

# TEACHERS' CONCERNS REGARDING THE IMPLEMENTATION OF INTEGRATED THEMATIC INSTRUCTION (ITI)

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## ABSTRACT

*The purpose of this study was to explore primary grade teachers' concern about an educational reform initiative called Integrated Thematic Instruction (ITI) in Indonesia. In 2006, the Indonesian Ministry of Education mandated primary school teachers to implement ITI. Using a convenience sampling method, 150 teachers in one major province in Indonesia participated in the study. The data collection method used a standardized questionnaire from The Stages of Concern Questionnaire (SoCQ). The data analysis employed in this research involved descriptive, quantitative methodologies. The results of the study revealed that the teachers have unresolved awareness and self-informational concerns. This study provides perspectives on curriculum implementation in general and ITI in particular by adding to the small body of existing literature concerning how teachers regard the new policy implementation. This study provides insight into policy implementation approaches by clarifying how the new curriculum can be adapted during the reform process. Recommendations of this study include the need to build a comprehensive system for monitoring, supervising, and scaffolding teachers' implementation of ITI.*

**Key words :** *integrated thematic instruction, stages of concern, curriculum reform.*

## 1. INTRODUCTION

Like many other developing countries, Indonesia has undergone significant educational reform in recent decades. However, no major improvements in student achievement have been identified in national exam scores. Recent studies by the Ministry of National Education (MONE) and the Indonesian Department of Education reveal that students are not satisfied with their learning outcomes, and they are unprepared for the work force (MONE, 2001b). These studies identified several factors that cause this lack of quality in Indonesian education. One of the main factors noted was that reform efforts mandated from top levels do not result in subsequent changes in classroom instruction. Guskey (1988) articulated that while the execution of meaningful and beneficial change in classroom practice sometimes requires only minor changes in the classroom activities of teachers, in many cases it would require a new curriculum. Although these changes can create new opportunities for instructional improvements, they are often ineffectively

implemented by teachers in the classroom (Chan, Chan, Cheung, Ngan, & Yeung, 1992).

Addressing the above situation, the Indonesian government has taken broad measures to clarify and standardize learning objectives in recent years, specifically through legislation known as "Curriculum 2006". In addition, there is also a considerable effort to implement educational reform particularly in teaching practices at the elementary school level that aligns with the National Education Standard particularly the Process Standard in Decree of Education Minister No. 41/2007, the Content Standard in Decree of Educational Minister No 22/2006, and the Graduate Competency Standard in Decree of Educational Minister No 23/2006 developed by the Indonesian Department of Education. The curriculum is competency-based, highlighting a shared responsibility between school and government and calling for change in the teaching-learning process. The government set up the standards of competency and basic competencies for students at all levels of education. In order to implement the standards, the schools have to transfer

the standards into measurable indicators of learning for students. All the schools throughout Indonesia have to follow the standards and were to implement them by the end of the academic year 2009-2010 (MONE, 2008a). Part of this legislation requires that school subject matter be taught according to thematic units in grade 1, 2 and 3 through a method commonly known in the U.S. as Integrated Thematic Instruction (ITI). To effectively employ ITI in the classroom, teachers must work independently and collaboratively to create a planning document that outlines theme focus and interdisciplinary integration. However, according to an investigation by the Indonesian Department of Education, only 13% of teachers nationwide had completed this plan (MONE, 2008a). Although the literature outlines ways to support the implementation of the standards, more research must be conducted to address local reform. Since teachers implement the reform and ultimately determine the degree of student learning, it is important to know how the standards are transferred and to understand teachers' concerns (Rakes & Casey, 2002).

ITI was selected as the subject of this study for several reasons. First, only a small percentage of students experience contextual learning while the majority receive instruction based on specific subject matter. As a result, the rate of retention and dropouts is alarmingly high especially for first graders (MONE, 2008a). Second, the retention and dropout rates are worse in remote areas where there is little to no kindergarten instruction (MONE, 2008b). Consequently, those students are not prepared to enter primary school and begin learning the required subjects (language, civics, social studies, science, and religion), and thus have to develop simultaneous skills in unfamiliar subject matters (Sweeting & the Early Grade Project Task Team, 2000). Finally, the current Indonesian government report shows that teachers' understandings of core primary subjects remain low, i.e., Indonesian Language (51.5%); Social Studies (38.3%); Sciences (43.5%); and Math (36.5%) (MONE, 2003f).

According to Hall and Hord (1987, 2001), teachers will have differing thoughts, feelings, attitudes, and perceptions – framed as “concerns” – about the adoption and use of innovations such as ITI in the classrooms. While a number of potentially relevant models exist, the Concerns Based Adoption Model (CBAM) is an appropriate tool in evaluating the implementation of ITI (Hall, George, & Rutherford, 1979; Hall & Hord, 1987, 2001). This

model has been used in various researches and is widely accepted in educational research providing a participant-based focus for understanding an individual's attitudes, perceptions, and concerns about a new innovation (Adams, 2002; Ansah & Johnson, 2003). Initially, the model was framed by way of observations of K-12 teachers and college professors as they adopted and implemented educational innovations (Hall & Hord, 1987). The central assumption of CBAM is that any implementation of innovation involves an inability for an organization to change until the individuals within it have implemented the innovation (Hall & Hord, 1987, 2001).

To examine the personal side of change, the CBAM examines various levels of user concerns related to the adoption of a new innovation designated as “Stages of Concern” (SOC) (Hall & Hord, 2001). The SOC defines the potential users or adopters' concerns, as “the composite representations of thoughts, feelings, preoccupations and considerations given to a particular issue or task.” According to Hall & Hord (1987), “all in all, the mental activity composed of questioning, analyzing, and re-analyzing, considering alternative actions and reactions, and anticipating consequences is *concern*” (p. 59). Moreover, concerns are believed to have “a powerful influence on the implementation of a change, and they determine the kinds of assistance that teachers find useful” (Hord, Rutherford, Huling-Austin & Hall, 1987, p. 30).

According to LaRocco and Murdica (2009), “Public policies that aim to improve the quality of education in our schools often bring change, and the need to implement innovations not only at the organizational level but also at the individual teacher level” (p. 3). Considering the increase in needs; the complex, and systemic nature of the change; and the central role of teachers in the implementation process, it is important to critically examine how teachers' concerns describe the implementation of ITI. To explore this issue, this study proposed the following research question: “What are the stages of concern of primary school teachers regarding the implementation of Integrated Thematic Instruction (ITI)?”

## **2. LITERATURE REVIEW**

The implementation of ITI for primary schools in Indonesia is a mandate from the government through the Regulation of MONE No 22/2006 about

Content Standards for elementary and secondary education. In order to support teachers in implementing ITI, the government provides guidelines for the characteristics of thematic instruction at the primary level (MONE, 2009) as follows:

- 1) *Student-centered Learning*. Thematic instruction in line with modern learning approaches posits student in the main role in the learning process while teachers work as facilitators.
- 2) *Provide Direct Experiences (Hands-on Learning)*. Thematic instruction can give students direct experiences relating to their lives giving tangible applications of abstract concepts.
- 3) *Subject Integration*. In thematic instruction, the separation among subjects is transparent. The focus of learning is on themes that most closely connect with students' daily lives.
- 4) *Whole Learning*. Thematic instruction presents concepts from various subjects in a related whole so that students will be better able to solve problems encountered in everyday life.
- 5) *Flexibility (Responsive)*. Thematic instruction is flexible where teachers may link teaching materials from one subject with other subjects, connecting with students' life.
- 6) *Variety of Assessment*. Students have an opportunity to optimize their potential according to their interests and needs. Evaluations take into account students' intrinsic motivation.
- 7) *Using the Principles of Engaged learning*. Learning is conducted in various ways such as role-play, games, and general discussions. The aim of all instructions is that students enjoy their learning (for detailed explanations see MONE, 2009, p. 9).

### 2.1 Need for Curriculum Reform

Demands for the latest curriculum reform, which logically follows the restructuring of the administration of a new system of government, relate to recent political and economic trends coupled with some basic social and demographic facts. Indonesia, a country made up of about 17,508 islands, nearly 6,000 of which are inhabited, with the five largest stretching across over 3,200 miles of Equatorial Ocean, is the fourth most populous country in the world. With 238 million people who are ethnically and linguistically diverse, Indonesia is a unitary state, which is considered to be the best form of government to maintain national unity and national integration.

Despite its diversity and size, Indonesia has one of the most centralized forms of government in terms of its social, political, and economic systems (Purwadi & Muljoatmodjo, 2000). A priority of the educational reform of 2000 in Indonesia was to restructure central education programs to offer the provinces a combination of flexibility in implementation and accountability in meeting the standards.

### 2.2 Integrated Curriculum

The definition proposed by Moss and Noden (1995) stated that curriculum integration "generally refers to making connections between and among the various subject areas" (p. 358). More detailed, Martin-Kniep, Feige, and Soodak (1995) stated that integration "generally refers to any putting together or relating of things, either conceptually or organizationally" (p. 228). According to them, there were four types of integration: "(1) integration of content; (2) integration of skills/processes; (3) integration of school and self; and (4) holistic integration" (p. 230). Moreover, Gehrke's (1998) definition was more descriptive and generalized in scope: "Curriculum integration is a collective term for those forms of curriculum in which student learning activities are built, less with concern for delineating disciplinary boundaries around kinds of learning, and more with the notion of helping students recognize or create their own learning" (p. 248). Continuing the discussion regarding curriculum integration, Dressel (1958) argued that "the purpose of curriculum integration is to provide opportunities for students to make connections between skills, knowledge, concepts, environment and themselves, and to use these connections to relate to the real world and solve complex and interconnected problems" (as cited in Taft, 2007, p. 9).

Integrated Thematic Instruction (ITI) can be "a powerful tool for reintegrating the curriculum and eliminating the isolated, reductionist nature of teaching around disciplines rather than experience" (On Purpose Associates, para. 4). Thematic instruction is a part of integrated curriculum that incorporates using a theme as the "conceptual glue" for students, strengthening bonds to knowledge across curricula. It has become one of the reform recommendations in the educational field in the United States in order to prepare the national work force to compete in the global economy (Czerniak, Lumpe & Haney, 1999). By making connections among subject areas or within

the sciences, students will develop a deeper understanding of the content (National Research Council, 1996). However, this national call for integrated and thematic instruction does not always make its way to the classroom (Hurd, 1991). Subject matter has traditionally been taught in schools as a separate stand-alone subject. Integration rarely exists between subject matters (e.g., Social Studies, Mathematics, Language Arts) into one theme or within a subject matter. As a result, History, Economics, and Geography are generally taught separately instead of unified into Social Studies.

### **2.3 Concerns Based Adoption Model (CBAM)**

Concern Based Adoption Model (CBAM) is a conceptual framework that describes, explains, and predicts probable teacher concerns and behaviors throughout the implementation of an innovation (Hall, George, & Rutherford, 1979; Hall & Hord, 1987, 2001). It is based on previous work done by Frances Fuller (1969) who originally introduced the term “concerns” to identify personal feelings and perceptions. Fuller, in her work with pre-service teachers, proposed a model for teacher education based on understanding a teacher’s unrelated concerns (focused on completely different things), self concerns (focused on personal questions about the innovation), task concerns (focused on the management of the innovation), and impact concerns (focused on students using the innovation). Fuller defined concerns as “the emotions, perceptions, attitudes, and feelings people experienced when confronting a new innovation” (as cited in Petherbridge, 2007, p. 44).

The CBAM model provides tools for measuring the process of implementation such as standards-based education reforms. One tool, the Stages of Concern (SoC), focuses on understanding an individual’s personal concerns about the change. Hord et al. (1987) argued that, “being concerned about change is universal even though the nature of change varies from person to person” (p. 30). There are three procedures for assessing concerns. The first and most practical is face-to-face informal conversation. It is more appropriate for gathering information from individuals. The second procedure is the open-ended statement. This procedure is more formal than the conversation method and usually is not used with one

person. It is more appropriate in soliciting information from groups. The third way to assess concern is the Stages of Concern Questionnaire (SoCQ), a quantitative, 35-questions Likert scale instrument. This measurement is most often used with groups. The power of this questionnaire is that it was constructed to apply to all educational innovations (Hall & Hord, 2001, pp. 56-79).

According to the SoC model, the concerns are called stages because usually there is developmental movement through the implementation process. This developmental nature of concerns is not absolute and does not occur identically for each individual. Hord et al. (1987) argued that, “the pattern and intensity of individuals’ concerns are directly affected by the kind of innovation and the amount of assistance provided” (p. 32). It is possible that unrelated, self-concerns will be most intense early in the implementation process and decline with time, while task concerns will later increase. Only after task concerns have been reduced in intensity can impact concerns be expected to emerge. Those four developmental dimensions of concerns – unrelated, self, task, and impact – are not “mutually exclusive” (Hord et al., 1987, p. 30), meaning one can have some degree of concern at all stages at any given time, and one of these areas will take precedence becoming a peak stage of concern.

Those four, more broadly defined stages of the SoC (unrelated, self, task, and impact) are the reflection of seven categories of concern (awareness, informational, personal, management, consequence, collaboration, and refocusing) derived from several research studies on educational innovations. Accordingly, the concerns of individuals change in a logical progression as users become more skilled in the use of an innovation, sequentially from unrelated, to self, to task or management, and finally to impact concerns (Fuller, 1969; Hall & Hord, 1987; Hall & Hord, 2001; Hall, George & Rutherford, 1979).

### **2.3 Concerns Based Adoption Model as a Model for Change**

The concept and result of this study will be based on a specific approach called the “concern-based approach” (Hall & Hord, 1987, p. 5). This approach is derived from the conceptual framework known as Concern-Based Adoption Model (CBAM), initially introduced in 1973. A precondition for this approach is that an effective user understands how he or she

perceives change and adjusts what he or she does accordingly (Hall & Hord, 2001). In the education context, in order for schools to improve, teachers must change. For teachers to change, there is must be promising innovations that they develop or implement or adopt and, when necessary, adapt. Historically, teachers were “provided with various workshops, materials, and other resources based on the needs of others rather than on an understanding of teachers’ need” (Hall & Hord, 1987, p. 5). Using concern-based approach, administrators and teachers work collaboratively to meet teachers’ emerging needs.

Specifically about the Stages of Concern (SoC), its greatest strength is that it “acknowledges and gives a precise language for the reactions, feelings, perceptions and attitudes individuals have when experiencing a new program, practice, or technology” (Petherbridge, 2007, p. 50). It stresses the importance of the personal side of change, particularly from the perspective of the “front line” users such as teachers. Additionally, this model “empowers people to make change while supporting their rational assessment of needs and means and, perhaps more important, bringing them together to deal with change as an organized group” (Sashkin & Egermeier, 1992, p. 15). The SoC helps make sense of the change process, and provides some concrete tools for moving that process along and continually evaluating the progress of the change as it impacts both individuals and the organization (Horsley & Loucks-Horsley, 1998). Dooley argues that when determining the diffusion of an innovation within an educational context, a natural place to start is with the individuals involved, as appropriate professional development activities and interventions cannot be designed, nor should they be designed, without an understanding of user concerns (as cited in Petherbridge, 2007, p. 50). Importantly, the SoCQ instrument also has strong “psychometric qualities” (Hall & Hord, 1987, p. 69) and can provide both baseline and post-intervention data that help monitor the innovation process and guide follow-up support (Horsley & Loucks-Horsley, 1998).

### 3. RESEARCH METHODOLOGY

This research employed a non-experimental research design, specifically a cross sectional descriptive design using a survey methodology for

data collection. In non-experimental research designs, “there is no manipulation of an independent variable and no random assignment to group by the researcher” (Johnson & Christensen, 2008, p. 43). This approach means that this research design studies the world as it naturally occurs. The researcher measured the degree of relationship between variables. A non-experimental design was chosen because it fits with the research question in which the researcher intends to examine the relationship between variables that cannot be manipulated. A cross sectional design was appropriate for this study because the data can be collected from the respondents at a single point in time (Johnson & Christensen, 2008). The descriptive purpose of the design allowed the researcher to describe and explore relationships between variables. The survey method of data collection allowed for information to be collected from the population using a questionnaire, thus, improving the efficiency of data collection (Borg & Gall, 1983).

#### 3.1 Population & Sample

The population of this research was primary grade teachers in one major province in Indonesian schools who currently taught first, second or third grade students and employed ITI as part of their responsibility. Primary grade teachers were defined as classroom teachers at the first through third grade who teach whole subjects such as mathematics, science, Indonesian language, social studies, civics, physical education, and in some cases religious education (Islam, Christianity, Protestantism, Hinduism, and Buddhism).

This study employed a convenience sampling method in which the participants were selected because of their accessibility and convenience (Johnson & Christensen, 2007). Within Indonesian schools, all primary grade teachers were nationally mandated to implement ITI in their classrooms. Primary grade teachers from one foundation in a major province in Indonesia were a sample of primary grade school teachers easily accessible to the researcher. For this reason this group of teachers became the sample from which potential participants would be recruited. Using the number of potential participants 151 as the “population”, the Krejcie table indicated a number of 113 participants were needed for a 95% confidence interval for this convenience sample.

### **3.2 Setting**

The research was conducted at 46 schools of a foundation in one province of Indonesia. These schools were located in five different regions of that province. This setting was chosen because they were implementing the national standards and there was not any comprehensive research about the implementation of the ITI in that area.

### **3.3 Data Gathering/Instrumentation**

The Concern Based Adoption Model is a research-based model used to analyze teachers' attitude and behavioral changes regarding their implementation of an innovation. The model has three dimensions namely Stages of Concern (SoC), Level of Use (LoU) and Innovation Configuration (IC). This study utilized the first dimension of the model as the measurement of teachers' attitude toward the ITI implementation. The first part is the Stages of Concern Questionnaire (SoCQ) developed by Hall and Hord (2001) that would be aimed at measuring one of the independent variables, the respondents' peak or the most intense level of concern associated with the use of ITI.

The instrument was developed to describe the affective side of change – teachers' people reactions, feelings, perceptions, and attitudes (Hall & Hord, 2001, p. 81) about their implementation of the innovation. The permission to employ the questionnaire, to modify it by replacing the word "innovation" with the words "integrated thematic instruction (ITI)", and to translate it into Indonesian language were obtained from the Southwest Educational Development Laboratory (SEDL) in Austin, Texas, as the current holder of the copyright.

### **3.4 Stage of Concern Level**

The data in this study uses the stage of concern level measured by SoCQ, which portrays the relative intensity level of the stages of concern of primary grade teachers. It contained 35 items using an eight point Likert rating scale, which ranges from 0 as "irrelevant" to 7 as "very true of me now." Since its creation and validation, this instrument has been widely used by many researchers in a variety of educational settings, including recent studies examining instructional innovations in educational reform (Faircloth, Smith & Hall, 2001; Newhouse, 2001; Petherbridge, 2007; Rout, Priyadarshani,

Hussin, Pritinanda, Mamat, & Zea, 2010). Therefore, in this study, the use of the SoCQ in fact did not need to be validated because it is a standardized instrument accepted by many researchers in various settings "across nationalities and cultures for many years in which concepts and items are validated appropriately to this time" (Newhouse, 2001, p. 9) as well as the fact that this study followed the procedures suggested by the authors of the instrument.

The reliability of the SoCQ showed that it has an acceptable internal reliability coefficient, meaning that the items constituting a measure relate to the same phenomenon (O'Sullivan, Rassel & Berner, 2003). Based on the Cronbach Alpha's item analysis for internal reliability measurement for the seven categories (from stage 0 to stage 6) of the SoCQ, it resulted in a low reliability alpha coefficient of .64 for unrelated, .78 for informational, .83 for personal, .75 for management, .76 for consequence, .82 for collaboration, and .71 for refocusing (Hall et al., 1979, p. 11). According to the standard in social science literature, alphas of < .60 are considered as unacceptable and alphas > .70 are considered as acceptable with reliability (Neill, 2004). The SoCQ reliability is not extremely high but they are acceptable (Petherbridge, 2007).

The validity of the questionnaire was initially measured by the SEDL staff using inter-correlation matrices and interview data. The result showed that the scores of the SoCQ related to each other and other variables. From two correlation analyses, Hall et al. (1979) demonstrated evidence for the validity of the stages. The first showed that 83% of the items had higher correlations with the stage they had been assigned than with the total score of the instrument and the second analysis indicated that 72% had higher correlation with the stage to which they had been assigned than with any other stage (Ansah & Johnson, 2003).

For the SoC data interpretation and analysis according to the guidelines in the technical manual for scoring and interpreting the information gained from the SoCQ, the SoCQ can be used to construct individual or group concern profiles by taking the raw score for each stage and converting the scores to percentiles to draw the profile plot showing the pattern for the profiles' interpretation and description (Hall et al., 1979; Hall & Hord, 2001). A total raw score can be computed as shown in Table 1.

Table 1: Raw Score Computation

Developmental Dimension	Stages of Concern	SoC Stages	Raw Score Computation
Impact	Refocusing	Stage 6	Items 3 + 12 + 21 + 23 + 30
	Collaboration	Stage 5	Items 6 + 14 + 15 + 26 + 35
	Consequence	Stage 4	Items 7 + 13 + 17 + 28 + 33
Task	Management	Stage 3	Items 4 + 8 + 16 + 25 + 34
Self	Personal	Stage 2	Items 1 + 11 + 19 + 24 + 32
	Informational	Stage 1	Items 5 + 10 + 18 + 27 + 29
	Awareness	Stage 0	Items 2 + 9 + 20 + 22 + 31

Moreover, Hall et al. (1979) suggested that graphic representation of percentile scores could provide interpretation of SoCQ data; however when using statistical analysis procedures, the use of raw scores is preferable. For group data, the authors recommend using the peak stage of concern. The peak stage of group concerns can be determined by combining individuals' data obtained from the average scores for each stage of the individuals in a group. From the percentile figures, SoCQ profiles can be plotted to identify the peak or the most intense stage of concern (Hall et al., 1979). For this study, descriptive statistics were used to convert raw scores to percentiles to illustrate the stage of concern profile of the teachers regarding the implementation of ITI. The interpretation of the profile using the percentile was used to show the ranges of the relative intensity of concerns from 0 (the lowest) to 99 (the highest). As the authors did, raw scores were used for statistical analysis.

stages was .63 and ranged from .007 to .83. Moreover, another correlation matrix revealed that 94% of the items correlated more highly with the stage to which they had been assigned than with the total score of the instrument. The correlation between the 35 items of the SoCQ and the total score had an average coefficient of .44 and ranged from -.05 to .66. This result was in accordance with Hall's analysis in which 83% of the items correlated highly with the assigned stages than with the total score of the questionnaire (George et al., 2006) and 72% of the items correlated highly with the assigned stages than with the other stages of the scale score (George, Hall & Stiegelbauer, 2006).

As shown in Table 2, the result of the reliability test in coefficient alpha for all SoCQ scales was considered *high* (.86). Meanwhile, the reliability coefficients for each of seven stages of concern ranged from .45 (Stage 1-Informational) to .76 (Stage 5-Impact Collaboration).

Table 2: Coefficient of Internal Reliability for Stages of Concern Questionnaire (N=171)

Stage	0	1	2	3	4	5	6	All Scales
Alpha	.51	.45	.64	.51	.70	.76	.65	.86

### 3.5 Assessing Validity and Reliability

As noted in above explanation, SoCQ was an accepted instrument due to its validity and reliability. However, the researcher decided to check the reliability and validity of the SoCQ as proposed by Cheung et al. (2001). The researcher obtained validity evidence based on internal structure by using correlation matrices. The analysis of correlation matrices for Stages of Concern Questionnaire indicated that 88% of the items correlated more highly with the stage to which they had been assigned than with any other stage's scale score. The average correlation coefficient for 35 items with their assigned

The conclusion from the reliability and validity analysis for the research instrument in the present study indicated that the instrument was *good* enough for the purpose of the research.

### 3.6 Data Collection

The data collection was carried out in July and August of 2011. Each respondent was sent a sealed packet containing: (1) the cover letter to introduce the study; (2) the questionnaire that consisted of the Stages of Concern Questionnaire (SoCQ), and personal data set for collecting demographic information of the respondents; (3) and a souvenir as

a token of appreciation for participation. In addition, the researcher constructed an introductory letter to the principal of each school accompanying the instrument. The response rate was 99% in which from 151 potential respondents, 150 were returned. While the response rate was excellent, it remained in question. Particularly, the researcher believes that the most likely factor affecting the high response rate of this study was a combination between the researcher's affiliation and the use of couriers. Kornadt (2002) said that "Japan and Indonesia clearly belong to the more collective group of cultures." This collectivistic culture is characterized by polite behavior, mutual respect among people and obedience to norms" (p. 199). Independence, self realization and assertiveness are "unacceptable." Moreover, Asian culture is identical with seniority in which "the society is structured in hierarchical way according to seniority" (p. 200). In this context of study, the respondents or principals may have an "emotional" attachment to the university where the researcher work. It was possible that the principals, the contact person or the respondents might have felt impolite if they did not participate. In addition, the principal or contact person of the school might have had another pressure knowing that the couriers would pick up the completed questionnaires from their school. They might encourage their teachers to participate in the research in order to be noticed as cooperative in supporting the research.

### **3.7 Data Analysis Procedures**

The data management was carried out prior to the data analysis for testing the hypotheses. It consisted of four steps suggested by Iraossi (2006), namely coding, editing, data entry and data cleaning. From 150 returned questionnaires, all of them were usable because they met the criteria as a completed questionnaire.

The data obtained from the returned questionnaires was transcribed to coding sheets. Coding is the process of categorizing respondents' answers into meaningful patterns (Moser & Kalton in Iraossi, 2006). After the data was coded, it was reviewed and edited by two colleagues who were experts in quantitative analysis. The editing stage was important to find and correct errors. The next stage was data entry. Microsoft Excel and the computer statistical package SPSS Version 17 were utilized to

generate a computer data input and analysis of the data. The next process was data cleaning. The researcher carried out the data cleaning to verify the structural stability of the data. Part of the data cleaning was eliminating the zero and non-responses (empty cells) from the data analysis including the identification of the outliers.

To answer the research question, descriptive analysis was used by following the guidelines of the SoCQ manual. Concern theory hypothesizes that "teachers' concerns will move from unrelated, to self, to task and to impact concerns" (Petherbridge, 2007, p. 145). The SoCQ profiles were graphed to illustrate these shifts. According to Hall et al. (1979), the SoCQ analysis and interpretation is done by following the manual guidelines to construct the profiles of teachers' concerns:

- 1) Summing up the responses to the five item statements on the scale that make up each stage of concern. The total score of this summation is the raw scores of each stages of concern. The mean of each scale is computed for statistical analysis.
- 2) Taking the raw scores from each stage and converting the scores to percentiles according to percentile tables provided by the manual. This step provided the percentile figures.
- 3) Plotting the stages of concern profiles by identifying the highest percentile or peak score of each individual percentile figures.
- 4) Determining the composite Stages of Concern Profile for the entire respondents by tallying the number of teachers in each Stage of Concern. This group average will show the main high and low concerns of the group.

## **4. FINDINGS**

Data about teacher concern gathered from the SoC Questionnaire were analyzed according to the manual of scoring for the SoCQ to provide the Stages of Concern Profile for all respondents. This profile indicated the highest or peak scores of individuals' stages that were used to assist in data interpretation. The possible minimum score was 0 and the possible maximum score was 245. The numbers of teachers in each stage were counted to plot the composite Stages of Concern profile for the entire population in

this study. To view the pattern of concern for overall respondents, the individual data was scored aggregately on their raw scores for each of the seven stages following the guidelines from SEDL followed by locating the scores into percentile tables and plotting the results on the tables. Graphing the overall stages of concern score for all respondents indicated that respondents' highest concern were unrelated and self-concern, with a slight tailing-up of impact refocusing concern. Specifically, the SoCQ analysis revealed the following: overall, most primary teachers at the foundation in the province were on the Stage 1, Self-informational Stage of Concern, as many as 39% of the population, followed by 34% in Stage 0, Awareness Stage of Concern.

indicated teachers who did not intensively have concern about the impact of the innovation on students' outcomes, and academic performance. Neither did they have a great deal of concern about collaboration (low frequency on Stage 5).

Normally a non-user profile, Stage 6, would be low and indicate that the individuals did not have "other ideas that would compete with the innovation" (Hord, 1987, p. 37). However, in this study, there was a tendency for Stage 6 scores to tail up on the typical non-user profile. It could be interpreted that the individuals felt that other approaches had more merit than the proposed innovation. Thus, any tailing up on the Stage 6 of a non-user can be regarded as a

Table 3: Teachers' Concern Stages (N=150)

Stages of Concern	N	Percent	Cum Percent
Awareness Stages 0	50	34.0	34.0
Self Informational Stages 1	59	39.3	73.3
Self Personal Stages 2	12	8.0	81.3
Task Management Stages 3	10	6.0	87.3
Impact Consequences Stages 4	1	0.7	88.0
Impact Collaboration Stages 5	5	3.3	91.3
Impact Refocusing Stages 6	13	8.7	100.0

According to the SoCQ manual, the relationship between Stage 1 and Stage 2 is very important. If the stages are very different, the profile can be said to have a one-two split, the "one" referring to Stage 1 and the "two" to Stage 2. When Stage 1 was higher than Stage 2 (personal), it revealed the individuals who had more interest in knowing more about the innovation than the personal effect of the innovation such as personal position or job security. They admitted their lack of understanding and knowledge about the innovation and the way to implement it. They had a positive and proactive perspective with little fear of the personal effect of the innovation. When Stage 1 is higher than Stage 2, this is called a "positive one-two split" in which the individuals are open and interested in learning more about the innovation (George et al., 2006).

Moreover, the low frequency on Stage 3 revealed that respondents also had little or no concern about management, the ability to manage their workload especially regarding the scheduling, and organizing the innovation. Not surprisingly, this non-user profile had low frequency on Stage 4 that

warning that some individuals might be resistant to the innovation; "a more severe tailing up should be heeded as an alarm" (George et al., 2006, p. 42). The overall profile reflected individuals who somewhat wanted additional information about the innovation but also there were some individuals resistant to its potential use.

Overall, the study results revealed that teachers' highest concerns were unrelated and informational concerns. With less concern in personal, management and consequences levels, a slight tailing up in collaboration and refocusing levels indicated some resistance to implement ITI. Basically, teachers were in need of information about the innovation with the lowest concern on the impact of the innovation on their students.

A report from MONE (2007b) regarding the implementation of Curriculum 2006 in 33 provinces revealed that generally teachers and school staffs interpreted the new curriculum more as administrative matters such as completing documents, laboratories, and textbooks. Therefore, the impact of the new curriculum on the instructional practice in the

classroom was often neglected and became a secondary priority among school staffs. The findings of the report also revealed that in general, elementary school teachers had difficulties in developing syllabi into lesson plans particularly in constructing objectives, instructional procedures and evaluation to reach indicators, and rubrics for assessments. They also had problems in transferring standards of competency and basic competencies into indicators, developing the criteria for mastery learning, as well as the techniques of assessment. The reasons for those problems were that teachers had a lack of references and models (examples) and that administrative duty required a great deal of time. For primary teachers, the report stated that teachers faced difficulties in developing themes, instructional plans and instructional activities that integrated subject matters (MONE, 2008b).

Additionally, some relevant literature suggests various kinds of interventions such as workshops and seminars for teachers and principals, recognition in the reappointment, promotion and tenure (RPT) process, and mentoring (Gandolfo, 1998; Petherbridge, 2007; Surry & Land, 2000). Particularly for the respondents with high awareness and self-informational concerns, perhaps the most important interventions for them involve technical support, training, and additional time (Petherbridge, 2007).

Recommendations for future research is based on the fact that although there is a large body of research published on both educational reform and SoC, there is limited research on educational reform in ITI using SoC as a framework. There is also limited research on professional development as it relates to the implementation of standards in Indonesia.

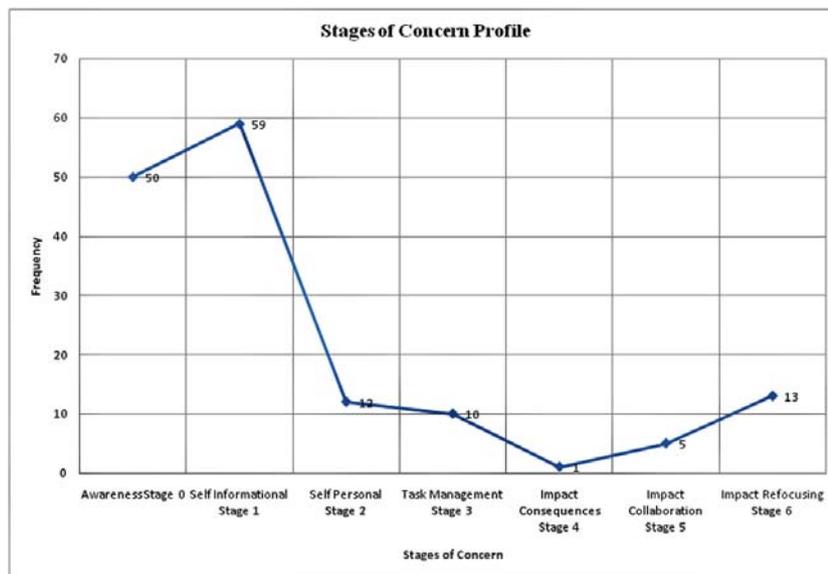


Figure 1: Teacher Stages of Concern Profile

## 5. CONCLUSION

Two types of training are needed for favorable results in classroom practice: within the school and between schools. Within the school, the principal should maintain internal support and monitoring such as conducting regular discussions to address the needs of teachers. Between schools, the local government should support schools by building a systematic mechanism for monitoring, evaluating and scaffolding teachers' performance after the training.

Specifically, there is a gap in exploring what types of professional development may be most effective when it comes to the implementation of standards-based education in Indonesia. It is imperative to focus more attention and resources on primary education, since it is the foundation of education. Reform should utilize higher order instructional methods and alternative forms of assessment that can be adequate for developing not only basic competencies, but also for combining real-life application and problem solving skills.

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