al., 2017), constructed the foundation thought that relating to educational side, "A case study was promoting the educator in readiness of assessment also decision construction of the complex situation". In further action, a case study in learning perspective of teaching the students is provide an objective learning situation also accommodate and develop professional skill. As a mean for the students, case study improves learning autonomy and ability in study design. In brief, case study elaborated the improvement of educational

strategy through fostering in both side of learner and educator to the purposeful of definite reflection to the objective decision. We can determine a case study as a method for diagnosing which involving particular research technique, that related to qualitative research methodology.

On the top of that, (Kelch & Malupa-Kim, 2014) said in conducting a case study "in teacher education, the case study method is a reflection in motivating, student-cantered approach in which theoretical models and concepts are illustrated through their application to practical situations. Case studies "can be used in any discipline when instructors want students to explore how what they have learned applies to [real world situations…] require students to answer an open-ended question or develop a solution to an open-ended problem with multiple potential solutions". In short, students learn by doing, and they develop their ability to engage in "teacher theorizing" and "robust reasoning". In highlight to that point, several action of applied a case study, has involve in such research below:

a) Physicians have long been training on the case method as medical students face the details of a patient's medical problem and tasked with providing a diagnosis and course of treatment. Case studies have been using in business schools to teach business ethics, management, marketing, consumer behaviour, sales, organizational behaviour, entrepreneurship and a range of other subjects;

b) In short, case studies can be and utilized in any subject area, including civil engineering, accounting and physical education;

c) Moreover, to the side of educational development, teaching case studies and stories provide a means of bridging theory and practice and demonstrating the complexity of teaching as a profession. Therefore, critical thinking-active involvement-participation was the outcome of case study engagement process;

d) In teacher education, a transition from a traditional program based approach to a constructivist approach achieved through a case-based method. Work by revealing the complex variables that are considered as teachers sort out, make sense of, and justify the use of particular actions".

Conclusion and Recommendation

Strengthen the point of overall link to research developmental era of Indonesia educator in case of pandemic outbreak, this paper concluded, to the both preferable research method on above, the educator would constructively promote their research capacity. While both methods not a burden in its action to achieve the educational goal. Meanwhile, either a case study or survey is solely respect to improve and develop educator research pathway besides educational system improvement in whole part. To the bottom line, in the line to the pandemic crucial situation, which influencing in massive sector, both methods stand as a bridge to professional development and knowledge apprehension.

Researcher in the future will remain comprehension to follow up discussion of that situation of educator research capacity, which assisting by future research in comprehension of both research methods. In the other side, the campaign of survey and case study method in case of online training or small group in rapid times, will assist our educator in Indonesia, especially, as archipelago and development country, which remain develop and reconstruct all of the sector, included educational system and it's aspect.

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