
Preparing Students for Computer & Paper/Pencil-Based National Exam, National Standard School Exam, National Science Olympiad, and State University Entrance Exam: An Evaluation

Fadly Azhar, Erni and Afrianto

English Department of Faculty of Teacher Training & Education, Universitas Riau – Indonesia

Email: fadlyazhar57@gmail.com

Abstract: This type of evaluative research using Self-Examination Strategy (SES) Evaluation model aimed at evaluating (a) teachers' efforts in preparing students for CPBNE, NSSE, and NSO based on the aspects of gender, academic qualification, and teaching experience; (b) principals' efforts in relation to schools' infrastructures, inhibitions & supports, and recruitment system; and (c) students' efforts in preparing themselves for SUEE. The research findings revealed that female teachers (3,576925) were better than males (3.13335) in NSO; but males (4,1487230) were better than females (3,9822384) in CPBNE; and males (4,5299) were better than females (4,51111) in NSSE. Then, teachers with Bachelors' degree (3,51785) were better than those with Masters' degree (3,22915) in NSO; but Masters' degree (4,2820153) were better than those with Bachelors' degree (3,9560384) in CPBNE; and Masters' degree (4,6666666) were better than those with Bachelors' degree (4,4843333) in NSSE. Finally, those teaching more than 20 years (3,85555) were the best in NSO and in NSSE (4,7037333); but 16 – 20 years (4,3384615) was the best in CPBNE. Meanwhile infrastructures, inhibitions & supports to teaching-learning process are better facilitated at state schools; but the recruitment system for new teachers is better conducted at private schools. However, the students of these schools still need extracurricular tutorial lessons from educational tuitions/courses for SUEE and CPBNE. In summary, whatever maximum preparations have been made by the teachers and the principals through SES, students' great success cannot be separated from the role of educational tuitions/courses.

Keywords: national; school; olympiad; state university exam

1. Introduction

To get students' maximum achievement in Computer and Paper/Pencil-Based National Exam (CPBNE), National Standard School Exam (NSSE), National Science Olympiad (NSO), and State University Entrance Exam (SUEE) is the main target of elementary, junior high, and senior high schools throughout Indonesia. So, the victory either in one or in four types of these exams will yield a positive effect to those levels of schools. The positive effects among others may be the growing of public accountability, school accreditation, students' self-confidence, teachers' satisfaction, and schools' reputation. Therefore, it is an obligation for principals, teachers, and students to find out simple and practical efforts to pursue that kind of victory, for example, by overlooking all aspects related to students' success in CPBNE, NSSE, NSO, and SUEE.

This research quantitatively and qualitatively evaluates principals, teachers and students' efforts through Self-Examination Strategy (SES) Evaluation model. Quantitatively, it aims to investigate valid and excellent opinions, views, perspectives, and efforts executed by teachers in preparing students for CPBNE, NSSE, and NSO viewed from the aspects of gender, academic qualification, and teaching experience of the teachers (Independent variables) and the aspects of guidance/assistance, inhibitions & supports, and teaching-learning process (dependent variables). Qualitatively, this

research aims to display data prepared by principals in relation to schools' infrastructures, inhibiting & supporting factors, recruitment for new teachers; and students' efforts in relation to SUEE. In summary, this research uses a mix method which integrates both qualitative and quantitative data.

Self-Examination means *'the contemplation of your own thought, desires, characters, actions and conduct*. So, Self-Examination Strategy (SES) in this context can be defined as a strategy used by principals, teachers, and students to utilize their own efforts to achieve great success in CPBNE, NSSE, NSO, and SUEE. Other terminologies which have similar functions and implementation of SES are Self-Efficacy, Self-Regulated Learning, Self-Esteem, Self-Evident, Self-Employment, Self-Energizing, Self-Enforcing, Self-Excited, Self-Executing, and Self-Existing ((m.artikata.com 2019; collinsdictionary 2019). In summary, the great success of schools as educational institutions as a whole in CPBNE, NSSE, NSO, and SUEE cannot be separated from SES as a set of efforts executed by principals, teachers, and students themselves.

In line with this, Tobing, (2013), Zimmerman & Martinez, (1988), and Sumarmo, (2006) mention that SES concerns with three major efforts, that is, (a) it is focused on the growing issue; in this context, the issues deal with the use of computer & paper/pencil in NE, excellence in NSO, and greatly successful in NSSE as well as SUEE rather than personal issue; (b) it possesses positive orientations towards the excellence of institutions, in this case schools, since principals and teachers have sacrificed themselves in the preparation of their students for those types of exams; and (c) it will yield total-success of the schools as a whole since students have various efforts in enriching themselves with knowledge of exams. So, schools as educational institutions have huge compulsory tasks to manage their students to obtain this maximum achievement in CPBNE, NSSE, NSO, and SUEE (A letter of Decree of Minister of Education and Culture Republic of Indonesia Number 4, 2018 about students' learning achievement evaluation).

2. Methodology

2.1. Research Design

This research belongs to a descriptive qualitative and quantitative method. A descriptive qualitative method aims to search valid and excellent opinions, views, perspectives or efforts on one certain variable (<http://www.pengertianmenurutparaahli.net> 2019). Meanwhile a descriptive quantitative method aims to describe characteristics of a population, phenomenon or factors being analyzed/studied (<https://en.m.wikipedia.org/wiki>, 2019).

In this context, this research quantitatively aims to investigate valid and excellent opinions, views, or perspectives including efforts executed by teachers in preparing students to get maximum learning achievement in CPBNE, NSSE, and NSO viewed from the aspects of gender, academic qualification, and teaching experience of the teachers (Independent variables) and the aspects of guidance/assistance, inhibitions & supports, and teaching-learning process (dependent variables). Meanwhile, qualitatively, this research aims to display data prepared by principals in relation to schools' infrastructures, inhibiting & supporting factors, recruitment for new teachers; and students' efforts in relation to SUEE. In summary, this research uses a mix method which integrates both qualitative and quantitative data.

2.2. Population and Sample

The population of this study covers principals, teachers, and students of state elementary, Islamic elementary, state junior high, Islamic junior high, state senior high, and Islamic senior high schools in

Pekanbaru Municipality and those in Siak Regency – Indonesia. Meanwhile, the sample of this study is the principals, the teachers, and the students of SMA Plus Provinsi Riau (in Pekanbaru Municipality), SMA Negeri 1 Sungai Mandau (in Siak Regency), SMA Nurul Falah (in Pekanbaru Municipality), SMP Negeri 1 Sungai Mandau (in Siak Regency), SMP Negeri 40 (in Pekanbaru Municipality), SMP Islam Al-Ulum (in Pekanbaru Municipality), SD Negeri 44 (in Pekanbaru Municipality), SD Negeri 1 Kuala Kelantan (in Siak Regency), and SD Islam As-Syofa (in Pekanbaru Municipality). In summary, there are 9 principals, 54 teachers, and 90 students get involves in this research. The technique of taking them as the sample of this research is using Simple Random Sampling technique, that is, to select and to draw samples without taking care of their stratified identity within a group of population (Riduan, 2012; Sugiyono, 2011).

2.3. Data Collection Technique

To collect the data provided by teachers in preparing students for CPBNE, NSSE, NSO quantitatively, a set of questionnaire containing the aspects of profile, efforts, inhibiting & supporting factors, and teaching-learning process is used. Meanwhile, the data provided by principals covering the aspects of infrastructures, inhibiting & supporting factors, recruitment for new teachers is collected through documentation, observation, and interview (triangulation model). Finally, the data provided by students concerning with their preparation for SUEE, a set of structured interview including focus group discussion is used. In summary, this research employs two different sets of instruments, that is, questionnaire (for quantitative data) and triangulation model (for qualitative data).

2.4. Data Analysis Technique

To analyze the data quantitatively based on the questionnaire, inferential statistics such as Compare Means & Standard Deviation and T-Test are used in comparing the aspects of gender, academic qualification, and teaching experience. Meanwhile, the data qualitatively obtained from triangulation model is presented in tables of frequency and percent to draw conclusions.

2.5. Research Questions

- (a) Are there any significant differences of teachers' efforts in preparing students for CPBNE, NSSE, and NSO viewed from the aspects of gender, academic qualification, and teaching experience?
- (b) What are principals' efforts in terms of recruitment process, infrastructures, inhibiting & supporting factors?
- (c) What are students' efforts in preparing themselves for SUEE?

3. Results and Discussions

3.1. Teachers' Efforts in Preparing Students for NSO

Schools need to think about how to measure their students' learning achievement quality in different angles. One of the best ways to do is by participating NSO. This type of Olympiad tends to measure students' learning achievement on academic/scientific contest or exhibition rather than examination. In the preparation for this type of Olympiad, Erfan, (2019); Siwi, (2018); Suprawoto, (2010); Fernando. (2016); and Agusheri, (2017) suggest teachers to analyze the following efforts: (1) to select a number of students to be the school delegates; (2) to introduce topics related to Olympiad guidebooks; (3) to discuss items of previous Olympiad guided by delegate-teachers; and (4) to have an official cooperation with experts, for example, lecturers from FKIP Universitas Riau for academic and

technical assistance. The research findings show that female teachers (3,5769255) with Bachelors' degree (3,5178555), and have more than 20 years of teaching experience (3,8555555) have done better efforts in preparing students for NSO.

3.2. Teachers' Efforts in Preparing Students for CPBNE

CPBNE is a type of exam which is implemented and supervised by Badan Standar Nasional Pendidikan (*Indonesian National Education Standards Board*). The purpose of this exam is to evaluate students' competency in certain school subjects. The subjects that will be examined are as in the following: Indonesian Language, Mathematics, and Exact Sciences (for elementary schools); Indonesian Language, Mathematics, Exact Sciences, and English Language (for junior high schools); and Indonesian Language, Mathematics, English Language, Biology, Physics, and Chemistry (for senior high schools) (A letter of Decree of Minister of Education and Culture Republic of Indonesia Number 4, 2018 about students' learning achievement evaluation).

So, in order to rich the maximum learning achievement in CPBNE, Kemendikbud, (2013); Mulyadi, (2004); Yoga, (2013); Guraru. Org (2019); Jessica, (2019); Renesia, (2018); sindonews, (2018); matrapendidikan.com (2019); Dwiretnowati, (2012; Maura, (2018) suggest teachers to analyze such efforts as (1) to talk over the table of specification; (2) to rich a certain output-competency in nation-wide; (3) to re-investigate the criteria of output-achievement; (4) to overview the standard of content; (5) to meet the scope of lesson materials to be taught; (6) to increase the cognitive level of lesson material scope; (7) to train students using computer programs in answering test items; (8) to make sure the students to select the best answer once (since there is only one test-item on the computer display); (9) to remind students about time-consuming for each test-item; (10) to train students not to be under-pressure during the exam; (11) to inform students about the level of item difficulties; (12) to overview the basic competency being examined in the previous CPBNE; and (13) to discuss the correct and incorrect answers of test-items available in the previous CPBNE.

However, the result of CPBNE in Riau Province in academic year 2018 decreased compared with the previous years. There are two major reasons for this. Firstly, it is the use of computer in answering test-items. Secondly, it is the level of difficulties of test-items particularly, Mathematics containing higher-order thinking skills (Bisnis.com, Pekanbaru, 2019). For this type of exam, the research findings showed that male teachers (4,1487230) with Masters' degree, and have teaching experience in 16 – 20 years (4,3384615) have shown better efforts in preparing students for CPBNE.

3.3. Teachers' Efforts in Preparing Students for NSSE

The purpose of NSSE is to examine students' over-all competency in all school subjects. The learning achievement of this exam will determine whether or not the students will be successful in leaving the school. This sort of exam can also be called 'leave-taking school exam' which means that students will be legalized leaving the schools whenever they could pass this exam in a certain criteria. Therefore, NSSE can be considered as the derivation of CPBNE so the quality of test-item, the time consuming, the content validity, the face validity, and the scoring system must be subject to those in CPBNE. Hence, seputarfib, (2018); quipper, (2016); ultimaz, (2018); and news.okezone, (2015) suggest teachers to analyze the following efforts: (1) to accomplish all lesson materials as in available in the curriculum; (2) to reach the set-up learning competency; and (3) to obtain output-competency standard in accordance with the level of learning achievement reputation in nation-wide. Research findings in this type of exam describe that female teachers (4,52999) with Masters' degree (4,6666666), and 11 – 15 years of teaching experience (4,5833333) have shown better efforts in preparing students for NSSE.

3.4. Principals' Efforts in the Aspect of Infrastructures

In the aspect of infrastructures, only 4 (44,4%) out of 9 schools have language laboratories and located in a crowded area; meanwhile 8 (88,9%) schools have rooms for principals, guidance & counseling, conducive classrooms, sports corners, and rest-rooms. However, between 6 (66,6%) up to 7 (77,8%) of them have teachers room, reading room, exact science laboratories, conference room, mosques/prayer room, computer laboratories, parking lots, and equipped with internet & air-condition but canteens are available in all of them.

3.5. Principals' Efforts in the Aspect of Inhibiting & Supporting Factors

In the aspect of inhibitions & supports, only 3 (33,3%) until 5 (55,6%) of principals conclude that 'time allocation for remedy', 'doing classroom research' and 'reaching the curriculum' obstruct teachers from preparing full efforts for their students' success. Meanwhile, 4 (44,4%) until 8 (88,9%) of them think that other sub-aspects such as number of teachers, number of learning groups, linearity of academic qualification, MGMP (Learning Subject Teacher Meeting) activities, meeting with teachers periodically, and learning facilities support teachers for students' success.

3.6. Principals' Efforts in the Aspect of Recruitment Process

Finally, in terms of teachers recruitment process, only 3 (33,3%) of principals conduct the following activities: build up selection team for recruitment, teaching practice, discussion on reward, punishment, salary, and promotion system.

3.7. Students' Efforts in the Preparing Themselves for SUEE

In the context of SUEE, it is clearly seen that schools have no special approach or efforts. The success of the students in this type of exam is really dependent on the students themselves. Therefore, many students make several personal efforts; and one of them is by taking extracurricular tutorial lessons either inside or outside the school. Inside the schools means that schools provide a program to enrich the students with the competency to be examined in SUEE. This often happens to the schools located in Kecamatan (a small district) in urban areas. Meanwhile, for the students staying in a Siak Regency and Pekanbaru municipality, they tend to join tuition classes outside the schools.

There are at least two main reasons for students taking tuition classes. Firstly, it is influenced by students and parents' belief that schools cannot guaranty the students' success in SUEE; while the second one is due to the higher passing grade for SUEE, particularly the favorite universities. In addition, tuition classes provide consultation services for hard learning materials including home-assignment in free-of-charge; and the model of teaching is focused on the trick asking questions in a short time <https://ardi-ardo.blogspot.com/2009/02/melihat-keberadaan-dan-peranan-lbb.html>, 2019).

In line with this, Abdul Aziz (2017) said that learning at tuition classes always come to the point and applicative to test-items. Then, Praharesti Eriany, et al (2014) in their research findings show that 89,12 % of students joining tuition classes because of intrinsic motivation and 10,88 % because of extrinsic motivation. However, this intrinsic motivation comes from five factors: needs (18,89), behavior (23,23%), interest (15,85 %), values (21,64%), and purpose (20,39%). Finally, research done by Widyantoro Adi Nugroho, et al (2015) reveals that tuition classes are not always in positive impact because 6 subjects to be examined in CPBNE get increase but the others may get decrease. So, the success in learning achievement will depend on role of school and the willing of the students themselves.

Finally, out of 14 aspects to be asked, between 50 (55,6%) until 80 (88,9%) of students were taking extracurricular tutorial lessons out of schools. Their reasons to do this are as in the following:

strengthening learning mastery, having leisure classrooms, killing time after schools, developing self-confidence for CPBNE, getting sources of material, learning materials related to exam, obtaining 'great' formula for exam, always join a try-out, and always discuss more than one topic in every teaching session.

4. Conclusions

The efforts of teachers through self-examination strategy (SES) in preparing students for CPBNE, NSO, and NSSE are highly influenced by the aspects of gender, academic qualification, and teaching experience. On the other hand, students themselves will determine their success in SUEE. Therefore, the appearance of tuition classes indirectly will be bridging students with all of these types of exams since students have intrinsic and extrinsic motivation in learning at tuition classes. Last but not least, the aspects of infrastructures, inhibitions & supports, and recruitment system executed by principals draw significant effect towards the students' success in CPBNE, NSO, NSSE as a whole. So, in a further research, the research topic such as the role of tuition classes is highly suggested.

Acknowledgment

Thank you very much to the Dean of FKIP Universitas Riau for the financial support of this research; and particularly to all teachers who have got involved in this research as the sample respondents.

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