Embracing the 2013 Curriculum: A Qualitative Metasummary of Problems

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Abstract

This study seeks to synthesize research findings on problems in implementing the 2013 Curriculum in schools across the country. The terminal objective of this study is to construct a large picture of the issue across different contexts of the synthesized studies. Drawing on *Qualitative Metasummary* variant of the *Qualitative Metasynthesis Method,* data were collected through online searching of relevant research reports available in several databases. Data analyses followed the procedure suggested by Sandelowski and Barroso (2007) on 81 research reports. Findings of this study show that problems in the implementation of the 2013 curriculum can be grouped under ten topical categories, namely 1) teacher's readiness; 2) assessment; 3) learning resources; 4) infrastructure; 5) introduction and training; 6) learning process; 7) time allocation; 8) student's readiness; 9) regulation; and 10) monitoring and supervision. It was also found that 4 out of the 7 anticipated problems in the pre-implementation public assessment period of the curriculum exist in the synthesis. It is therefore suggested that: 1) Continuous monitoring and assistance by related authorities of the implementation of the 2013 Curriculum is needed to help teachers and schools deal with the identified problems; 2) as teachers' readiness seems to be the central problem in the implementation, solving this problem also help ease the other problems; 3) as the current study only on focuses the problems in the implementation of the curriculum, it does not necessarily mean that the curriculum is void of advantages and strength. Therefore, the researcher recommends research that looks into this side; and 4) as most of the anticipated problems existed in the synthesis, there seems to be so far inadequate control and follow-up of the valuable anticipation. Therefore, in the future, close attention and immediate actions should be taken to address such issues.

Keywords
Curriculum, metasummary, problems, qualitative study

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Introduction

Curriculum changes are common in any system of education. The changes are mostly made in order to suit the latest development in the context where it is used. Such development can be ideological, methodological, and pragmatic in nature. Ideology driven curriculum changes are made about shifts of the ideological or philosophical foundation of the context where the curriculum is implemented, which has also shifted its educational philosophy. The methodology is driven curriculum changes mainly result from the development of education's methodological aspects and contents. For instance, when a new approach or method of teaching claimed to improve the quality of learning is adopted by a system of education. The pragmatic curriculum changes orient the curriculum to the needs of its society that may include workplace and market demands as both educational and non-educational issues can trigger such curriculum changes.

Since its independence in 1945, Indonesia has repeatedly changed its national curriculum. On average, the curriculum changes or revisions are made once every ten years, and, as suggested above, the changes have been ideological, methodological, and pragmatic in nature. However, rapid and fundamental curriculum changes occurred during the 2004 to 2013 period. In 2004, The Ministry of Education (MOE) launched the Competence-based Curriculum, an outcome-oriented curriculum that replaced the long practiced content-based curriculum. In 2006, the so-called School-based Curriculum was introduced. Although essentially identical to the Competence-based Curriculum, it transferred the responsibility for developing the curriculum from the MOE to schools. Hence, the change was fundamentally from a centralized curriculum development paradigm to a decentralized one. Later, in 2013, the 2013 Curriculum was launched. This curriculum is still competence-based, but its purposes stress more on holistic learning and character building. Most importantly, the 2013 curriculum takes back the responsibility for developing the curriculum from schools to the MOE. However, so far, no clear or official information is available on the reasons that have led to the re-transfer of the responsibility. This has further deepened the belief held by many educators in Indonesia that a new regime means a new curriculum.

The literature has been consistent in suggesting the central role of teachers for successful curriculum innovation. Nation and Macalister (2010) argue that change should also occur in the minds of teachers and other people affected by the innovation and change in the curriculum. However, Fullan (2009) argues that most top-down changes have been centered on policy and the initiation phase, overlooking the process and implementation problems. At the same time, implementation can either be absent, superficial, partial, or thorough. In the same tone, Graves (2009) claims that the top-down "specialist approach" to curriculum development where different groups of people involved, who might have insufficient knowledge and information on the many different contexts within which the curriculum will be implemented, undertake different functions in curriculum development with their own beliefs, assumptions, and interpretation of the nature of the curricular policy may fail in the implementation. Therefore, as McGrail (in Alwan 2006) suggested, participating effectively in curriculum innovation, teachers need a profound understanding of the rationale for the innovation. This particularly concerns the "why" of the innovation.

They also have to understand the conceptual framework, principles and underlying assumptions of the new curriculum (Brooker & Clenet, 2006; Gopinathan & Deng, 2006, Orafi & Borg, 2009). This is because they are the executors of curriculum of the top-down hierarchical pyramid of curriculum development and implementation. Hence, there is clearly a need to listen to teachers' voices and concerns in a curriculum change.

In the context of the 2013 curriculum, there had been efforts to gathers educators' perspectives. Before launching the curriculum, the MOE allocated a period of time until December 2012to pilot project the curriculum in some schools across the country. In addition, during the period, the public was also invited to post their opinions regarding the curriculum to the MOE online. According to the report by the MOE (2012), there were 5729 responses received, which centered on seven themes, namely: 1) justification of the curriculum change; 2) the competencies; 3) the structure of the curriculum; 4) training for teachers; 5) textbooks; 6)time allocation, and 7) extension of duration of the lesson. Based on the responses, the MOE concluded that; first, the public accepted the underlying concept of the curriculum but demanded stressing on character education through the subject of religious teaching; second, training is to be provided for school principals and teachers; third, parents need to be introduced to the curriculum; and fourth, the public welcome the extension of the duration of the lesson (*Kementerian Pendidikan dan Kebudayaan*, 2012). Ornstein and Hunkins (in Hussain, Adeeb, & Aslam, 2011) suggest that curriculum implementation is an integral part of curriculum development. However, it is often considered a distinct part that is not related to curriculum development. In addition, Hussain et al. (2011, p.2-3) suggest that, "implementation involves attempts to change individuals' knowledge, attitudes and actions; it involves interactions between curriculum planers, management, teachers, students and all stakeholders". Furthermore, they argue,

> "Curriculum development process is not static. Rather, it is continuous and cyclic and undergoes a continual process of modification in the light of feedback obtained through constant monitoring of existing curriculum. It does not lead to a finished final product and demand for continuous improvement in the light of the continuously changing needs of society. It means that continuous monitoring and evaluation should be implanted as vital parts in curriculum development process." (p.3)

In light of the above-mentioned views, now after almost five years of implementation, there is a need to see how the 2013 Curriculum is implemented in the field; whether or not the concerns voiced five years ago exist in the implementation of the curriculum, and if there are new issues and problems to be addressed. There have been a great number of qualitative studies that evaluate the implementation of the 2013 Curriculum, for example, Suhardono (2014), Riptiani, Manuaba, and Putra (2015), Hermuttaqqien (2015), Siskandar (2016), Matra, Sidqi, and Ulya (2016), and many others. However, the studies are context-specific in their scope and findings, reflecting only the status of the implementation of the curriculum in a single research site. In contrast, a larger account on the issue needed for a more comprehensive overview is, to the researcher's knowledge, so far still unavailable. Therefore, a study that synthesizes the findings across those studies is needed to offer a wider picture of implementing the curriculum across the country. Such information is important as a part of

efforts to monitor how the curriculum is implemented at schools continuously. Hence, issues related to the weak points of the curriculum can be mapped and improved.

The literature suggests that curriculum implementation should be considered an integral part of the curriculum development cycle to continuously monitor how the curriculum is practiced by teachers at school and, hence, to improve the curriculum. As the executor of the curriculum, teachers play a vital role in the realization of the curriculum and, thus, in the process of curriculum development itself. They possess first-hand information about the implementation of the curriculum. However, although school level studies on the implementation of the 2013 Curriculum have been conducted in some areas of the countries, such studies are context-specific in their scope and findings. To date, no study synthesizes findings from completed qualitative studies on the issues to offer more comprehensive picture of the status of implementing the curriculum across the country. This study aims to fill the voids.

Literature Review

Curriculum innovation: Definition and forms

Markee (1997, p. 46) defines "curriculum innovation" as *"*a managed process of development whose principal products are teaching (and testing) materials, methodological skills, and pedagogical values that are perceived as new by potential adopters.*"* However, Alwan (2006) argues that whether a curricular innovation carries something new is subjective. Drawing on Fullan (1999), she furthermore argues that innovation in curricular policies does not necessarily entail change, which is a process of transformation that comes in various degrees in its speed, size, thoroughness, profoundness, and direction.

The literature has used other four terms, i.e. curriculum reform, curriculum change, curriculum renewal, and curriculum development" interchangeably with "curriculum innovation"(Stolk et al., 2010; Suter 2002; Wedell, 2003; Brooker & Clennett, 2006; Handal & Herrington, 2003; Iemjinda, 2007; Wang, 2008; Nunan, 1995; Cumming, 1993; Kilpatrick, 2008). One thing that can be inferred from the usage is that the meanings of these terms are overlapping. However, Marsh and Willis (2003) suggest that "curriculum change" is the generic term that covers the other four terms, in the sense that curriculum change has been understood and realized in the form of "curriculum innovation", "curriculum reform" and "curriculum renewal". The undertaking or translation of these notions into curriculum documents, i.e. syllabi and lesson plans, by curriculum developers is referred to as curriculum development. At the end of the continuum comes curriculum enactment or the implementation of the curriculum by teachers in their teaching (Brady, 1992; Lewy, 1991; Bolstad, 2004; Graves, 2009, 1992; Marsh, Day, & Hannay, 1990; Kennedy, 1992; Ramsay, Hawk, Harrot, Marriot, & Poskit, 1995; Gopinathan & Deng, 2006). In this study, the term "curriculum innovation" is understood in Markee's (1997) definition and used to refer to and mean the other four terms used in the literature, emphasizing curriculum and syllabus development.

The literature also shows that innovations in a curriculum have been made on its approach, objectives, focus, scope, contents, structure / organization, process /

implementation, responsibility for curriculum development, product / outcomes, materials, and assessment (Barnett, 2006; Brooker & Clennett, 2006; Wedell, 2003; Suter, 2002; Cumming, 1993; Kırkgoz, 2008; Borman, 2008; Orafi& Borg, 2009; Wang, 2008; Handal & Herrington, 2003; Van Zoest & Stockero, 2006; Stolk et al., 2010; Iemjinda, 2007; Kilpatrick , 2008). Referring to the curriculum innovations mentioned above, the shift from decentralized school-based curriculum to centralized 2013 curriculum in the Indonesian context of education exemplifies innovations in curriculum and syllabus development.

Teachers' practices in curriculum innovation

The literature on teachers' practices has been mostly focused on *teachers' classroom practices*. Very few addressed the issue of teachers' practices in curriculum innovation or development. Interestingly, of 37 books and articles available for review, either on "teachers' classroom practices" or "teachers' practices in curriculum innovation", none has operationalized or defined the term "practice". However, all discuss how teachers perform or execute their particular professional tasks in their contexts of teaching. Hence, it seems that there is common sense or shared understanding among researchers in what "practice" means. Nevertheless, for clarity, "practice" in this study is understood as "the actual performance of an activity in a real situation" (Macmillan English Dictionary, 2002, p. 1104).

Studies on teachers' practice in curriculum innovation worldwide, although limited in number, have been consistently reporting the existence of "gaps" between the intention of the innovation and teachers' practice. To mention a few, in The United States, Olson (2006) finds the discrepancy between what prescribed by the mathematics curriculum reform and teachers' classroom. In Libya, examining the implementation of a new communicative English language curriculum in secondary schools, Orafi and Borg (2009) find considerable differences between the intentions of the curriculum and the instruction observed. In China, Wang (2008), observing the implementation of language policy in the Chinese tertiary context, concludes that "Teachers failed to implement what was required from policymakers in the classroom" (p.1). In The Netherlands, a study on chemistry teachers' involvement in early stages of context-based curriculum innovations by Stolk et al. (2010) demonstrates that the teachers only adopt the innovation partially.

Competency-based curriculum

As previously mentioned, the 2013 Curriculum is still using the framework of the 2004 curriculum- the competence-based curriculum (CBC). Therefore, in this study, it is essential to discuss this kind of curriculum here. CBC is developed to view that education is intended to develop learners' functional competence that will enable them to function appropriately in their community (Ansyar, 2004). Mc Asham (cited in Hasan, 2002, p.4) defines competency as " …knowledge, skills, and abilities that a person can learn and develop, which become parts of his or her being to the extent that he or she can satisfactorily perform particular cognitive, affective, and psychomotor behavior." Such qualities, found in learners themselves, are trained and developed through teaching and

learning processes until they become internalized in learners' personality (Chickering & Claxton, 1981). In CBC, student competencies required for the course as well as competencies to be developed during the course are outlined and explained (Kern 1990). The main difference between CBC and other types of the curriculum is that it focuses more on achieving quality learning, on profound-comprehensive-continuous learning with contextual materials, rather than on quantity. It also gives a significant role to local school teachers to design their own syllabus that will suit their teaching context (Kwartolo, 2002). *Balitbang-Diknas* (2002, p. 25) defines CBC as "a set of plans and arrangements of competencies and learning outputs students should achieve in their study, including types of assessment, organization of teaching and learning activities, and the enforcement of educational resources for the development of school curriculum."

Initiatives for adopting CBC as a substitution for the 1994 Curriculum began in 2001. These initiatives were not only based on the common rationale for curriculum change, i.e. to cope with ever-changing demand of the age and dissatisfaction of the results from almost one-decade implementation of the 1994 Curriculum, but also on a fundamental political shift that takes place in Indonesia since the dawn of the New Order Era in 1997 which had ruled Indonesia with such a centralized system for more than 30 years (Sidi, 2002). Now, with more democratic and decentralized governance, the educational sector also needs a curriculum that will enhance decentralization and give a wider autonomy to local schools. Finally, in late 2002, after a series of seminars, pilot projects, and evaluations organized and supervised by the Centre for Curriculum Development and Research, Department of National Education, a decision to adopt CBC was made. Full implementation of CBC in schools across the country was expected to be realized in 2004 (Boediono, 2002). From the official guidelines of CBC released by The Centre for Curriculum Development and Research or *BalitbangDiknas / Puskur* (2002) some important points can be drawn:

1. The underlying ideas on which CBC is developed are the development of one's competence knowledge, skills, and basic values which are habitual and reflected in his thoughts and actions. One's consistency and continuation in his habit of thinking and acting will make him competent, in a sense that he possesses the knowledge, the skills, and the basic value necessary for doing something.
2. The rationale for adopting the concept of competence in the curriculum are: a) Competence is related to students' ability to perform a task in various contexts; b). A student's competence reflects his or her learning experience; c).Competence is learning outcomes which explain what students do after the learning process; d). Students' ability in performing a task should be well defined within a standard which can be achieved through a measurable effort.
3. CBC can be diversified, extended, and adjusted according to the immediate context and demands of students and the community.
4. The development of syllabus refers to CBC and its components which have been developed Centre for Curriculum Development and Research. Local schools which have sufficient resources may develop their own syllabus which they think will suit their needs. This should be done with an agreement from the local Board of Education.

5. The local Board of Education may organize schools with insufficient resources in developing syllabus. This can be done by involving experts or other related parties (*Balitbang Diknas,* 2002).

Colleges and universities also adopt CBC. With this curriculum, the directorate of higher education only lists the students' competencies when they finish their tertiary study. Colleges and university are free to develop their own curriculum and syllabus and nominate subjects as long as they are aimed and referred to the list of competencies.

The 2013 curriculum

The curriculum 2013 is competency-based. A competency-based curriculum is an outcomes-based curriculum and therefore, curriculum development is directed at developing competencies formulated from standard of graduation competencies. Similarly, assessment of learning outcomes and curriculum outcomes is measured by the achievement of competencies. The success of the curriculum is defined as the achievement of competencies designed in the curriculum document by all learners. Competencies for the curriculum 2013 are designed as follows: 1. The contents or curriculum contents are competencies expressed in Core Competencies and further detailed in the Basic Competencies of every subject; 2. Core Competencies are categorical descriptions of internal competencies covering the aspects of attitude, knowledge, and skills (cognitive and psychomotor) that learners must achieve for a level of school, class and subjects.

Core Competencies are the qualities that a learner should have for each grade through Basic Competencies learning organized in a student-centred learning process; 3. Basic Competencies are competencies that learners learn for a theme at elementary school and for subjects in certain junior/high school classes; 4. Core Competencies and Basic Competencies in secondary education are targeted at the sphere of attitude while at the secondary education level on intellectual ability (high cognitive ability); 5. Core competencies become the organizing elements for Basic Competencies; 6. Basic competencies are developed based on accumulative, mutually reinforcing principles and enriched between subjects and levels of education; 7. The syllabi are developed as a learning design for one theme at the elementary school level or one class and one subject at junior and senior high school levels; 8. Lesson Plan is developed from each Basic competency for the subjects and the grade (*Kementerian Pendidikan & Kebudayaan*, 2013).

Methodology

As this research aims to synthesize findings of completed qualitative studies within the scope of the research questions, qualitative Metasummary (Sandelowski & Barroso, 2007) method is considered suitable for the current study to achieve that aim. Sandelowski and Barroso (2007) outline that, as a type of qualitative research synthesis, qualitative metasummary is "... a quantitatively oriented aggregation of qualitative findings that are themselves topical or thematic summaries or surveys of data" (p.151). Regarding the selection of studies to be included in qualitative synthesis research, Sandelowski, Docherty,

Emden (1997) suggest that, to get the most relevant studies, qualitative synthesists need to, first, determine topical similarity across the foci of the research being conducted and that of targeted completed qualitative studies; second, set *Inclusion Criteria* for the topically similar studies to be included in the research*;* and third, determine *Methodological Comparability* among the included reports as the initial guidance in retrieving and selecting sample reports to be synthesized.

Pertaining to the notion of topical similarity, this study sought completed qualitative research that addresses the issues of problems and opportunities in the implementation of the 2013 Curriculum, particularly those raised in the research questions. The inclusion criteria follow the four parameters suggested by Sandelowski and Barroso (2007) i.e., the topic (what), the population (who), the time (when), and the methodology (how). Thus, the completed projects included in this study are qualitative research exploring the problems and opportunities in the implementation of the 2013 curriculum as perceived by school teachers from 2014 to 2017. To be more specific on the *who* parameter, this study sought qualitative research that takes elementary, junior high, or senior high school teachers-general, religious, vocational, or special schools. In addition, the *how* parameter also addresses the methodological comparability among included research reports. The current study searched for the data through two online search engines, i.e. "Google", and "Portal Garuda"- an official website of the Ministry of Research and Higher Education of the Republic of Indonesia that hosts academic research reports from Indonesian scholars and researchers. The search term used was "*Implementasi Kurikulum* 2013". Initial retrieval followed by an examination of individual items yielded from both search engines 301reports that fitted the topical similarity parameter. These included undergraduate theses, master degree theses, and research reports. Further examination with the inclusion criteria resulted in 81 items (see appendix) relevant to further analysis following the procedure outlined in the methodology chapter. These include 6 undergraduate theses, three master theses, and 72 research reports from various study contexts. In terms of education levels, the reports came from research on elementary, secondary, and high school contexts. Their coverage ranges from classroom and subject level accounts to a province-wide study of curriculum implementation, from general, vocational, and religious types of school to school for special needs students.

Data analysis in this study follows Sandelowski and Barroso (2007) that suggest that qualitative metasummary data analysis techniques include (a) extracting findings, separating them from other elements of the research report; (b) editing findings to make them accessible to any reader; (c) grouping findings in common topical domains; (d) abstracting findings; and (e) calculating manifest frequency and intensity effect sizes.

Findings

Analysis of the findings of the 85 reports found 209 mentions of problems in the implementation of the curriculum that can be further classified into ten topical areas presented in the following table in the order of decreasing number of mentions:

Table 1. *Problems found in the synthesis*

NO.	Topical Area	Number of mention	Percentage
1.	Teacher's Readiness	38	18,2 %
2.	Assessment	31	14,8 %
3.	Learning Resources	29	13,9 %
4.	Infrastructure	24	11,5 %
5.	Introduction and Training	23	11 %
6.	Learning Process	15	7,2 %
7.	Time Allocation	14	6,7 %
8.	Student's Readiness	14	6,7 %
9.	Regulation	7	3,3 %
10.	Monitoring and Supervision	6	2,8 %

Teacher's readiness

The current study found *teacher's readiness* as the most frequently reported problem, with a total of 38 (18,2 %) studies mentioning it. This implies the dominance of the weight of the issue over other issues identified in the summarized studies. Furthermore, the problem of teacher readiness is made up of first, teachers' lack of or partial understanding of the curriculum; second, teachers' difficulty to change their old teaching paradigm and habit to the new one prescribed by the curriculum; and third, teachers' low Information Technology (IT) literacy.

Assessment

The problem of assessment was reported in 31 studies (14,8 %). Almost all reports on this issue justified it by the complexity it carried. They said that the authentic assessment required by the curriculum with extra foci on the learning process and evaluation of attitude on every student was considered too complex by many teachers. They had practically no sufficient time to carry out all the details of the required assessment. In addition, some teachers were also reported to have not yet understood the conceptual aspects of the assessment; let alone how to conduct it.

Learning resources

As reported in 29 studies (13, 9%), learning resources cover a wide range of issues. First, there was a shortage or unavailability of subject matter text-books problem. This was associated with problems in the production and distribution of textbooks. Second, there were also problems with the contents of the textbooks. Since contextual situations and conditions of schools and students in Indonesia may vary greatly from one to another school, the written and produced textbooks by the Ministry of Education and Culture's written and produced textbooks were deemed to be overlooking and uniformizing those variables. Therefore, in some contexts, the textbooks were of limited utility. In addition, it

was also reported that the contents of textbooks for some subjects were not well synchronized with the corresponding Basic Competencies stated in the syllabi. Furthermore, for the elementary school level that implements an integrated curriculum approach through cross-subjects thematic learning, such a lack of synchronization issues made it difficult for teachers to integrate lessons across subjects.

The third problem related to learning resources is the unavailability of adequate learning media. Most reports on this issue argued that the use of scientific method necessitates will be successful only if adequate learning media support it. This is because parts of the approach, such as observing and analyzing information, require them. Fourth, some studies also reported problems with lesson plans used by teachers. The lesson plans were copied from other teachers whose students' background might be different from their students. However, the copied lesson plans were not tuned in to suit their context of teaching.

Infrastructure

The problem of infrastructure was reported in 24 studies (11,5%). All refer to the unavailability of adequate infrastructure to support learning, and hence also means the success of the implementation of the curriculum. Some of the reports linked the issue with the needs for sufficient funding, which in turn originates in financial policies and planning. However, schools do not have the authority and power in these areas. Much of the decision regarding school infrastructure lies in the hand of the government and the people representative house. In such a situation, curricular policies are very often not timely supported by necessary infrastructure policies.

Introduction and training

Twenty-three studies (11%) mentioned this problem in their reports. Three situations were identified to have been associated with the problem. First, some teachers had not been formally introduced to the curriculum. Second, some of the studies highlighted the effectiveness of the training on the curriculum provided for the teachers. It was reported that some of the training was not comprehensive in terms of topics covered and were ineffective in terms of achieved results. In addition, the "one-shot" type of Training of Trainers (TOT) and a small number of teachers involved was also seen as weak points. Third, it was also reported that the training had been mostly general in nature. The teachers voiced their needs for subject-specific training that address subject level issues.

Learning process

The learning process problems centered on the difficulty faced by teachers in implementing the scientific method in their teaching and was mentioned in 15 studies (7, 2 %). Several other problems such as teachers' readiness, lack of learning resources and infrastructure, and the complexity of assessment previously mentioned were seen to contribute to the problem.

Time allocation

14 studies (6, 7%) mentioned time constraints as a problem in the implementation of the curriculum. This problem was mostly associated with the complex assessment teachers have to do. The assessment requires extra time for teachers to prepare. While they also have other responsibilities to bear, such as preparing lessons, media, and fulfilling works related to their managerial and administrative roles.

Student's readiness

Student's readiness problem, reported in 14 studies (6, 7%), refers to their learning motivation and activeness in the process of learning. As the scientific approach is student-centered in nature, it demands the students to take an active role in learning. It also necessitates strong self-motivation to learn. Such a paradigm shift is not easy to achieve after years of, for example, teacher-centered learning. At the senior high school level, it was also reported that parents' unjustified favoritism towards science major had caused many students to sit in lessons that they were not ready for and not interested in. At the lower elementary school level, since the greater focus is given to developing basic skills such as reading and counting, the implementation of a scientific approach was found to face more challenges.

Regulation

At the school level, this problem (reported in 7 studies, 3, 3%), as indicated by the reports, refers to the absence of regulations in some schools researched that support implementing the curriculum, such as ones on class size and teacher's workload. Such an absence, although it seemed insignificant, was reported to indirectly affect the performance of the curriculum. Large class size impedes the application of student-centered learning, scientific approach, and authentic assessment. Similarly, teachers with excessive workload were reported to be having time-constraint problem in planning lessons and conducting an assessment.

Monitoring and supervision

The problem of monitoring and supervision, mentioned in 6 studies (2, 8 %), highlighted the need to enhance the role of school principal as a supervisor and the school supervisors about implementing the curriculum. It was argued in the reports that during and after the curriculum introduction period, teachers needed close guidance to ensure that they were on the right track in the implementation of the curriculum. Such guidance was reported to be scarcely available. This left the teachers on their own with unanswered questions while, at the same time, having to keep the classes running within the new curriculum framework. In other contexts, the curriculum mentoring program launched to overcome the

problem-where core teachers (or guru into) was assigned to guide other teachers in dealing with the curriculum- was reported to be of limited success.

As mentioned in the introduction chapter of this report, the current study also aims to see whether or not the curriculum pre-implementation public assessment period problems also exist in the synthesis. The assessment itself anticipated seven problems, namely, 1) Justification of the curriculum change; 2) The competencies; 3) The structure of the curriculum; 4) Training for teachers; 5) Textbooks; 6) Time allocation, and 7) Extension of duration of the lesson. Based on the responses, the MOE concluded that; first, the public accepted the underlying concept of the curriculum but demanded stressing on character education through the subject of religious teaching; second, training is to be provided for school principals and teachers; third, parents need to be introduced to the curriculum; fourth, the public welcome the extension of the duration of the lesson (*Kementerian Pendidikan & Kebudayaan*, 2012). The synthesis shows that 4 out of the seven problems of the issues anticipated in the pre-implementation public assessment period exist. The following table summarizes these findings:

Table 2. *Anticipated and existing problems*

No.	Anticipated	Found in the Synthesis
1.	Justification of the curriculum change	-
2.	The competencies	-
3.	The structure of the curriculum	-
4.	Training for teachers	-Teacher's Readiness -Introduction and Training
5.	Text-Books	Learning Resources
6.	Time allocation	Time Allocation
7.	Extension of duration of lesson.	Time Allocation

Discussion

The findings of this study show that the problems in the implementation of the 2013 Curriculum across the synthetized research can be categorized into ten topical areas. Of course, these topical areas are not clear-cut for, to some extent, each of them is related to each other. This section will discuss, first, the findings within a systemic view on how the topical areas are connected to each other. This is to offer a comprehensive apprehension of the issue; and second, a comparison of the findings with the problems identified in the pre-official implementation period of the curriculum as mentioned in the background of the problem of this report. These will be discussed with existing relevant literature on the issue.

The problem of teachers' readiness comprises teachers' lack of or partial understanding of the curriculum, teachers' difficulty in changing their old teaching paradigm and habit to the new one prescribed by the curriculum; and their low Information Technology (IT) literacy identified by the majority of the research are common but often looked over phenomena in a curriculum change. Studies have repeatedly shown that problems related to teachers' understanding area prevailing phenomenon in curriculum innovation (Nation & Macalister, 2010). Research by Gross et al. (1971), cited in Fullan

(2007), found the majority of the teachers' inability to understand the conceptual foundation and the whole picture of the innovation they were implementing.

McGrai (in Alwan 2006) argues that teachers need a profound understanding of the rationale for the innovation to participate effectively in curriculum innovation. This particularly concerns the "why" of the innovation. They also have to understand the conceptual framework, principles and underlying assumptions of the new curriculum (Brooker & Clenet, 2006; Gopinathan & Deng, 2006, Orafi & Borg, 2009). However, Nation and Macalister (2010) suggest a high possibility for curricular change to be misunderstood by implementers. Wang (2008) highlights explicitly understanding of the syllabus and the learner-centred approach often promoted by the syllabus and textbooks as two areas where problems with teachers' understanding are likely to occur.

Nevertheless, researchers have also stressed the importance of a shared common understanding between policymakers and implementers for a change to be successful. Wang (2008), for example, warns that misunderstanding or partial understanding by teachers as the implementer of the policy might result in their reluctance to adopt the change and ignorance of some aspects of it. In this light, Fullan (2007), drawing on Gross et al. (1971), who found the difficulty in the majority of teachers to grasp the underlying ideas of educational innovation, stresses the necessity to clarify the intention of the curriculum change by the initiators at the initial phase of the change. This is to minimize teachers' anxiety and frustration in the implementation phase. He exemplifies his suggestion by referring to research finding on curriculum change in Canada, where a new curriculum guideline was dismissed by teachers' due to problems with their understanding. He, furthermore, anticipates a greater problem of understanding in a more complex change.

Furthermore, Nation and Macalister (2010) note that curriculum change is not only about change in the curriculum *per se,* but also about changing teachers' belief. They furthermore argue that teachers come to training or workshops with well-established beliefs about teaching and curriculum from their professional experience and pre-service program. Therefore, in addition to introducing the curricular change, it is also important to address the issue of change of teacher's beliefs, particularly at the initial part of the training or workshop. When their beliefs are ready for change, they would be likely to accommodate new ideas easily. This also shed some light on the problem of *introduction and training* identified in this study. There seems to be a rare phenomenon for teachers to adopt a new curriculum innovation and alter their old paradigm with the new one after participating in training. It takes time for such a change to happen. Borman (1984) and Kennedy (1992) theorize that the problem of teachers' understanding of curriculum innovations is because they are practitioners rather than theoreticians. Teachers are more concerned with short-term classroom-level decision-making than long-term curricular planning and theoretical issues. Other researchers associate the problem with the influences of past curricula on teachers' understanding of the new one (Brooker & Clenet, 2006; Bartlett, 1992; Marsh et al., 1990). The teachers' readiness problem is also related to the introduction and training problem identified in the synthesis. Training and workshops on the curriculum for teachers in Indonesia usually take two forms, but all are in "once-off" mode. First, there is training and workshops organized by the Ministry of National Education, either at the provincial or district level. In this form, several selected teachers are invited to attend the training or

workshop and are expected to disseminate the knowledge and skills they get from the training or workshop to their colleagues. The second form is organized by teachers by embedding it in the Teachers Regular Meeting Program, usually held on district level or through a school-level program. In both forms, teachers who have had training organized by the Ministry of National Education usually act as instructor. However, these kinds of training, due to some problems, are not effective. This finding signifies the need for rethinking and reconceptualizing the training program.

The ineffectiveness of the "once-off" mode has also identified in South Africa (Ramparsad, 2001) and Singapore (Goh and Yin, cited in Nation and Macalister, 2010). Rampersad (2001) suggests that such training should be made a formal program. He proposed that such a program be made a compulsory part of teacher development which can be held during extended school hour or extended school vacation. This scenario could be considered in curriculum training in Indonesia. The reasons are; first, the 2013 Curriculum carries a range of knowledge and skills that need to be mastered by teachers. Teachers can well absorb these in a "once-off" mode of training. Second, in most teacher preparation programs, curriculum development or, at least, lesson planning is taught as a credited compulsory subject and lasts at least for one semester. This indicates that the subject should be approached intensively rather than occasionally. Rampersad's (2001) suggestion is also in line with Handler's (2010) note that curriculum decision making requires particular expertise which could only be fully acquired through advanced education. As argued by Bartlett (1992), curriculum development is about teacher development.

The teachers in the synthesized reports also voiced their concern about the type of assessment required by the curriculum. The curriculum mandates seven kinds of assessment to be carried out on students: authentic assessment, student's self-assessment, portfolio assessment, quizzes, daily assessment, middle-semester exam, and semester exam. They perceived these many types of assessment are too demanding for their tight time schedule and amidst a number of work-related responsibilities they have to bear. If compared to the types of assessment in the previous curriculum, i.e. the school-based curriculum, a considerable shift of focus is readily observable. The previous curriculum relied on tests and focused on the assessment of outputs of learning, i.e. the extent to which students achieve the predetermined competencies. However, the assessment in the 2013 Curriculum focused on wider aspects of learning, not only the outputs but also the process of learning and academic development of every individual student. In addition, it also seeks to assess the three domains of learning, i.e. cognitive, affective, and psychomotor. Another extra-load is the curriculum's assessment behaviour and attitudes for the curriculum that also mandates character education to be integrated into every subject.

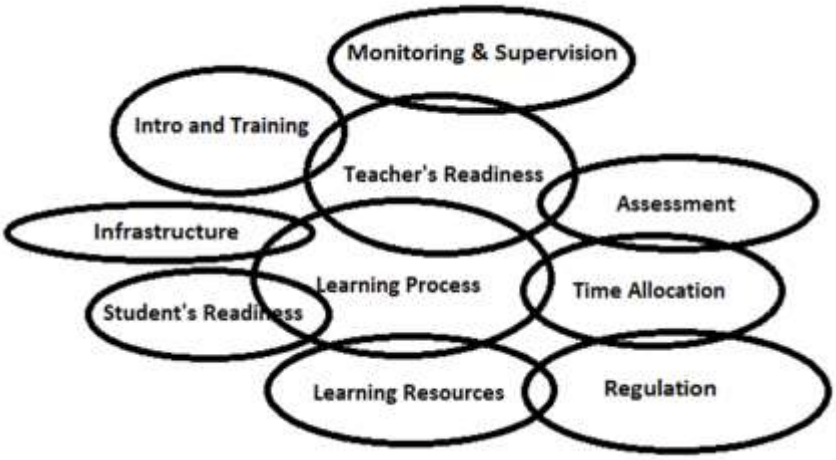
Pertaining to changes an educational innovation brings, Kirgoz (2008) and Wang (2008) suggest that teachers' implementation of an innovation is related to the extent to which the innovation fits their current understanding of teaching, skills, and teaching style. Thus, they are unlikely to adopt innovations that are not congruent with these three aspects. This view shares the idea that the size of innovation matters. An innovation that requires a significant alternation in teachers' understanding and practice will be difficult to realize by teachers (Stoller, 1994, cited in Nation and Macalister, 2010).

To be successful, a curriculum change often requires sufficient learning resources that go with both the theoretical and practical demands of the curriculum. Similarly, the scientific approach carried by the 2013 Curriculum also calls for such supports. However, studies have shown that this has been one of the major problems in Indonesia. For example, research by Kamil (2012) found that most schools in his study were not well equipped with adequate facilities and media. Schools that were better equipped are usually favourite schools located in cities.

Although schools and school committees improve their infrastructure and facilities through the School Operational Assistance Program that disburses block grants to all schools throughout the country, based on a per-student formula, i.e. the amount of the grant a school receives depends on the number of enrolments, only schools with a big number of students will enjoy a bigger sum of grants. Usually, these schools are favourite schools and mostly located in cities. Schools with fewer students receive smaller amounts and, therefore, less able to improve their facilities and resources or extend their academic programs, even though their needs are actually quite similar to those of favourite schools.

The problem identified in the learning process should be taken as central to the implementation of the 2013 Curriculum. This is because it is the "connector" that bridges the ideals of the curriculum to its aims, i.e. the outputs of learning. Almost all of the conditions of other problems identified in this study contribute to those of the learning process and hence the outputs. Therefore, the quality of the learning process and its outputs can, to a large extent, serve as an indicator of other related problem identified in the synthesis. This synthesis is summed up in the following figure that shows a systemic presentation of the problems identified in the current study:

Figure 1. *A systemic view of the synthesized problems*



This study also shows that 4 out of 7 problems anticipated in the pre-implementation public assessment period exist in the synthesis, namely; 1) Teacher's readiness; 2) Introduction and training; 3) learning resources, and 4) time allocation. As can be readily seen, all these four

problems are practical in nature. In fact, so are the ten problems identified in the synthesis? The other three anticipated problems, i.e. 1) Justification of the curriculum change; 2) the competencies; and 3) the structure of the curriculum, which are theoretical, were not identified in the synthesis. Again, this finding is consistent with Borman (1984), Kennedy (1992), who suggests that teachers are practitioners, not theoreticians, that concern more with practical issues of their teaching. However, the finding does not necessarily conclude that there was no theoretical problem with the curriculum.

Conclusion and Recommendations

This research aims to synthesize research findings on problems faced by teachers in implementing the 2013 curriculum. It also aims to compare the syntheses with problems anticipated during the curriculum pre-implementation public assessment period. Based on the findings and discussions, the following conclusions can be drawn. The synthesis yields ten topical categories of problems in implementing the 2013 curriculum: teacher's readiness, assessment, learning resources, infrastructure, introduction and training, learning process, time allocation, student's readiness, regulation, and monitoring and supervision. The ten topical categories are interrelated in nature where problems in a topical category may entail problem in another or other topical categories and vice versa. All the ten topical categories are practical in nature, indicating that the teachers were more concerned with issues related to their teaching practices than the theoretical ones in implementing the curriculum. Comparing the findings of the synthesis with problems anticipated during the curriculum pre-implementation public assessment period shows that four out of the seven anticipated problems also existed in the synthesis. However, none of them was theoretical in nature.

Disclosure statement

The authors declare no conflict of interest in the design of the study; in the collection, analysis, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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