Development of Teacher Education in the Global Era
- Focusing on Ed.D. and Master Programs for In-Service Teachers -

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Abstract

The theme of this year's symposium is "Development of Teacher Education in the Global Era". The purpose of our symposium is to analyze teacher education curricula/programs such as the Ed.D. program and master program for "in-service teachers". Also, we would like to understand teachers' professional training at the individual school level (such as lesson studies), and the partnership between the Board of Education and our university. Finally, we will improve our teacher education and teacher's professional training system of the graduate school curricula/instructions and systems through discussions regarding our advanced idea of "integration between educational theories and practices".

We would like to present the Research Questions regarding each country's situation of teacher education below.

RQ1: What kind of programs regarding teacher education and teacher training do you have at your university? What kind of programs do you offer about principal/leadership education, including the curriculum, and are there any internships?

RQ2: Why do teachers want to have a master's degree or PhD/Ed.D.? Is it because they could be officially promoted to the position of principal or administrator? What kind of incentives can they recieve? Are they able to earn more money?

RQ3: What is the difference between PhD and Ed.D. in your country? Why does the Ed.D. program need to be distinguished from the PhD program? Do most superintendents and principals have an Ed.D.? Do you have any basic templates/manuals for creating an Ed.D. dissertation? (Ex., Action research style with qualitative/quantitative research)

RQ4: What kind of professional training system do you have for teachers at the individual school level, such as a lesson study? Also, please explain the partnership between the Board of Education and your university?
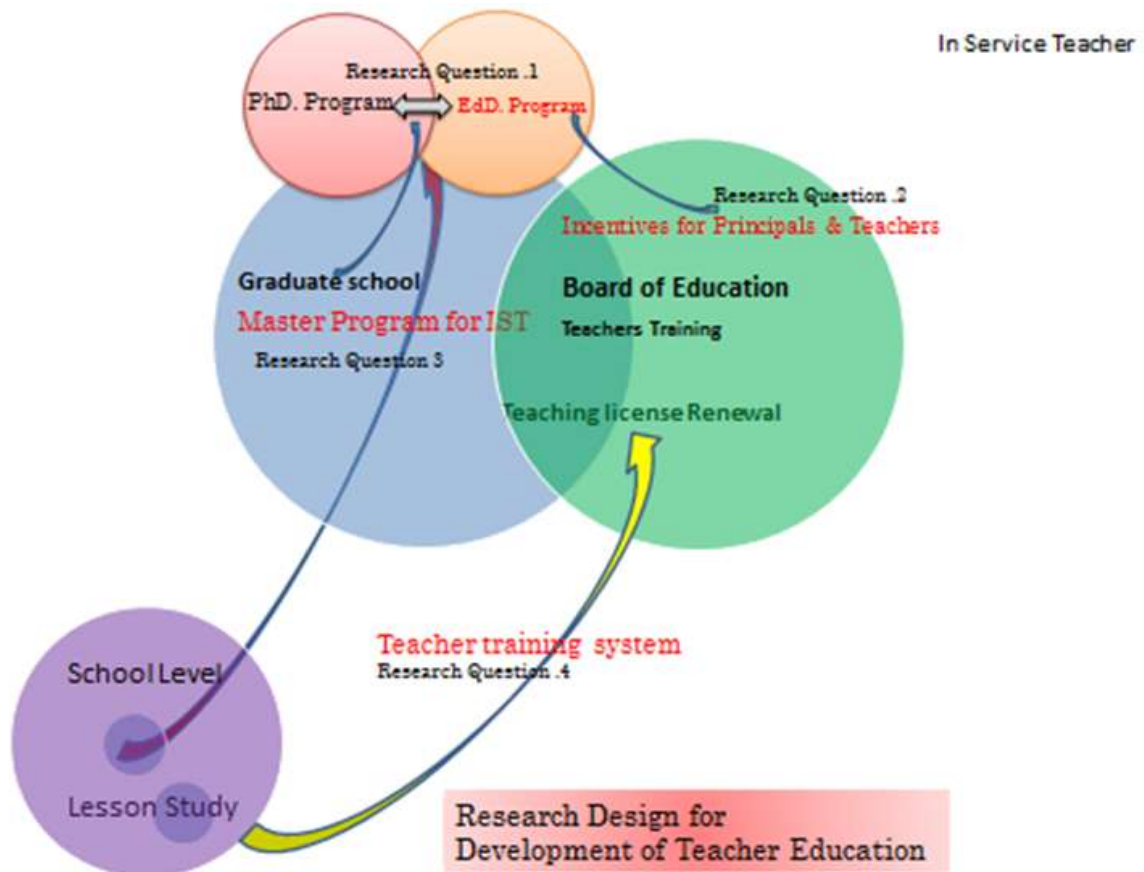
(Figure 1. Research Design for development of teachers Education)

As a result, our discussion could be effective and have productive indications for our main theme of this year's symposium, which is "Development of Teacher Education in the Global Era".

Keywords: action research, in-service teachers,Ed.D.

Introduction -Future study focused on Action Research for in-service teachers-

The most significant point of this research is that Lesson Study (Japanese teacher training of professional learning community) is a part of the conceptual structure of the Curriculum Management theory so that these relative concepts can become consequently meaningful to Teacher Development.

In order to study the concepts discussed in my presentation, and to theorize the educational practice based on teacher development, the key factor for my future research is to establish the methodologies for Action Research. It is possible to define "metaphoric" as the educational research "of the teachers, by the teachers, for the teachers". In the meaning, action research theory achievements should be reviewed. In addition, future visions should be suggested for building "theory and practice" in education from the perspective of the action research interests.

1.　The structure of the Study of Action Research

Recently, action research has been to be given special attentions as one of the new educational research methodologies. Therefore, because of this, teachers are generally being recognized as researchers who focus on the process of problem solving in their practices. Furthermore, it is based on the individual teacher's specific character, such as their own personality, teaching skills, and educational philosophy/morality. As a result, the action research is aimed in order to improve the teachers' own practices in their own situations and contexts.

Kurt Lewin, who is a well-known researcher of Group Dynamics, has generally been considered as the origin of action research. He is concerned with social problems, and focused on participative problem-solving processes in the social organization. He characterized action research as "a comparative research on the conditions, effects of various forms of social action, research leading to social action", using the process of "spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action" (Lewin, 1946).

It is very difficult to define the true concept of action research, due to the various theoretical developments of the background. Otherwise, some true concepts would be shown as literary reviews.

According to Chris Argyris, action science was becoming famous by studying how human beings choose to behave in difficult situations. Choosing how to act is the key difference between Single-Loop Learning and Double-Loop Learning. Thus, "Action Science" was used in individual and organizational learning and the extent to which human reasoning (Argyris, 1985).

There are many definitions for action research, historically; for instance, Rory O'Brien discussed action research as below.

"Action research...aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process." (Harrison, 1995). Additional definitions follow.

"Action research is a disciplined process of inquiry conducted by and for those taking action. The primary reason for engaging inaction research is to assist the actors in improving their action" (Sagor, 2000).

"Action research consists of planned, continuous, and systematic procedures for learning about your professional practice and trying out alternative practices to improve outcome" (Whitehead, 2006).

The theoretical framework for educational action research is described as the rhetoric of "Knowing in Action" to "Knowledge in Action". This means that it is important for action researchers to understand the rhetoric of "Reflecting in Action" (Atkins, L. & Wallace, 2012).

Moreover, from the perspective of subjective theory, action research has an active tendency that is based on individual teachers' personal specific theories and situational theories derived from their own experiences (Torbert, 2004). Alternatively, action research from objective and scientific perspectives is a community of practice, which is a collaborative understanding with those who are practitioners, researchers, and stakeholders, under the school systems themselves. It is not for only personal issues, but also includes progressive social problem solving in the process of fostering educational practice. Therefore, action research is an eloquence research that emphasizes the integrated, adequate balance between subjective and objective understandings in the spiral process of individual and organizational practices. It is also based on behavior research of the problem solving process within the collaborative research context (Reason & Bradbury, 2001).

Uchiyama, who is a well-known Japanese action researcher, quoted a significant theory of Soft System Methodology by Checkland. He also discussed integration between the hard and soft systems of organizational management. Action research by Uchiyama introduced both Actuality and Auto-Affection, regarding subjective personal idea and objectivized consideration. This means that subjective consideration is generally criticized because of a lack of scientific objectivities; however, it became necessary to prove the importance of subjective actuality. Also, action research is a kind of antithesis to exceed positivism, and it is essential to recognize it as a new research style for practitioners who always face their own actualities. Uchiyama described action research as learning from real-world knowledge through practitioner's experience. It is behavior research, or "Omoi" exists between actuality and reality, between us and society (Uchiyama2008).

According to Sano, action research can be possibly divided into three types. It is firstly an educational reform movement to involve parents and communities through research data. Secondly, it is a deductive style that puts theory into practice in order to improve classroom research. Thirdly, teachers try to foster their own practice through their own experienced knowledge. In addition, the importance of educational research is to design the methodologies for the educational practice science from perspectives of action research. As educational researchers have pointed out, educational practice and theory are divided into two categories, and they tend not to blend together well.

Above all, regarding the structure of action research, it is indispensable to discuss an integrated approach between subjective and objective cognitions and understandings.

2. First, Second, and Third-person Action Research

To create a clearer definition of what action research is, from the points of subjective and objective cognitions mentioned, a key note speech at action research symposium, which was held

at San Diego University in 2007, will be utilized. According to Torbert, the key factor is "First-person, Second-person, Third-person theory", which was based on an inter-subjective approach to integrate subjective and objective cognitions/understandings. In contemporary social science, the idea of inter-subjectivities, which is first-, second-, third-person research and practice, has only taken shape since the late 1990s.

The three dimensions of difference are "the temporal dimension," "the practice dimension" and "the voice dimension." The temporal dimension is divided into the past, the present, and the future. The practice dimension is differentiated according to whether the research focuses on the researcher's own practice (first-person practice), the practice of a group of which she or he is a member (second-person practice), or the practice of some broader population of which the researcher may or may not be a member (third-person practice). Finally, the voice dimension is differentiated according to whether the inquiry is conducted in (1) the frankly subjective first-person voice of the action inquire, (2) the multiple, inter subjective second-person voices of multiple action inquire, and (3) an anonymous, generalized, intended neutral third-person voice.

To conclude, according to Kuramoto (Kuramoto, 2011), action research means how to approach an objective perspective through an inter-subjective method between personal subjective perspectives. It is also based on the first-person, second-person, third-person theory, which is a typical triangulation theory of qualitative research.
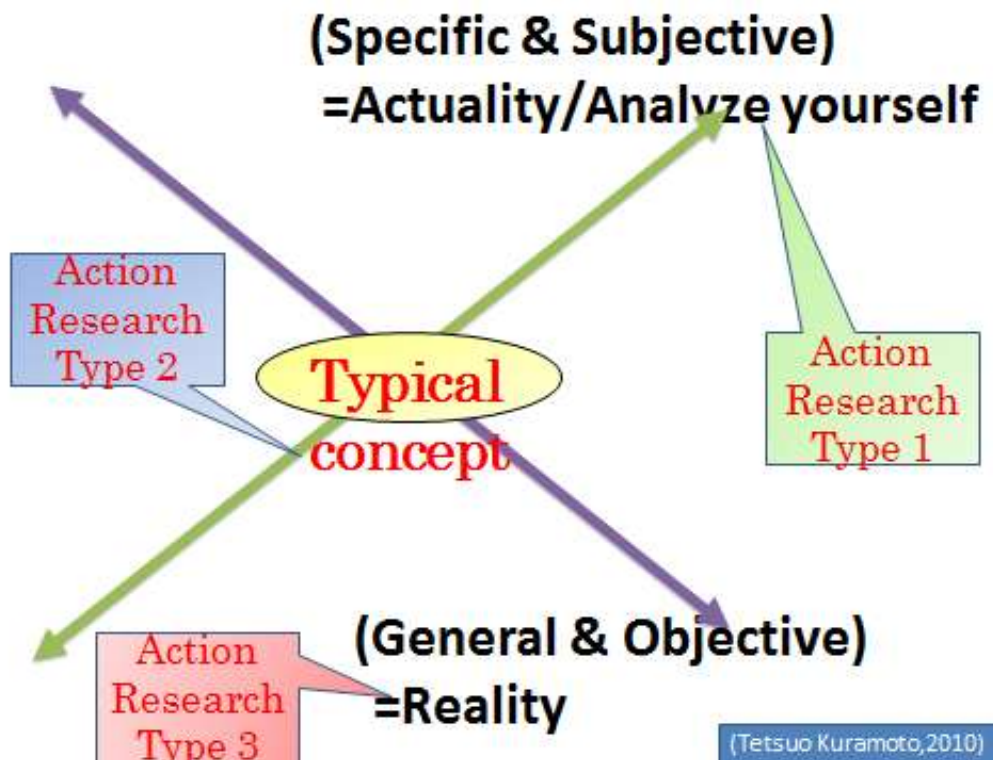
(Figure 2. 3 concepts of Action Research)

In addition, action research has three concepts necessary to recognize its important features.

Since action research depends on a practitioner's personal knowledge and experience to improve their practice in particular situations, the concept of Type 1 (specific & subjective perspective), which is based on "actuality and analysis of yourself", must be considered. On the contrary, the concept of Type 2 (general & objective perspective), which is based on "reality," is regarded as a part of social and human science methodologies. Furthermore, it has a high status in the academic society in general. Therefore, it naturally tends to use an empirical methodology to prove some kind of social or human tendencies without a practitioner's specific knowledge and experiences. It is difficult to analyze individual cases to grasp their austenitic realty.

Finally, the most important concept for action research is based on the concept of typicality (Type 2). This type of concept is necessary in order to integrate the general/objective and specific/subjective perspectives of action research. Because action research needs to relatively acquire both concepts, the indication is similar to the philosophy of the case study method in a typical concept theory.

3. Additional aspect of action research

To profoundly understand the additional aspect of action research, it is required to recognize the three dimensions for action research, which are the "XYZ aspects" for the integration between educational practice and theory.
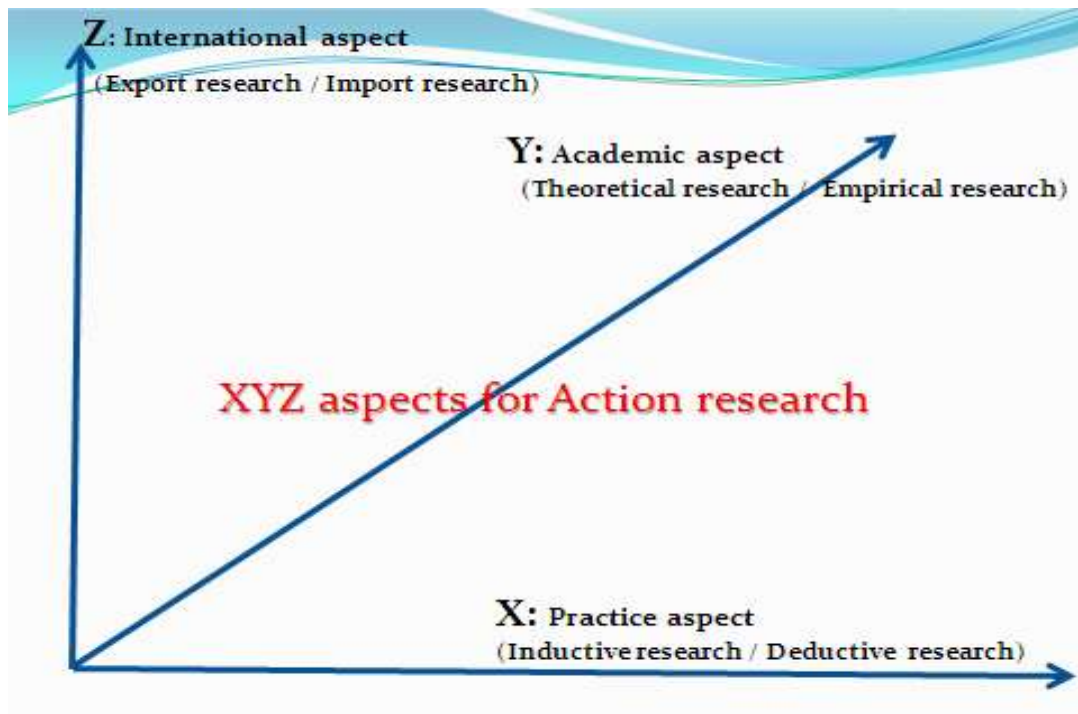
(Figure 3. XYZ aspects for Action Research)

The "X aspect," which is the practical aspect, consists of "inductive research" and "deductive research." Inductive research is a productive approach from practices into theories. For example, practitioners generally have their own rich, practical experience; however, they perform their practice through their own senses and previous experiences without understanding authentic theoretical meanings. As a result, they cannot organize their practices to recognize the meanings and convey them to others.

Therefore, it is indispensable for them to build their own theory from their own practices. This requires the inductive approach of action research. In contrast, deductive research is the opposite approach, which firstly tends to grasp educational theories, and secondly, to apply it into the practices. Since both the approaches have blended together relatively well, they are often adapted into research structures such as the Ed.D. dissertation on the action research style. Concerning the pre-survey in that type of dissertation, it often relies on an inductive approach for practitioners in order to build their original theories from perspectives of the own practices. The main survey consists of a deductive approach for adapting theories into their own practices to improve the quality.

The "Y aspect," which is the academic aspect, consists of "theoretical research" and "empirical research." As long as it is regarded as academic research, it is absolutely necessary to consider literature reviews in theoretical research, as well as in empirical research, to establish research questions and to conduct empirical methodologies which might include qualitative and quantitative approaches.

Finally, the "Z aspect," which is the "International aspect," consists of "import research" and "export research." The import research style depends on an old-Japanese style of research, which was very popular a few decades ago. Since Japanese research in the education field was under development at the time, the research style of translating from the western educational systems into the Japanese system was frequently respected in the academic societies. However, since the 2010s, the exporting of export Japanese educational practice and research results has gradually increased. Some of the Japanese educational concepts are gaining attention in international educational societies; the typical popular concept is the lesson study which is the main topic in this book. This means that the export research style is also essential to develop action research strategies.

In Figure 4 below, in order to conduct the action research procedure, it is imperative to understand the process of action research. The reason why academic research and educational practice do not combine together is due to the cognitive distance between them. For instance, a practitioner cannot use a general and academic educational theory because of his/her lack of academic experience and the overemphasizing of practical interests. Therefore, the most important strategy for improving action

research is to build an intermediate theory to connect between academic theory and educational practice.
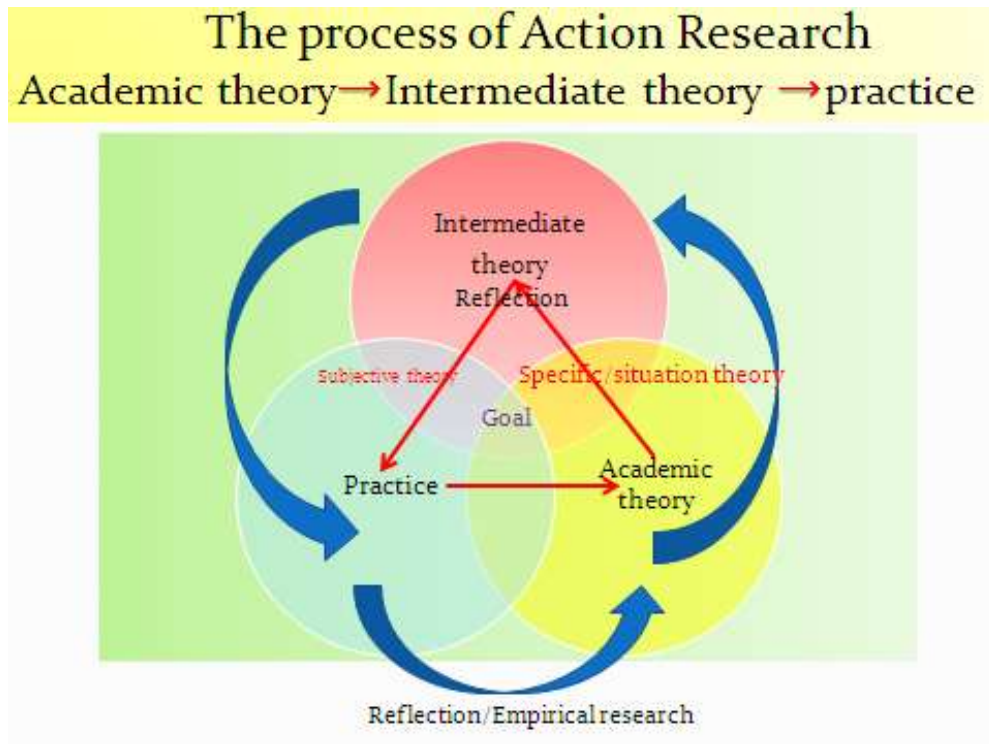
(Figure 4. The process of Action Research)

In action research, which is "of the teachers, by the teachers, for the teachers," the teachers need to analyze their own personalities and practice tendencies from specific and situational theoretical concepts.

As a result, it is imperative for the practitioners to reflect their own effectiveness of the practice in their themes. In general, teachers focus on their practice through their sense and sensibilities which are based on their previous experiences due to a lack of time in their hectic work schedules. In action research, in the included reflection for example, empirical methodologies, which include the qualitative and quantitative approach, are required to prove the outcomes of their practice.

4. Conclusion -Action research and Ed.D. dissertation example-

If one focuses on how to complete an educational practical dissertation, action research will most likely be a very typical methodology for it. Therefore, the Ed.D. (Education Doctoral Degree) template below in Figure 5, one sample of an Ed.D. dissertation, is shown as an example of the action research style.

Chapters	Contents	The template of the dissertation on action research (Sample)
Introduction	Purpose of research	0.1 Background
		0.2 Research purposes
		0.3 Research Value

		0.4 Research Structure
Chapter 1	Literature reviews	1.1 Academic Achievement
		1.2 Learner Autonomy
		1.3 Lesson study
		1.4 Blended Learning
		1.5 Technology Without the Knowhow
		1.6 Blended Learning Course Design
		1.7 Gaps in the Research
Chapter 2	Pre-survey	2.1.1 The subjects
		2.1.2 The course goals
		2.1.3 Course Evaluation
		2.1.4 Vocabulary learning methodology and Learning input
		2.1.5 Student learning process
		2.1.6 Differences in learning styles
		2.1.7 Methods of data collection
Chapter 3	Main-survey	3.2 Main-study
		3.2.1 The subjects
		3.2.2 Learning Input (Semester 1)
		3.2.3 The learning process (semester 1)
		3.2.4 Learning output (semester 1)
		3.3 Learning input (semester 2)
		3.3.1 Mreader
		3.3.2 Learning process (semester 2)
		3.3.3 Learning output (semester 2)
		3.3.4 In conclusion
Chapter 4	Results	**4.1 Pre-study results**
		4.2 Discussion of Quantitative Results
		4.3 Statistical Analysis of Pre-study
		4.4 Survey 2 – after results (post-survey)
		4.5 Qualitative results
		4.6 Main-study results
		4.7 week 5 /Qualitative Analysis (KJ method)
		4.8 Week 10/Qualitative Analysis (KJ method)
		4.9 Week 15 /Qualitative Analysis (KJ method)
Conclusion	Analysis/ Discussion	5.1 Conclusions for research question number 1-5
		5.7 Complications and disputes
		5.8 Limitations and future research

(Figure 5. The template of a dissertation on action research)

One of the students in my doctor's course, Bruce Lander, who is also a Kurume University lecturer, whose abstract for his Ed.D dissertation, **"The Influence of Blended Learning Technology on Contemporary Society"** is a typical example regarding the Figure 5 template above.

"This study comprised of two groups of subjects, a pre-study and a main-study. The pre-study consisted of a large group of elementary English learners at a medium-sized private university in Japan, while the main-study consisted of a much smaller group of intermediate-level English language learners at the same university. The pre-study group comprised of 480 subjects ranging in age from 19 to 21, while the main-study group contained seven students, all aged 20. Both groups were introduced to various levels of digital, online learning tools that were specifically chosen for the tasks at hand and to meet course objectives.

The primary objective of this study is to raise awareness of technology through various blended learning components that aid autonomous learning, providing students with new learning skills and ultimately a new mind-set. It was predicted that the introduction and on-going support of new learning tools could not only motivate learners to learn more but also improve test-scores over a comparatively short period of time."

However, to conduct the action research/Ed.D dissertation procedure above, it is imperative to understand the process of action research. The reason why academic research and educational practice do not combine well is due to the cognitive distance between them. Therefore, the most important strategy for improving action research is to build an intermediate theory to connect academic theory and educational practice.

This is especially important in the action research which is "of the teachers, by the teachers, for the teachers," where the teachers need to analyze their own personalities and practice tendencies from specific concepts and a situation theory. In conclusion, it is important for self-analyzed action research to examine practitioner's specific qualities, because each practitioner has his /her own educational style and effectiveness skills/techniques.

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