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Listening to students voice: A survey of implementation of English as medium of instruction in an international standard school in Indonesia

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Abstract
This quantitative and qualitative study examine the implementation of English as medium of instruction in Titian Teras International Standard School (TT-ISS) in Jambi province, Indonesia by investigating students' socio-demographic characteristics, perceptions on vision, mission, goals and objectives, English as medium of instruction, and facilities and resources of the school. Using a survey questionnaire, document analysis and focus group discussion (FGD), this study involves 190 students in one of international standard schools in Indonesia. Results indicate that socio-demographic characteristics significantly correlated with academic performance. In contrast, students' perceptions on vision, mission, goals and objectives, facilities and resources, and English as medium of instruction was not significantly related with academic performance. Furthermore, focus group discussion (FGD) shows that students having difficulties to implement English although they are mandated to use English in school. Therefore, students' preference to use Bahasa Indonesia as medium of instruction in Math and the sciences
Key words: implementation, international standard school, English as medium of instruction

1. Introduction

This paper is a part of a PhD study (Haryanto, 2011) conducted in relation to Indonesian government language policy in international standard school program . The increasing trend towards English as medium of instruction has become a global phenomenon in education system (Sultan 2012; Wannagat 2007; Shannon and Milian 2002) shifting from non-English instruction to English instruction is no exception to Indonesian government to which the government of Indonesia developed new act on its educational system in 2003 which "*the government and local government shall organize at least a unit of education at all levels of education, to be developed as a unit having international standard of education"* (No. 20, year 2003 on education system:26 – 27).

The main purpose of this international standard school (ISS) is using English as medium of instruction in the teaching and learning process in math and the sciences such as biology, chemistry, and physics besides international standard school aims at improving students' competence in English to boost their academic and professional competitiveness at the global level (MONE, 2003; 2009a; 2009b). Furthermore, Ministry of National Education defines the international standards school to be based on the standards posed by OECD and/or another advanced nations (Sundusiyah, 2010; Haryana, 2007; Coleman, 2009). Indonesian government has invested large amounts of money for this program aiming to succeed in making Indonesia senior secondary education of international standard. More school buildings were built and equipped with facilities.

However, issues have been raised in the manner by which it is implemented due to limited English proficiency of teachers and students (Sultan, 2012; Haryanto, 2011; Sundusiyah, 2010; Kustulasari, 2009). Furthermore, implementing English as medium of instruction becomes more complicated in the teaching and learning process. There are huge number of researches on English as medium of instruction indicate that students are having difficulties in understanding and grasping the contents and the concepts of knowledge where English as medium of instruction particularly math and the sciences (Fakeye and Ogunsiji, 2009 ; Yip, Tsang, and Cheung, 2003; Tan and Lan, 2010). Some studies show that English as medium of instruction has academically effect students' performance in learning process. A learner who begin learning with their native language has greater chance to a better learning (Nyaga and Anthonissen, 2012). Similarly, Yushau and Bokhari (2004) argue that students usually experience severe problems when the medium of instruction changes from their native language to another one.

Moreover, studies that were conducted on English as medium of instruction and its effect on the learning process revealed negative effects. The Education Department of Hong Kong (1994) found out that English as medium of instruction had no effect in the learning process. In a school where language environment was more Chinese than English, students generally were more 'deeply' or academically motivated and tended to maximize their understanding by using several high level cognitive strategies to handle their school tasks. Meanwhile, those in the English medium who were not competent in English learned by rote memorizing and

focusing only on selected details. Similarly, Heugh et al. (2007) claimed that classroom observation and assessment data demonstrated that English as medium of instruction did not necessarily result in better English learning. In fact, students who used the mother tongue as medium of instruction in the teaching-learning process had higher academic achievement levels.

Vizconde (2006) has pointed out critically towards English as medium of instruction in the Philippines that English language seems to pose the problem particularly the term of mathematics and sciences are difficult to understand. Furthermore, she argues that students comprehend the lesson better or only, when they use Filipino. Another critical consideration is the study of Yip, Tsang, and Cheung (2010) on the effect of English as medium of instruction in Hong Kong argue that "the comparison of students performance in English medium of instruction and Chinese medium of instruction provides clues that EMI students have lower science achievement." Findings of their study show that native language is more advantage than a second language in learning science.

In this context, therefore, it is important to examine what the perceptions of TT-ISS students are concerning the language instruction. This paper examines the perceptions of TT-ISS students on vision, mission, goals and objectives, English as medium of instruction, and facilities and resources. The main objectives of this study is to asses students' perception on the implementation of English as medium of instruction, this study tested the following null hypotheses:

1. There is no significant relationship of the socio demographic characteristics of the students and their academic achievement in English, math, and the sciences;
2. There is no relationship of the perceptions of the students on vision, mission, goals and objectives, school facilities and English as medium of instruction used by teachers, and the achievement of the students in English, math, and the sciences.

2. Methods

The research utilized the descriptive research design through which quantitative and qualitative data were obtained. The survey questionnaire was used to draw the socio-demographic characteristics and the perceptions of the students on the implementation of the ISS. Since Titian Teras is the only ISS in Jambi, Indonesia, this was used as the main source of data for the study. The student questionnaire was administered to 190 students in Grade 10 and 11. The focus group discussion (FGD) was undertaken to students to explore and clarify their views (Kitzinger as cited in Sim, 1998). The FGD involved 20 students of grade 10 and 11. The group is coordinated by a moderator and it took for forty five minutes discussion after school. The survey instrument was pre-tested drew a coefficient value of 0.915. Descriptive statistics such as frequency counts, percentages, means, and standard deviation were used to describe the socio-demographic characteristics of the respondents, perceptions on ISS implementation, grades of the students, and school resources. Pearson Product Moment Correlation was used in testing the relationships of selected independent and dependent variables. Statistical tests are set at 0.05 level of significance. Theoretical framework, this study was conceptualized in the context of the ISS program in Indonesia. Achievement is grade in English, math and sciences such as biology, chemistry and physics in these was assumed to have been the result of the independent variables (component parts) such as socio-economics, the perceptions of the students on vision, mission, goals and objectives, facilities and resources, and English as medium of instruction.

3. Results and Discussions

3.1 Students demographic profile

3.1.1 Gender

Table 1 shows that majority (51.1%) of the student respondents in Titian Teras are male although the difference is negligible. This means female students in ISS can compete well for admission in the ISS despite the stringent physical capability requirement. This requires the students (male and female) to "pass the physical test that covers a run for 12 minutes, push up for one minute, and shuttle run for a number of kilometers". In the case of Titian Teras, the run was no less than three kilometers from Titian Teras to the city of Jambi and back.

3.1.2 Educational attainment of parents

Most of the students' parents are highly educated. They are either college graduates (39.6%), master's degree holders (26.0%), doctoral degree holders (8.3%), and senior high school graduates (10.7%). Some (15.4%) did not specify their parents' education. It was possible that the students who did not indicate their parents' education could be those taken in as student grantees of the ISS. These are the poor but deserving students who

compose 10 percent of the total population of the school and are subsidized by the school as required by the Ministry of National Education.

3.1.3 Use of English in the classroom.

More than half (54.0%) of the students "sometimes" speak English in the classroom while 31.7 percent of the students speak English most of the time. This means that the students are having difficulties to use English in the classroom. According to the students during the FGD,

> *"Personally, I don't like using English in the classroom, if I use English usually my classmates and teachers misunderstand to what I said, besides my grammar is not good and it is really difficult to express my opinion through English."(Dona, a grade 11 female student)*
>
> *"English make us confused in understanding the lesson well because many terms for sciences we don't understand." (Lisa, a grade 11 female student).*
>
> *"English is good to be implemented in our school but the problem our English is really not adequate as well as our teachers. So better we use Bahasa Indonesia, we can understand the content of the lesson easily." (Fajar, a grade 10 student)*
>
> *" I have to struggle to speak English, instead I understand the content of the lessons I got confused and didn't understand at all because most of the time I misunderstand when my friends or my teachers speak English." (Wiwid, a grade 10 student).*

From the FGD above, it means that using English as medium of instruction is difficult to implement in the ISS program. There are some possible reasons could happen, as Sumintono and Mislan (2011) in their research found that most of the teachers in ISS are using Bahasa Indonesia throughout the lesson when giving example, explaining the contents, and even ask the questions. It indicates that the main problem is teachers rarely use English in the classroom. Furthermore, Coleman argues that teachers use English for greetings and conforming answer such as 'yes' and 'you are right' (as cited in Sumintono and Mislan, 2011). Similarly, the students in the FGD in this present study claimed that teachers actually use Bahasa Indonesia in teaching math and the sciences despite the requirement imposed by the Ministry of National Education. Although based on the class observations conducted for this study, the teachers were forced to use English in the classes.

Teachers' competencies in English play a significant role in implementing this program. The lack of teachers' proficiency in English is a major contributory factor to students' motivation to use English in the classroom. It might be the problem faced by teachers as Sumintono and Mislan (2010) argue that in bilingual program teachers have limited English proficiency and not confident use English because they cannot speak fluently. This finding is supported by Banesse that most teachers are not confident in using English as medium of instruction because teachers lack of English proficiency (as cited in Sakamoto, 2012). Thus, Blanco (1977) argues that teachers in bilingual classroom should be able to provide instructional variety of language, it is not sufficient for greeting and pronouncing name because proficiency in target language is a must.

4. Students' perceptions on vision, mission, goals, and objectives

The overall perception (3.60) of the students on their school's VMGO (described as agreeable) reflected their awareness and understanding of these as these are integrated in their school and class activities (Table 2). This is a good indication that understanding the vision and mission, and achieving the goals and objectives of the school and its programs enable the students to see the relevance of their activities in school as it realizes the vision and attain the goals of the school.

This finding showed that the students know about the vision, mission, goals, and objectives of the ISS. Although the awareness level is described as "agree", at least the students see the relevance of their activities in the attainment of the mission, goals and objectives of their school. To Bobrow (1998), vision should be a simple, honest statement that describes the purpose of the organization giving a picture of the future being sought and is consistent with the core values of the people in the organization. More importantly, the shared vision should be a launching platform of the institution's mission. Furthermore, he stated that vision must be understood, shared, accepted and liked by everyone who is responsible in making it a reality. Based on the result of this present study, the student respondents understood and accepted the vision, mission, goal and objectives of the ISS school because they agreed with it.

5. Facilities and Resources

The overall mean perception of the student respondents had a mean of 3.75 described as "adequate". This means that the students find their school facilities and resources sufficient enough for learning. The highest mean score of 4.26 was given to computer room which was followed by availability of Indonesian teachers (4.19)

and classrooms (4.11). These facilities were described as "fully adequate" and "adequate", respectively indicating that the ISS has sufficient computer facilities for them to use and Indonesian teachers to attend to them. Also, classroom resources were seen as adequate too by the students. The results on facilities and resources in the ISS were validated by ocular visits conducted in the ISS and documents requested from the office of the principal. The school has enough facilities and resources to support teaching and learning management. The ISS is fully equipped with ICT centre, science laboratories, music rooms, library, student learning center, and sound laboratories. Every classroom is equipped with TV, CCTV, and digital (visual) projectors. The resources centre has an internet access and some places in the school campus are marked as Wi-fi zones. Overall, these perceptions further substantiated the listing of the ISS facilities and resources which was requested from the school principal's office. These also conformed with the Ministry of Education's requirements.

6. Perceptions on English as Medium of Instruction in the ISS

The overall perception of the student respondents on the use of English as medium of instruction in their school was 3.57 described as "agree". This means the students simply agreed on the use of English by the teachers in their content subjects. However, the highest mean score of 4.06 was given to "I understand the lesson better when my teachers explain/discuss/present these using Bahasa Indonesia" negated it.

This means the students prefer the use of their own language to that of English as they can understand and learn the lesson better if the teachers use Bahasa Indonesia. Also, numerically, a little lower than this is the use of both English and Bahasa Indonesia in teaching science and Math subjects although it is still described as "agree". However, it was higher than the use of English only in the two subjects. These findings supported the research results in Malaysia (Zaidi Isa et al., 2011) in which was revealed the preference of the students in the use of Bahasa Malaysia as instructional medium rather than English. Results further showed that the students were convinced that teaching and learning science and Mathematics are more effective in Malay. In addition, they also did not believe that the use of English in teaching science and mathematics is effective. However, another study on student inclination (Ismail, 2010) toward English as medium of instruction in the teaching of science and mathematics among students in the University Kebangsaan Malaysia found out that Indian students and other students but not Malay and Chinese had greater inclination toward English as medium of instruction. In particular, the students in the Faculty of Science and Technology and who studied in Mandarin and Tamil at pre-university level had higher inclination than those who used Malay or even English.

7. Performance of the Students in English, Math and the Sciences by Year Level

Table 5 shows that in Grade 10, the highest mean (76.42) was obtained in Biology while the lowest (67.13) was in Physics. Meanwhile, Chemistry (75.93) and Math (75.09) had a higher mean than English (73.54). These data showed that the achievement of the students in these subjects was highly dispersed as shown by the standard deviation.

On the other hand, the highest mean performance of the Grade 11 was in math (82.61). This was followed by biology (80.21) and physics (78.73). The lowest mean was in English (73.49). These findings showed that Grades 10 and 11 performed better in the science subjects and math than in English. This was despite the fact that in their term examinations (midterm and final), English is used as the medium. Just like the achievement of Grade 10, it was highly dispersed as shown by the standard deviation.

Overall, the achievement of the students in English, Mathematics and the sciences had a mean of 76.498. This was a little bit above the passing grade of 75 although this may increase since this achievement of the students was based on their first semester grades. Another contributory factor may be the preference to Bahasa Indonesia as medium of instruction in Math and the sciences.

8. Relationship of Students' Socio-demographic Characteristics and Academic Achievement

Only one variable in socio demographic characteristics were found to be highly significantly correlated with academic performance (Table 6). This was use of English in the classroom with math ($r = 0.235$, $p \leq .01$) and the sciences ($r = 0.217$, $p \leq .01$) and use of English in class with English ($r = 0.155$, $p \leq .05$). Meanwhile, better knowledge of English can facilitate better grades in Math and the sciences. Of lower significance were the uses of English in class that markedly impact on student performance or students' academic achievement.

It is possible that those who use English are those with high academic achievement in English, math and the sciences. It should be noted that the textbooks have English translation and the term examinations in these subjects are in English and have to be answered in English.

These results conformed with those found by previous studies conducted. Nordin (2010) who studied lower secondary subjects taught in English in Malaysia concluded that students have encountered language problem as well as contents' problems when English was used to learn science and mathematics. This means the

students find it difficult to learn science and math when using English. The recommendation made was to emphasize building up proficiency in English before they should learn science and mathematics effectively.

In India, the continuing debate on the use of mother tongue as medium of instruction versus English was studied (Ramasamy, 2001). Although no definite conclusion (thus confusing evidence) supported either, the balance certainly favored the mother tongue as a pragmatic approach. The study concluded that the mother tongue is best for those learners belonging to the lower socio-economic level because enriched contexts in the use of English are not easily available to them.

9. Relationship of Perceptions on ISS Variables and Academic Achievement of the Students

Table 7 shows that the variable which significantly correlated with the academic achievement of the students was only VMGO although this was negative. This means the students' agreeable attitude toward the VMGO did not result in high academic performance. The mean performance was only 76.498. Facilities and resources and teachers' use of English as medium of instruction had no significant correlation with the academic achievement of the students. This means regardless of these, their achievement in English, Math, and the science remains.

10. Conclusions

Titian Teras has clear vision, mission, goals and objectives that are understood by the students. The perceptions on the use of English as medium of instruction was generally satisfactory to the students while facilities and resources were generally perceived as adequate. With only the perception of the students in VMGO significantly but negatively correlating with their academic achievement, this partly led to the rejection of the hypothesis that "There is no significant relationship of the perceptions on ISS variables and the academic achievement of the students". One variable of the students' socio-demographic characteristics are significantly related with their academic achievement hence the null hypothesis is rejected. Use of English in classroom is significantly correlated with the grades in English, math and the sciences. This implies that socio-demographic characteristics can influence academic achievement of the students in the ISS. However, the FGD shows that the implementation of bilingual policy has not been implemented well in the ISS. Therefore, the students prefer the use of their own language to that of English as they can understand and learn the lesson better if the teachers use Bahasa Indonesia.

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Table 1. Socio-demographic characteristics of the student respondents

CHARACTERISTICS	FREQUENCY (n=190)	PERCENT
Gender		
Female	93	48.9
Male	97	51.1
Total	**190**	**100.00**
Educational Attainment of Parents		
Bachelor's degree	67	39.6
Master's degree	44	26.0
Doctoral degree	14	8.3
Others	26	15.4
Total	**169**	**100.00**
Use of English at classroom		
Rarely	14	7.4
Sometimes	102	54.0
Most of the time	60	31.7
Always	13	6.9
Total	**189**	**100.00**

Table 2. Perceptions of the students about the ISS VMGO

VMGO STATEMENTS	MEAN	DESCRIPTION
I am aware of the vision of the ISS	3.77	Agree
I know the mission of the ISS	3.48	Agree
I know the goals/objectives of ISS	3.53	Agree
Our school activities/class activities clearly reflect the vision and mission of ISS	3.63	Agree
Overall	**3.60**	**Agree**

Table 3. Adequacy of facilities and resources as perceived by the students

STATEMENT	STUDENTS	DECRIPTION
1.	4.11	Adequate
lassroom	4.00	Adequate
2.	3.89	Adequate
ibrary	3.79	Adequate
3.	3.75	Adequate
cience laboratory	4.26	Fully adequate
4.	3.78	Adequate
ound laboratory	3.55	Adequate
5.	3.47	Adequate
tudent learning Centre	3.42	Adequate
6.	3.57	Adequate
omputer room	3.46	Adequate
7.	3.52	Adequate
nternet access	4.19	Adequate
8.	3.47	Adequate
ibrary materials in English		

9.
extbooks in English
10.
xercise workbooks in English
11.
dditional books in English
12.
eferences in English
13.
urriculum in English
14.
ndonesian teachers
15.
nternational teachers

Overall Mean	**3.75**	**Adequate**

Table 4. Students' perception on the use of English as medium of instruction

STATEMENTS (USE OF ENGLISH AS MEDIUM OF INSTRUCTION)	MEAN	DESCRIPTION
I understand the lesson better discussed/lectured or presented by teacher using English	3.45	Agree
I understand the lesson better when my teachers explain/discuss/present these using bahasa Indonesia	4.06	Agree
I like my teachers in science and math to teach me these subjects using English	3.55	Agree
I like my teachers to teach these subjects in both English and bahasa Indonesia	3.95	Agree
I can attain higher grades if I use English in answering teacher questions in these subjects	3.39	Moderately Agree
I can score high in the national examinations if I speak good English	3.54	Agree
I can score high in the national examinations even if I do not speak English	3.02	Moderately Agree
Overall Mean	**3.57**	**Agree**

Table 5. Student performance in English, Math, Physics, Biology, and Chemistry by year level

GRADE	SUBJECT	N	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
10	English	153	58	87	73.54	5.071
	Math	153	56	98	75.09	8.453
	Physics	153	64	85	67.13	3.639
	Biology	153	70	93	76.42	5.078
	Chemistry	153	65	97	75.93	5.976
11	English	119	57	96	73.49	7.339
	Math	119	70	96	82.61	6.257
	Physics	119	68	97	78.73	7.044
	Biology	119	73	93	80.21	5.042
	Chemistry	119	69	92	76.25	5.530
Grand Mean					**76.498**	**6.8540**

Table 6. Relationship of socio-demographic characteristics of students and academic achievement

	ENGLISH	MATH	SCIENCES
Gender	-.139	-.058	-.038
Parents' educational attainment	.035	.025	.022
Use of English in the classroom	.155*	.235**	.217**

* Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

Table 7. Relationship of perceptions on the ISS variables and academic achievement of the students

	VMGO	FACILITIES AND RESOURCES	TEACHERS' USE OF ENGLISH
Value of Academic Achievement	-0.236(**)	-0.045	-0.030
		0.080	0.681
		190	189

** Correlation is significant at the 0.01 level (2-tailed)