

A STUDY ON “PROJECT MANAGEMENT” A CASE STUDY ON SCHOOLS INTEGRATION BY BOARD OF EDUCATION

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Projects are relevant today to all fields and sectors nowadays, and the application of Project Management in education field is getting more noticed. The case study in this research is the project of schools integration carried out by Board of Education of Tosu city. At the level of Board of Education, “Project Management” maybe is an effective managerial approach. This main research purpose is how to apply the concept of “Project Management” into the concept of educational field through the empirical research of Tosu schools integration. The aim of this study is to find out how educational administrators can operate curriculum development between schools from the point of view of Project management theory by using both qualitative research methods and quantitative research methods.

Keywords: Project Management, Schools Integration

Up to now, curriculum development was pointed out to play one of the most important roles in achieving educational goals for every teachers or school. This term is studied worldwide by many educators and researchers but mainly focused on the role of teachers as curriculum is considered to be the framework in which students gain information through different methodologies, assessments, and instruction. A curriculum can be seen as “ a programme of activities(by teachers and pupils) designed so that pupils will attain so far as possible certain educational and other schooling ends or objectives” (Grundy, 1987). This is basically true but unanswered to the question of how to define the needs, the ends (objective) to meet the requirement from pupils and parents. Besides, the logic of this definition is for the curriculum to be designed outside of the classroom or school, which is not the case for schools management. For example in schools integration, because educational administration plays more important role in varying degrees for curriculum development and liaising with school teachers and administration, the concept of “curriculum management” is needed to reconsidered.

The aim of this study is to find out how educational administrators can operate curriculum development between schools from the point of view of Project management theory by using both qualitative research methods and quantitative research methods. In these following research questions:

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- ① What category of Project Management theory in the education field, especially considering curriculum management as a project to operate on?
- ② How the Board of Education can manage the schools integration project, from the point of view of Project management theory?
- ③ How educational administrators can influence the effectiveness of curriculum management as projects- programs?

Project Management is a familiar term which has been authorized in economic research field as an application of knowledge, skills, tools, and techniques to project activities to meet project requirements (from Project Management Institute). The completing project demands are often referred to as the triple constraint of project management. Resources (Time, Cost, or People) are always two sides of the triangle. Depending on cases, the third side is either Scope, Performance, Quality or sometime Outputs.

Schools and universities are under considerable pressure to manage projects to successful completion- both on time and within budget. Considering integrated curriculum development as project means educational administrators have to approach to planning and guiding project processes from start to finish. Board of education has been said to have strong determination in succeeding schools integration projects, so it is important to describe their management style.

The case study in this research is the project of schools integration in Tosu city, located in the east part of Saga Prefecture, Japan. Tosu has been one of the major transportation hubs of Kyushu with big population. According to Tosu city Board of Education, there are about 10% of the top 6th grade students choose private junior high schools or schools outside the district. In order to attract more students to the public junior high school, a project of Schools integration between 8 elementary schools and 4 junior high schools has been carried out since 2010 with much effort from the Board of Education. This project is also expected to foster the quality of 9 years integrated curriculum and to a more effective management of budget and facilities as well. Schools Integration here can be described as the collaboration between Elementary (below as E) and Junior high school (below as J) in order to reduce the Chuichi Gapⁱ and improve teacher's attitude and behaviorⁱⁱ.

There is also a possibility of observing one school in each area in order to grasp more concrete information about the effectiveness of curriculum management as project management to give out suggestion for other schools while carrying out this kind of project.

2. Research method

2.1 Research object

The purpose of this research is to describe the concept of Project Management in education research through the empirical research of schools integration project. It is intended for 12 elementary and junior high schools in Tosu district, included 8 elementary and 4 junior high schools which have taken part in the school integration project since 2010. In order to assess the effectiveness of this project, attitude survey was taken from teachers and parents. For the students, because of the purpose of an effective 9 years integrated curriculum, a survey related to students' attitude survey was used.

Furthermore, among 3 surveys for teachers- parents and students, in this research I want to focus on survey's results and analysis for teachers first, for these reasons below:

- A growing body of research shows that student achievement is more heavily influenced by the teacher's quality than by students' race, class, prior academic record, or school a student attends(Center for Parent/Youth Understanding, 2007)
- According to the interview with BOE Chief of School Division who is considered to take charge in schools integration project, teacher improvement is said to be the most important factor that can brings community and parents trust, student growthⁱⁱⁱ.

As stated by Soy (1997), case study method brings the advantages of the applicability to real-life, contemporary, human situations and its public accessibility through written reports. In Japanese education, there are 3 types of school integrations: integrated schools, cooperated schools and combined schools. The case of elementary school and junior high school use the same facility is still the minority(up to 2012: 279 cases, points 1,3% elementary school and 2,8% junior high school^{iv}) while cooperated schools or combined schools points out the majority. According to these upper categories, schools integration style in Tosu city is mostly case 2 and 3 which can bring the applicability to real-life if doing research on these cases.

Table 2.1 Size of survey sample

	Teachers	Parents	Students
2011	291	3051	3315
2012	328	3986	3723

2.2 Quantitative research

Quantitative data in this study will be used to assess the effectiveness of schools integration from collecting opinions of teachers- students- parents.

There are 3 parts included in the survey for teachers:

- (1) Questions about in service- training and educational practice(21 questions),
- (2) Questions about school culture with 18 questions
- (3) Questions focuses on schools integration between elementary and junior high school(14 questions)

The purpose of this survey is to investigate the effectiveness of school integration and how it is operated during each year, especially through investigating what teachers and parents think about this project.

Using average value of each parts as database, researchers analyze the correlation among these 3 factors in order to find out what teachers in each area think about those and especially focus on the relationship of schools integration with the other two. The analysis method used here is IBM SPSS Amos software to reflect the relationship among school integration while observed and latent can be used to predict any other numeric variables. The surveys analysis is also designed to have the pre-test and post-test comparison which uses 2011 as the beginning point of the project and 2012 as one year after intervention. These series of design comparison can not only help describe changes over times, establish a baseline measure of project effectiveness but also keep track of trends and forecast future short term trends^v.

2.3 Qualitative research

Qualitative data will emerge from observed instances during interactions with education administrators from Board of Education and by using questionnaires, recorded interviews, observational notes, and dialogue journals. Researchers have had a chance to interview with the Superintendent of Board of Education, Chairman of Board of Education about how they carry out the project. Excerpts will be transcribed, categorized and coded to determine importance. The purpose of qualitative research is to conduct how each educational administrator can influence the effectiveness of the whole project.

A special qualitative method of “Meta Cognition” lesson study is also taken place by Tosu city Board of education. Speaking of curriculum management and lesson study, Action Research is a method which brings validity for educational research approach^{vi}. In Action Research, “Reflection” is considered the very important keyword where its psychological perspective is called “meta-cognition”(Torbert, 2004).

J. H. Flavell first used “Meta- cognition” to refer to one’s knowledge concerning

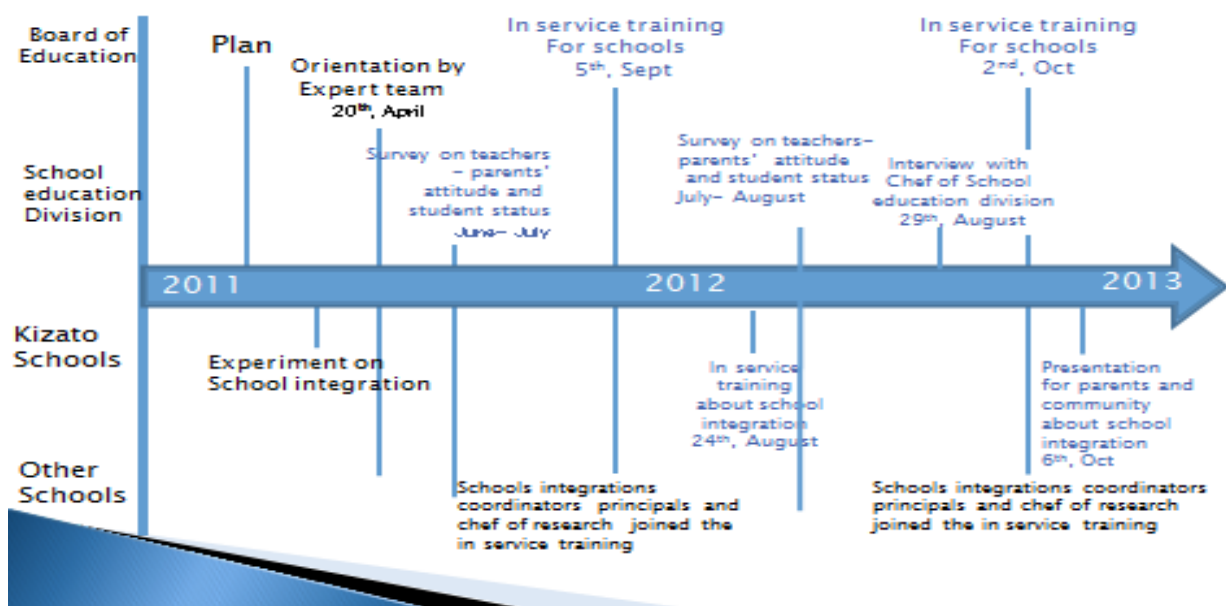
one's own cognitive processes or anything related to them, e.g., the learning-relevant properties of information or data^{vii}. According to R Phelps, the Impact of Metacognitive approach in learning and instruction is to translate their own experiences and reflections into espoused values for teaching their own students^{viii}.

In this research, the data collected from in service training is analyzed based on the logic of the connection of "subjectivity" and "subjectivity" can transform into a "inter-subjective" meta-cognitive approach. The figure 3.2.1 shows the structure of Meta-cognition lesson study operated in this school integration projects.

2.4 Empirical research procedure

Up to now, the research program and its progress overall two-year time span of this study can be summarized as follows. According to the request from BOE of Tosu city in April 2011, I have a chance to join the expert team to give advice and instruction to teachers in schools integration project from the very first workshop. After a period of conducting, the surveys were sent to every school in the district, BOE has the responsible to collect data from teachers, parents and students from June to July 2011. In September, 2011, analyzed data was presented to teachers in the second workshop (in service training) under the metacognitive lesson study which is mentioned in 2.3 above. During that time, a special workshop was also operated in Kizato schools as an experiment schools in this project. The process is continued with same schedule in 2012 in order to make comparison about the efficient and effectiveness. Data analysis is another complicated and important issue to be considered, given that both qualitative and quantitative approaches were used in this research.

Figure 2.4 Empirical research's procedure



3. Analysis results

3.1 Quantitative analysis results

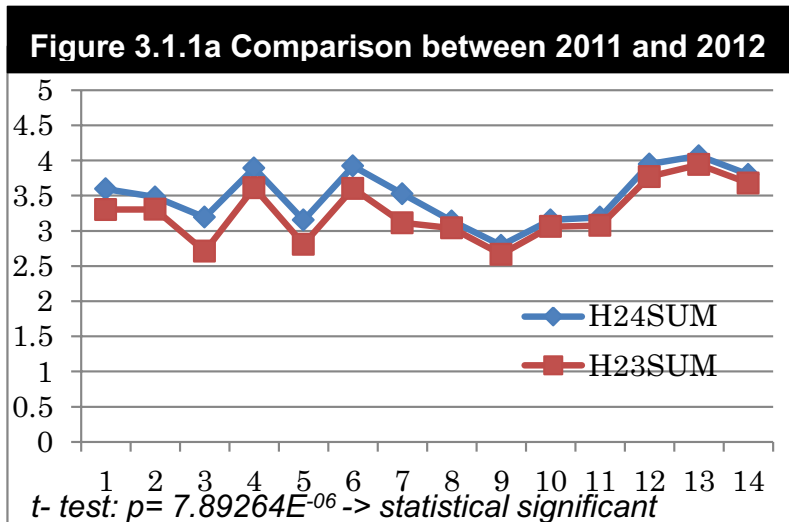
3.1.1 Analysis with line charts

As mention above, the surveys were taken from 2011 to 2012 to all teachers, parents and students in this project.

Questionnaire survey has the advantages in gathering information and examining the influence of various factors over the dependent variables (Mitchell& Jolley, 2004).For example, these are questions for part 3, which is emphasized as the most important goal of this investigation by explaining how schools integration can affects students, school culture through its concrete activities:

Table 3.1.1 Survey about schools integration for teacher

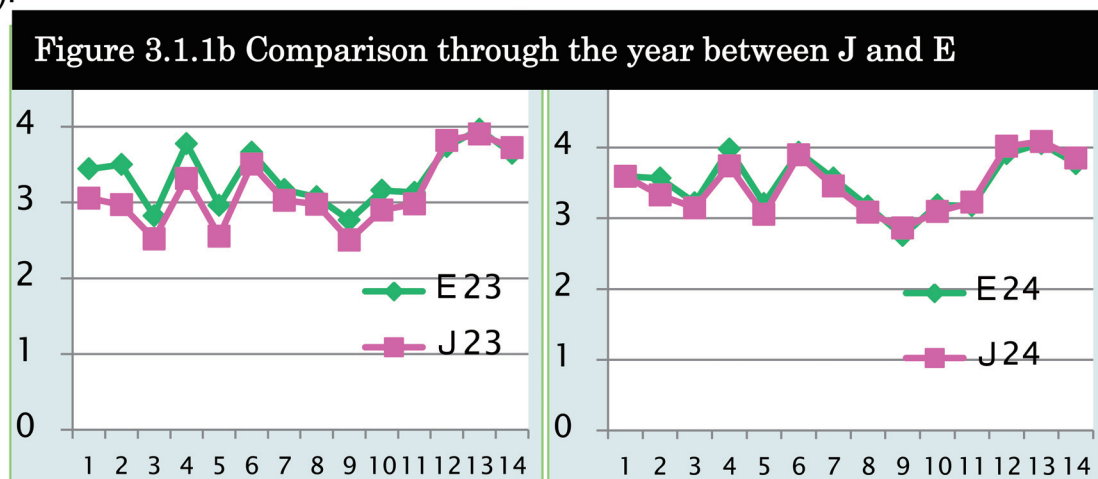
Table 3.1.1 Survey about schools integration for teacher						
1	Have discussion between J and E about the Student's model.	①	②	③	④	⑤
2	Have discussion between J and E about particular strategies in order to create a proper basic lessons.	①	②	③	④	⑤
3	Have discussion between J and E about systematical activities like integrated learning.	①	②	③	④	⑤
4	Have discussion between J and E about student guidance of school life.	①	②	③	④	⑤
5	Have discussion between J and E about career education and counseling.	①	②	③	④	⑤
6	Have discussion between J and E about special need education and educational counseling.	①	②	③	④	⑤
7	Put effort on exchange between J and E students.	①	②	③	④	⑤
8	Cooperate among E in J district.	①	②	③	④	⑤
9	Have team teachings by E and J teachers at least one time per one term.	①	②	③	④	⑤
10	Schools integration tightly cooperate with families communities.	①	②	③	④	⑤
11	Communities and Families are fully informed about the cooperation between J and E.	①	②	③	④	⑤
12	Thanks to the schools integration, Student's learning motivation, interest and attitude can be improved.	①	②	③	④	⑤
13	Thanks to the schools integration, the problem of Chuuchi Gap is solved.	①	②	③	④	⑤
14	Thanks to the improvement of schools integration, student achievement can be improved.	①	②	③	④	⑤



The number ①, ②, ③, ④, ⑤ here stands for the statistic scale: ① Strongly disagree ② Disagree ③ No Opinion ④ Agree ⑤ Strongly Agree^x. Figure 3.1.1a is the results of survey part 3, asking about the attitude of teachers about schools integration. It's clearly to see

that scales in 2011 is lower than 2012, especially questions number 1 to 8, which are mainly about activities related to schools integrations. It can be said that in 2011 the effectiveness of schools integration was highly acknowledged but the actual practical educational activities weren't operated widely and properly yet. In 2012, there are a significant gap from previous year, because possibly teachers actually have done more activities like having integrated lesson, having more discussion about career education/ student guidance through 9 years with more cooperation among elementary and junior high schools teachers.

The next figure 3.1.1b is another example of comparison the response of teachers in elementary school and junior high school concerning school integration. One thing that is very important to the integrated curriculum is the collaboration of teachers in elementary and junior high school. The fact is, on account of lacking information about elementary schools (from junior high school teachers) or junior high school (from elementary teachers), teachers may misjudge and misestimate each other role, tend to not fully understand what students should experience through 9 years deeply, making the gap in common understanding between teachers bigger^x(Oshima, 2010).



It can be seen from this figure that there is a significant gap between the response from elementary school teachers and junior high school teachers which means the common understanding of teachers hasn't tightly bounded yet. But till 2012, the gap is getting smaller and almost at the question 9 to 14 there is almost no gap at all. This can be pointed as an improvement of many discussions among teachers. Actually, these results also reflect the high responses from question 1 to 9 which are about the concrete educational activities. This also can point out that having the same vision about students can improve the discussion about actual practical teaching.

According to the survey about schools integration that Japanese Ministry of Education operated in 2010 among 1763 Districts Board of Education^{xi}, 75% response found that it's difficult to maintain schedule for meeting between J and E and develop teaching plan that related to schools integration. In the case of Tosu district, 328 teachers answered positively to have more discussion between J and E to a more common understanding about students and teaching method. This is indeed a good sign of developing project, particularly developing the shared visions, the communications for members in project.

Up to this point, it can be said that teachers in elementary and junior high schools are reaching to the same common understanding about effectiveness of schools integration, especially about the practical teaching.

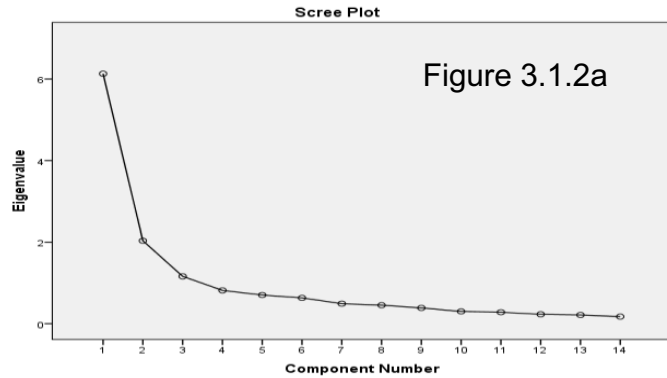
3.1.2 Factors analysis

There are total over 50 questions in these surveys for each teacher and parents. Even though it is easily to compare multiple continuous data sets, the analysis method of line charts may be difficult to summarize the results because of too many variables. Factor analysis which is technically called *principal components analysis*, is a statistical technique that essentially reduces a set of variables to a smaller number of underlying factors and detects structure in the relationships between variables^{xii}.

A common method is varimax rotation, where each factor will tend to have either large or small loadings on any particular variable. This means that this method will produce several very distinct factors. Numerical data were analyzed with SPSS 20.0 at the significance result from KMO and Bartlett's test^{xiii} (refer to SPSS User's Guide). Alpha reliability analysis was conducted to examine the internal consistency reliability, i.e. Cronbach's alpha or α , and to examine the correlation between items, and the correlation between items and scale (Pett et al., 2003).

Table 3.1.2a KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.866
Bartlett's Approx. Chi-Square Test of Sphericity	1621.950	
df		91
Sig.		.000



It was suggested that a combination of rules should be used to make the most reasonable decisions about the extraction of factors (Kim & Mueller, 1994; Thompson, 2004). According to Kaiser criterion (eigenvalue should be greater than 1.0) and Cattell Scree-plot criterion (factor extraction should be stopped at the point where there appears a leveling of the plot) (Blaike, 2003; Kim & Mueller, 1994; Sapp, 2002), three factors could be extracted.

Table 3.1.2b Factors analysis' result

Factors and the items (α , % variance) (N= 328)		Factor loading	Corrected item-total correlation
Factor 1: Shared vision (0.84, 43.79%)			
1	Have discussion between J and E about the Student's model.	0.794	.663
2	Have discussion between J and E about particular strategies in order to create a proper basic lessons.	0.882	.708
4	Have discussion between J and E about student guidance of school life.	0.866	.690
5	Have discussion between J and E about special need education and educational counseling.	0.84	.675
7	Put effort on exchange between J and E students.	0.647	.629
8	Cooperate among E in J district.	0.563	.645
Factor 2: Practices of integration (0.84, 14.52%)			
3	Have discussion between J and E about systematical activities like integrated learning.	0.807	.608
6	Have discussion between J and E about career education and counseling.	0.7	.543
9	Have team teachings by E and J teachers at least one time per one term.	0.805	.553
10	Schools integration tightly cooperate with the families and communities.	0.843	.733
11	Communities and Families are fully informed about the cooperation between J and E.	0.815	.660

Factor 3: Integration effectiveness (0.85, 8.28%)

12	Thanks to the schools integration, Student's learning motivation, interest and attitude can be improved.	0.828	.305
13	Thanks to the schools integration, the problem of Chuuichi Gap is solved.	0.905	.483
14	Thanks to the improvement of schools integration, student achievement can be improved.	0.861	.394

The overall α is 0.895 and totally 66.6% variance was explained.

At the end, a total of 14 items were selected to constitute the factors about schools integration from the point of view of teachers. Three factors were extracted which explained 43.79%, 14.52%, 8.28% of variance respectively. Overall 66.6% of variance could be explained. The Cronbach's α^{xiv} for Factor 1, Factor 2, Factor 3 and the overall was 0.847, 0.844, 0.856, 0.895 respectively.

The first factor includes questions number 1, 2, 4, 5, 7, 8. It is obviously that teachers are putting effort in overcome the wall between J and E, in order to have the common understanding, or the same point of view about students or schools. For that reason, researchers named this factor "Shared vision". Next factor includes questions number 3, 6, 9, 10, 11 which can relate to practical educational activities in the project of schools integration. For that reason, Factor 2 is named "Practices of integration". Last factor is called "Integration effectiveness" in related to question number 12, 13, 14. According to another survey taken by Ministry of Education, 95% teachers believe that schools integration between J and E is for the sake of student achievement^{xv}.

In summary, there are 3 factors underlying 14 items in these surveys about school integration, with satisfying content validity, internal consistency reliability and interpretable factorial structure.

In this study, the survey was for teachers also taken with more content of "In-service training and practical education", "school culture". So it's important to point out what is the relationship between schools integration with other element, especially when researchers has just found out the 3 factors underlying the attitude about schools integration from the point of view of teachers- practitioners.

3.1.3 Path analysis

The main aim of this section is to analyze the relationship among 5 elements: "In-service training and practical education", "school culture", "shared vision", "practice of integration" and "integration effectiveness" in order to provide a graphical way to represent the assumed theory, and empirically estimate the relationships which one variable has the assumed causal effect on other variables.

With SPSS AMOS 19.0, researchers would like to do examination of these 2 hypotheses:

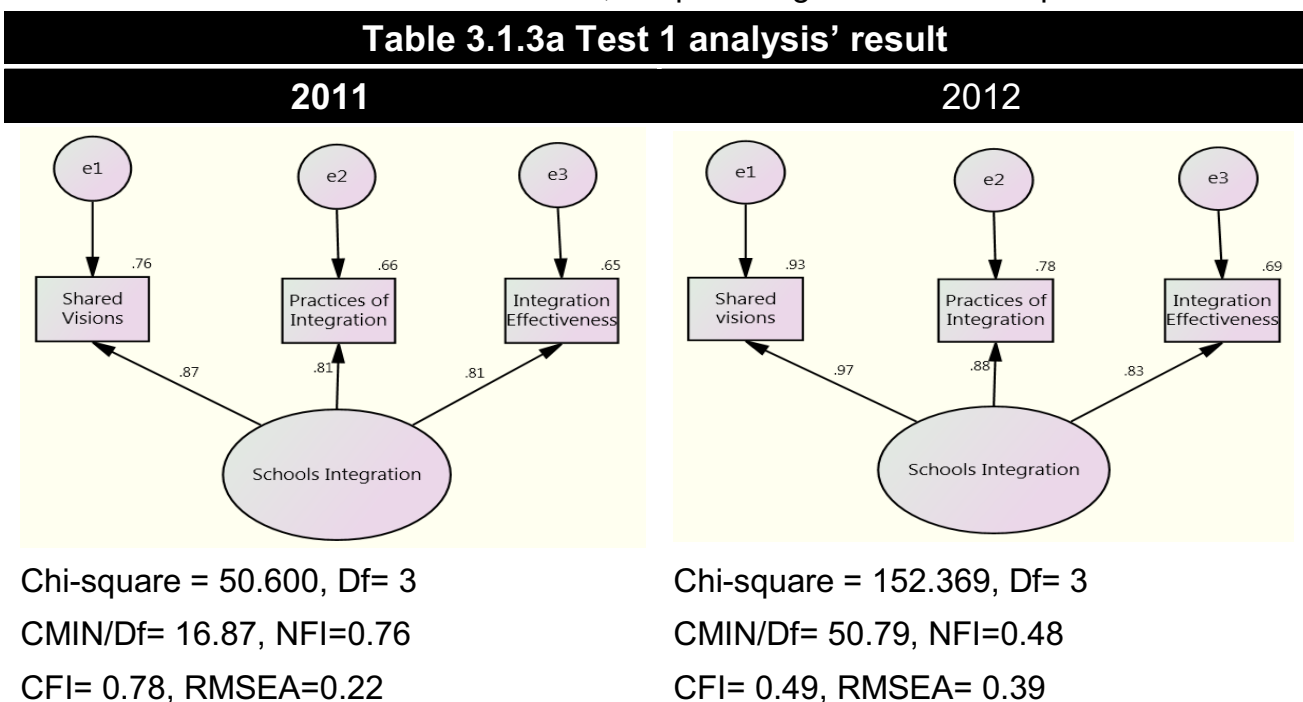
- ① Three factors of Shared vision, Practices of integration and Integration Effectiveness that extracted from the survey have tightly relationship with the concept of Schools Integration. In another way, research about these factors means investigating about the schools integration project.
- ② The causal effect of School Integration which includes 3 factors: Shared vision, Practices of integration and Integration Effectiveness to the In-service training-Educational Practice and School Culture. If provided that School integration has actually causes or affect positively the educational practice and School Culture, the project of School integration will reach its goal.

Test 1:

The sample for 2011 is 291 and 2012 is 328. Independent variable here will be "Schools Integration", dependent variables are 3 factors that were extracted from Factor Analysis. It is important to refine the measurement scale such as its reliability and validity for use in a particular circumstance. The Cronbach's α coefficient (suggested for Likert-scale (Gliem & Gliem, 2003) was employed to validate reliability. None of the variable was found to score low and they were highly correlated with each other. The Cronbach's α coefficient of 3 factors through 2011, 2012 were 0.325 and 0.754 respectively which is good as it achieved the reasonable score of reliability (George & Mallery, 2003).

With the assistance of AMOS 19.0, the path diagram was developed as below:

Table 3.1.3a Test 1 analysis' result



According to the figure above, it can state that the relationship between Schools Integration to each factor is relatively strong. For example, in 2012, the relationship between independent variable and variable “Shared visions” is 0.97, increased 0.1 in comparison with 2011 (0.87). This can be understood that sharing the same visions about schools or students is very important to the success of schools integration. Respectively, Practices of Integration and Integration Effectiveness also have stronger relationship to the School Integration variables through the year.

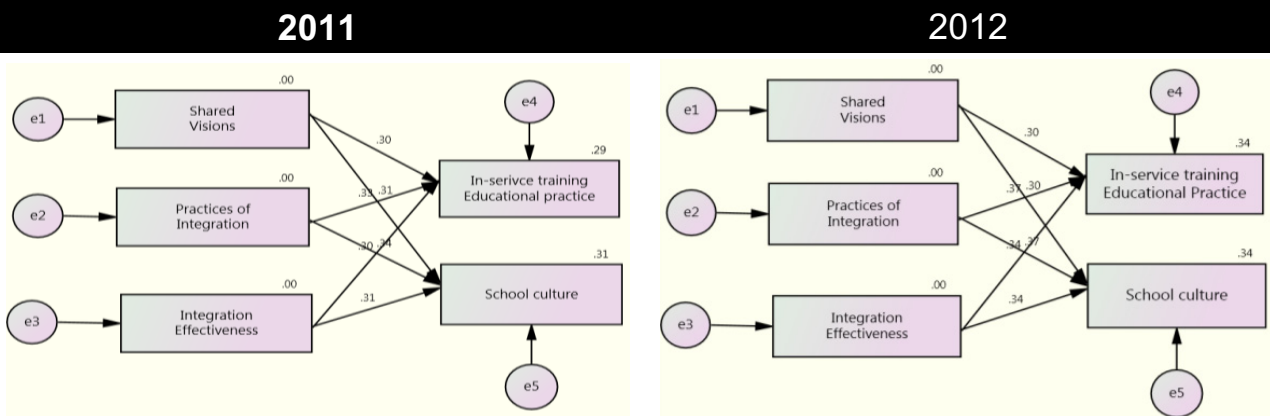
In summary, the assumed theory of Schools Integration element in Tosu city’s case study fit measures.

Test 2:

Test 2 has the same sample as test 1, with 5 dependent variables: Shared vision, Practices of integration and Integration Effectiveness, In-service training -Educational Practice and School Culture. The purpose of this test is to estimate the causal effect of 3 factors related to Schools Integration to In-service training –Educational Practice and School Culture. The Cronbach’s α coefficient of 3 factors through 2011, 2012 were 0.528 and 0.676 respectively which is good as it achieved the reasonable score of reliability (George & Mallery, 2003).

With the assistance of AMOS 19.0 program, the path diagram was developed as below:

Table 3.1.3b Test 2 Analysis’ result



Chi-square = 1340.7, Df= 10
 CMIN/Df= 134.07, NFI=-4.9
 CFI= 0, RMSEA=0.638

Chi-square = 1973.56, Df= 10
 CMIN/Df= 197.35, NFI=-4.68
 CFI= 0, RMSEA= 0.775

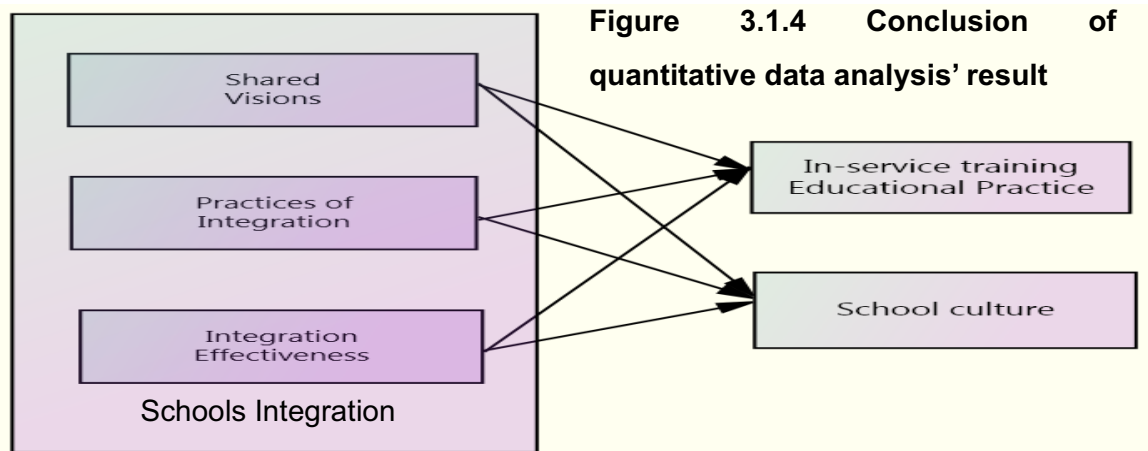
From the above figure, it is significant to state that Shared visions, Practices of Integration an Integration Effectiveness variables actually causes the In-service training and School culture variables. According to Nakatome & Kuramoto (2001), the most important factor about the functions is collaboration that would build up the positive relationship between organization and teachers, and among teachers, which would have direct and indirect impacts on school improvement. Based on the quantitative

results above, it can be translated that teachers in J and E schools in Tosu have put a lot of effort in working together in many activities of this project, in order to contribute to a better professional development activities. This means that the collaboration between J and E has effective impact on School improvement where not only student academic achievement but teacher's improvement as well is needed. Because in other words, "Student achievement is the product of formal study by educators"(Joyce and Showers, 2002).

3.1.4 Conclusion

Through 3 methods of quantitative data analysis method, I want to state some conclusion like below:

- The project of Schools integration has progressed through the year with more collaboration of teachers from acknowledging the importance of Schools Integration to the approach to more effective practical activities.
- From the point of view of teachers, School Integration has influence on professional development activities (in-service training) and each school culture, particularly, having common understanding about students (shared vision) and practical integration, integration effectiveness.



Up to now, the general picture about the project of School Integration, particularly, what teachers in J and E schools think about this project was provided by quantitative data analysis results. It's necessary to capture more depth and provide insights as to the "why" and "how" of these attitude and behaviors. Qualitative data analysis will make quantitative data easier to understand, provides more details and nuances, and explain what research objects mean to the people involved^{xvi}.

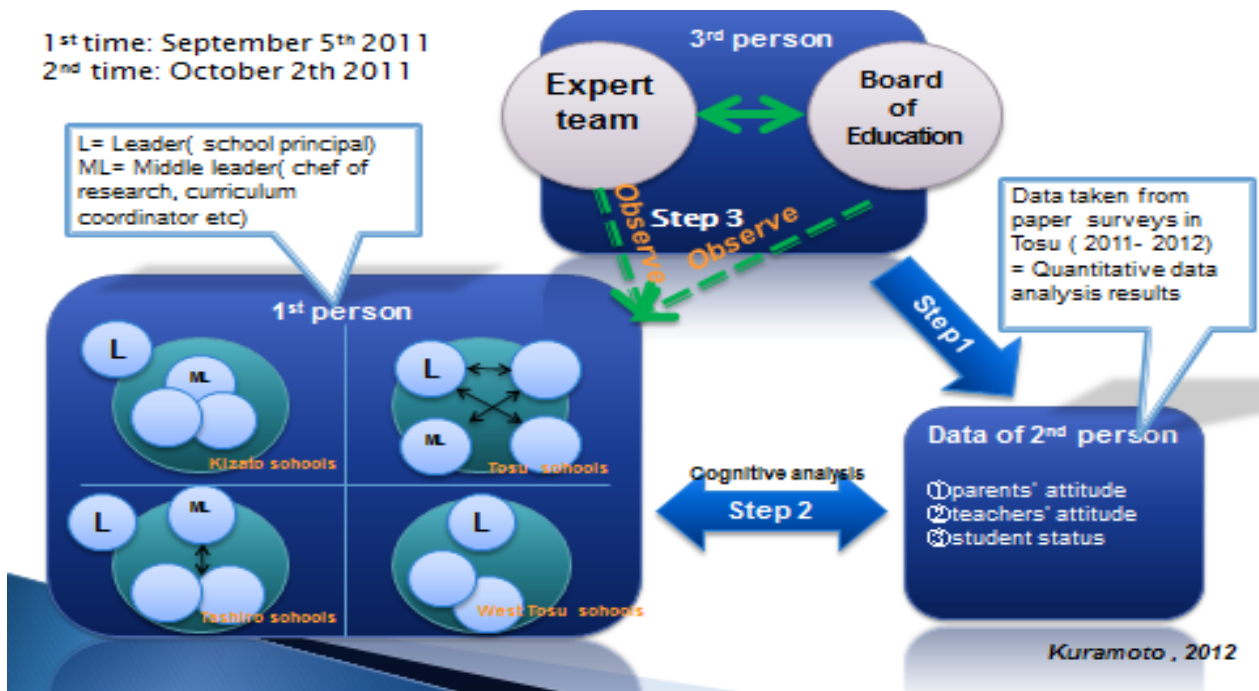
3.2 Qualitative analysis results

3.2.1 In-service training

As mention above, a special qualitative method of "Meta Cognition" lesson study is also taken place by Tosu city Board of education. The Lesson Study here can be

considered as a workshop/ in-service training for teachers from schools where operating the Schools integration project. The members of this workshop can be divided in 3 groups. 1st person in the figure below includes: school principals (or vice principle) (L), middle leader(Chief of research, curriculum coordinator etc) (ML), and teachers who are in charges of operate the project^{xvii}. 2nd person here is replaced by the quantitative data analysis results, which is processed by team expert and presented at the workshop. The reason why I named this group 2nd person is that the quantitative results are all about teachers- parents- students who related directly to the project. The 3rd group includes Board of Education officers (BOE superintendent, BOE chef of school division, etc) and expert team (Prof. Kuramoto and researchers).

“N Figure 3.2.1 Meta cognition lesson study for all schools



From 2011 to 2012, this kind of Lesson study was taken 2 times, in September 2011 and October 2012 in Tosu BOE office (See Figure 2.4). In this research, I want to focus on the latest workshop only, because in the second workshop, data analysis results were presented with more comparison with previous year. This is more suitable to observe the reflection of project members after a period of operation it.

The table 3.2.1 is the record of researcher’s observation during the workshop. There are 4 columns that contented with 3 parts of the discussion: about In-service training –Educational practices, School Culture, Schools Integration, respectively to the content of survey. In Tosu city, schools are divided into 4 groups where each group has one J and several E. 4 rows here respectively show 4 groups of schools whereas teachers in the workshop were also set to sit into groups in order to discuss easier.

Table 3.2.1 Teacher's survey

	Educational practice and in service training	School culture	Schools integration
Tosu J District	<p>In comparison with last year, this year the attitude of Manabiai (Co-learning) of teacher decreases.</p> <p>⑳: ICT is lower in J because there are more investment in E, for example the electric board or television—> because of the difference in applying ICT</p>	<p>Most of schools have improved, especially Tosu E.</p> <p>⑩⑪Is it possible to say that The school culture is better because of the schools integration? (Schools integration is only one of many activities) => It is necessary to show the relationship between school culture with school integration</p>	<p>Different for each subject's lesson study</p> <p>⑨ there're no actual practice yet but everybody acknowledge the plan</p> <p>⑧Teachers can acknowledge their weakness in cooperation among E schools</p>
West Tosu District	<p>The attitude of J teachers is raising because of the effective discussion among 3 principals during last school year.</p> <p>Particularly, they talked a lot about the school cleaning activities or greeting activities.</p> <p>Experience learning in J for E student was taken in August.</p> <p>August 23th, every teacher must take part in every Lesson Study happened between J and E in order to at least know each other..</p> <p>⑮⑯become the same</p>	<p>New principal has come with the motto of "If you think you can do it, you can do it"</p> <p>Everybody must join the in service training</p> <p>⑧Needs more effort into the model class</p>	<p>Lesson study mostly taken in E, that's explained the reason why there's a gap between E and J.</p> <p>⑨Once time per term is difficult to operate, which should considered to operate 1time in a school year</p> <p>Still not complete the model lesson</p> <p>Asahi E still not connect strongly with community but Fumoto E is pretty good.</p>
Tashiro District	<p>J is falling but E is raising-> can't not figure out the reason</p> <p>⑮J is falling because J teachers are busier?</p> <p>Cooperation among E is very important</p>	<p>J is raising</p> <p>⑧⑨J is better because of the common understanding between J and E</p> <p>⑫ J teachers organized meeting to check the progress gradually</p>	<p>③Both J and E is raising-> want to give report next year</p> <p>③⑤E student can experience club activities in J</p> <p>⑨Team teaching is difficult</p> <p>⑪Low-> Wakaba E is in charge</p>

Kizato District	E is raising but J is still the same-> because of the TT method. Ideas of teachers: in service training in J and E both have the same topic in order to increase the common understanding	J is better because of new principal J school culture becomes better because of E school culture can follow up, especially ⑥	②④because the way discussion is taken differently from last year
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According to the discussion, there are some conclusions which state as below:

① Communication like discussion or meeting is the decisive factor to the successful quality of schools integration project. Teachers think that the more common topic they have in meeting, the more shared vision they can achieve. Learning communities involve a high level of dialogue, conversation, discussion and collaboration. Everyone learns, including the teacher or group leader (Wilson & Cole, 1997; Bereiter & Scardamalia, 1993).

② Understanding the target and plan can promote consciousness about Schools Integration, especially communication among school and community, parents.

③ Leadership significantly plays the important role. Superintendents (and other district administrators), principals, and teacher leaders have a tremendous influence on district and school culture and the quality of professional learning in schools.

In summary, from the point of view of expert team, the teachers at the workshop acknowledge well the importance of having shared visions about schools integration and also cite the importance of their role in leading their school cooperate actively with other schools for school’s improvement. As mention above (see 2.3), the originality of this workshop is the way “subjectivity” and “subjectivity” can connect to the “inter-subjective meta-cognitive approach”. So it’s necessary to investigate all the ideas of 3rd person, who has an importance role of observation the workshop and the project to provide more objective results.

3.2.2 Interview with project leader

Semi- structured interviews were conducted in order to collect information in the specific areas (Bernard, 2000; Burnard, 2005), these are, subject’s attitude, response, behaviors and reflections related to his own practice of schools integration as a leader of the project. To maintain these interview foci (Bernard, 2000), an interview guide was used which contained 9 questions (See Figure 3.2.1). However, the wording and ordering of questions in the interview guide allowed for changes in response to subject’s expressions (Halcomb & Davidson, 2006).The interview was taken in August, 29th, 2012 in the office in about 1 and a half hours.

Table 3.2.2 Semi- structured Interview Questions

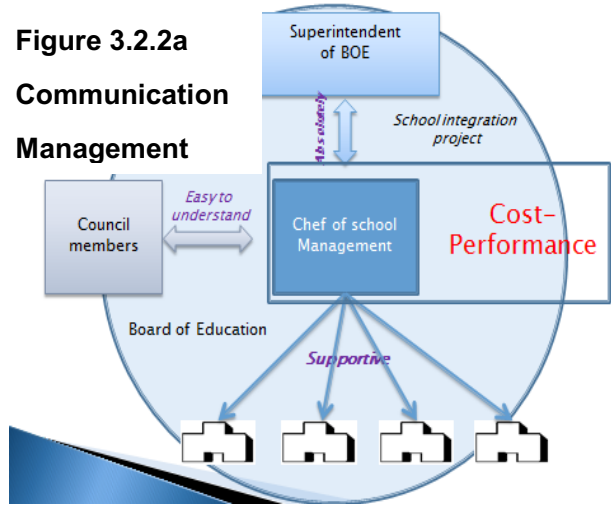
What do you think about the role of communication management to the success of the project?
In the process of planning the project, did you have communication plan like meeting, instruction, workshop through telephone, mail etc, in order to build relationship with and among members?
When you manage the communication, is there any achievement, is there any conflict?
What do you think about the role of project leader in communication management? Do you have any strategies while operate it?
Speaking of the project quality, it usually refers things (in Japanese Koto/ Mono ^{xviii}), what is your opinion about the quality of education? In the project of schools integration, what is the quality?
Refer to quality, what factors of aspects that need to be focus on? How did you plan about quality management in controlling process or monitoring process?
What is the role of project leaders in managing the quality of education?
Do you think at the level of BOE- the administrative educational leader- project management is the promising theory that suitable to develop?

Interviewee is the BOE Chief of School Division who has actively and tremendously contributed to the success of this project. It's obviously important to point out the values of project leader, in this case, the Chief of School Division. His influence is exercised in the countless decisions they make and actions they take each year that determine whether professional development will focus on student learning, whether the learning will be embedded in teachers' daily work, and the means by which the effort will be evaluated (for instance, whether changes in teaching practice and improvements in student learning will be assessed in addition to teachers' satisfaction with the experience). Too often, educational leaders underestimate their power in shaping professional learning and the quality teaching that flows from it^{xix}.

The purpose of the interview is to pursue in-depth information about how Board of Education carries out the project. The transcripts of tape-recorded are in Japanese, analysis strategy is Affinity diagram (KJ method) based on inter-subjective discussion (Triangulation).

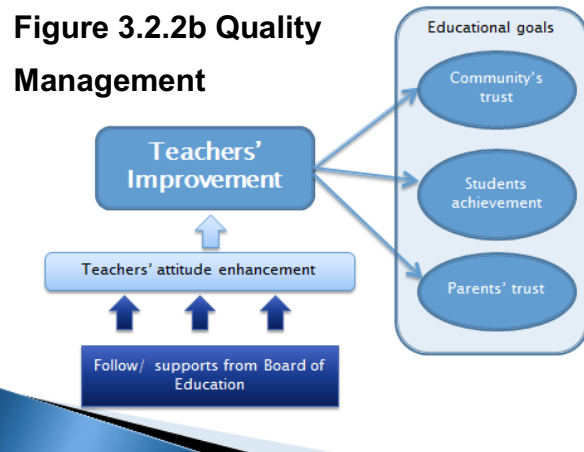
There are 2 main concepts that can be extracted from the interview results: Communication Management and Quality Management. Communication Management, according to Project Management Theory^{xx}, is the management, measurement, and control activities undertaken to ensure the effectiveness of communications and includes processes of Communications Planning, Information Distribution, Performance Reporting, Managing Stakeholders. While, Project Quality refers to things like applying proper project management practices to cost, time, resources, communication, etc^{xxi}.

In this case, Communication Management to the leader of this project includes various kinds of task and strategies. Being the most effective project communicator, He carries out communication with not only core project team member but also to schools, superintendents and member of BOE councils with different ways. For example, it's necessary to keep solid report to the superintendent, who indirectly leads the whole team to reach educational goal. To the BOE councils' member, it's important to manage expectations like keeping report that response to their understanding about actual educational activities. By employing effective listening



skills, paying attention and noticing feedback, he also emphasizes his supportive role in communicating with schools teachers/ leaders- the key principles to the success of project. Above all, the principle of “People and Politics go together” (Gregory M.Horine, 2009) demonstrates an understanding for the political nature of the project environment, which here is the keyword of “cost- performance”. The cost- performance becomes big issue to deal with for every decision that he can make during operation of project.

Second concept that is focused on here is Quality Management, which can be translated as the Quality of Educational Activities in the project of Schools Integration. Most of the best practices now recommended for the project management have quality concerns as their foundation. This means that understand the quality of the project is the prerequisite things needs



to set up before planning project. In this case, the Chef of School Division considers Teachers' improvement is the most important thing to the success of project. It equals to the fact that teachers' improvement can bring school improvement, including student academic achievement, community and parents' trust. He also figured out his strategies in improving professional development for teachers by enhance their attitudes and behaviors with fully support from BOE. The more teachers understand about Schools

Integration and its effectiveness, the more they develop themselves in dynamic way to collaborate for a professional community.

3.2.3 Conclusion

Up to this point, researchers have analyzed an empirical research about schools integration in Tosu city which cited positive results related to the theory of Project Management. It can state that the qualitative data analysis approach which comes from the observation of expert team (through meta-cognitive lesson study workshop) and the point of view of project leader (through interview with Chief of School Division) showed that a high level of dialogue, conversation, discussion and collaboration should be managed effectively as the key factor to the success of the project. A achieved communication management also can lead to a professional development of teachers community, which play tremendously important role in reaching education goal.

4. Findings

According to the report of Ministry of Education, it is necessary to carefully investigate properly and concretely the system of schools integration in order to improve to a stronger, more effective 9 years integrated curriculum, for a better education quality^{xxiii}. At the level of BOE, when operating Schools integration, Project Management Theory can be one of effective approach to process.

Using quantitative data analysis and qualitative data analysis methods, the researchers found that:

- Shared visions –common understanding between teachers from J and E is the decisive factor to the project management quality. In order to have effective communication management, discussion or meeting or in-service training should be taken more effectively.
- Quality management addresses both product quality (educational quality: student achievement and teachers' improvement) and process quality (like quality of communication). This is pointed out clearly through the interview with Chief of School Division who considered quality of education is the quality of teachers' professional community.

These finding is expected to give out some concrete practical ideas about how to operate educational activities like Schools integration at the administration level. I also hope that this research gave out empirical data analyzed results with reliabilities and validities by using several methodological approaches.

4.2 Limitation and future development

At the level of administrative educational leader, it would be too early to give out the conclusion about the effectiveness of Schools Integration project without investigating concrete case study.

It's necessary to research more about single case-study in order to answer the questions of:

- ① What kind of supportive communication and its effectiveness to schools level?
- ② Is the teachers' improvement can bring school improvement, parents and community trust?

To answer these new research questions, in the next part, it is necessary to find a single schools integration sample as a micro observation to find several improvements in integrated curriculum development and school culture.

In addition, it is important to keep in mind that the results above solely developed through teachers' survey whereas students and parents surveys haven't been mentioned yet. Continue to work on parents and student's survey analysis to figure out detailed results and develop the intermediate theory about Project Management in educational research are needed to be studied.

ⁱ Chuichi Gap means the problem of student when he/she is in the transition to junior high school

ⁱⁱ 『小中連携、一貫教育に関するこれまでの主な御意見について』 文部科学省 (2012)

ⁱⁱⁱ As a part of these projects results evaluation, research teams took an interview with leaders of the project in August 2012. Chief of School Division in BOE has contributed tremendously to the success of the project from collecting data to organizing in service training so it's adequate to investigate what vision, expectation that project managers have because of their important leadership roles.

^{iv} 小学校と中学校との連携についての実態調査(結果)平成23年10月14日文部科学省

^v "Strategies for Educational Inquiry" Indiana University

http://www.indiana.edu/~educy520/lecture_slides/520pre_exp_designs.pdf

^{vi} Reason, P and Bradbury, H. Handbook of Action research, London, Sage 2001

^{vii} University of San-Diego 5th Annual Symposium, "Action Research in Education and Leadership" (May16&17,2008)

^{viii} R Phelps, Challenging learners through metacognitive reflection, 2002

^{ix} This type of item is referred to as a "Likert item" because it was introduced by an organizational psychologist named Rensis Likert in 1932 in a journal article titled "A Technique for the Measurement of Attitudes." Others used this type of item at that time, but Likert was the first to assign numbers from 1 to 5 to the response options.

^x "小中一貫教育の展望と課題—小中学校の円滑な接続を目指して—"大島秀雄

^{xi} 小学校と中学校との連携についての実態調査 (結果) 2011 Oct, 14th 文部科学省

^{xii} "Doing quantitative research in education with SPSS- Daniel Muijs, 2011

^{xiii} KMO (Kaiser -Meyer -Olkin) measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to proceed. From the same table in output result, we can see the Barlett's test if sphericity us significant (less than 0.5), this means that the variables are correlated highly enough to provide a reasonable basis for factor analysis.

^{xiv} Alpha scale reliability analysis (Pett et al.,2003) was conducted to analyze the psychometric properties of items and the internal consistency reliability of all items. Only those items with acceptable corrected item-total correlation coefficients (> 0.25)(Blaikie, 2003) were retained.

^{xv} 小学校と中学校との連携についての実態調査 (結果) 2011 Oct, 14th 文部科学省

- ^{xvi} "Evaluation Method" www.socrates.berkeley.edu
- ^{xvii} Each school has at least one teacher as representative, can be called the "Schools Integration Coordinator".
- ^{xviii} Mono/Koto is a set concept which given out by K.Uchiyama whereas he described Koto or "actuality" is an active side of the world and Mono or "reality" is a cognitive side of the world (Read more at "The theory and Practice of Actuality" (2003)).
- ^{xix} "Teacher Professional Development: It's Not an Event, It's a Process" Sandra H. Harwell (2003)
- ^{xx} <http://www.qfinance.com>
- ^{xxi} Rose, Kenneth H. (July, 2005). Project Quality Management: Why, What and How
- ^{xxii} Managing expectations(managing the balance of perceptions and realities with expectations) is one of the key factors that Project Communicator has ensure because " the quality and effectiveness of your communications will have tremendous impact on stakeholder perceptions" (Gregory M.Horine, 2009)
- ^{xxiii} 『教育振興基本計画』(平成20年7月1日閣議決定) 2011 Oct, 14th 文部科学省

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