

# Ihsana El Khuluqo\_The Development of Classroom Climate Study in Indonesia (a Historical Perspective)

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## The Development of Classroom Climate Study in Indonesia (A Historical Perspective)

Hadiyanto<sup>1</sup>, A. Komariah<sup>2</sup>, G. Kusumastuti<sup>3</sup>, A. Priatna<sup>4</sup>, I.E Khuluqo<sup>5</sup>

<sup>1</sup>Educational Administration Department, Faculty of Education, Universitas Negeri Padang

ORCID: <https://orcid.org/0000-0001-6171-9666>

Email: [hadiyanto@fip.unp.ac.id](mailto:hadiyanto@fip.unp.ac.id)

<sup>2</sup>Educational Administration Department, Universitas Pendidikan Indonesia

ORCID: <https://orcid.org/0000-0003-2269-3592>

Email: [aan\\_komariah@upi.edu](mailto:aan_komariah@upi.edu)

<sup>3</sup>Educational Administration Department, Faculty of Education, Universitas Negeri Padang

ORCID: <https://orcid.org/0000-0002-2786-0364>

Email: [grahita.kusuma@fip.unp.ac.id](mailto:grahita.kusuma@fip.unp.ac.id)

<sup>4</sup>College of Teacher Training and Education (STKIP) Subang

ORCID: <https://orcid.org/0000-0002-4012-1881>

Email: [aseppriatna064@gmail.com](mailto:aseppriatna064@gmail.com)

<sup>5</sup>Educational policy and leadership at University Muhammadiyah

ORCID: <https://orcid.org/0000-0002-8860-4508>

Email: [ihsana\\_khuluqo@uhamka.ac.id](mailto:ihsana_khuluqo@uhamka.ac.id)

**Abstract:** Improving the micro-scale education quality through classroom climate improvement can be conducted, either by the teacher or school principal according to the each capacity. These efforts have been widely implemented abroad. Nevertheless, it is still rare in Indonesia because of the lack of adequate instruments or measurement tools, or even the lack of teacher capacity and principals in conducting the improvement. In America or Australia, classroom climate improvement has become an integral part of the learning process and the education process in schools. In Indonesia, the improvements need to be pursued in order to become a good habit. The author has started that effort by developing standardized, valid and reliable classroom climate instruments starting from primary education, secondary and higher education. The instruments have been used for classroom action research in order to improve the classroom climate. These efforts still need to be strengthened and disseminated to education providers, teachers and school principal to stimulate them and other researchers to use the classroom climate instrument in order to improve the learning and education quality in schools.

*Keywords: development, classroom climate, Indonesia, progress, perspective*

### I. INTRODUCTION

The study of classroom climate is a particular field and has developed in America since 1979, in Australia and other developed countries such as Spain, the Netherlands, Canada, Singapore (Hadiyanto, 2016). However, the study of classroom climate in Indonesia is not as much as in developed countries. Some classroom climate studies are generally still limited to the explorative studies (Wahyuningrum, 2008), or even correlational studies (Husna, Buwono, & Matsum, 2013). The studies have been done by students of undergraduate, master and doctoral as researchers and lecturers at various education levels.

Theoretically it can be understood that classroom climate is a quality of the physical and non-physical environment of the classroom that is constantly experienced by teachers, impact to their

behavior. 'Climate' as well as 'personality' in humans, respectively - each classroom has the characteristics (personality) which different from other classroom, although the classroom has the same physical and environmental conditions (Hadiyanto, 2016). Classroom climate is influenced by dimensions of milieu, ecology, organizational structure, and culture (Komariah, 2006). Due to the importance of the classroom climate in learning process, various studies have been conducted with development of standardized classroom climate parameter in regular classrooms (Fraser, 2015; Ahmad & Ahmad, 2018), or in inclusive classrooms (Sriklaub, Wongwanich, & Wiratchai, 2015), to linking between classroom climate with other variables. For example, Brackett's study shows there is a direct and positive correlation between the classroom emotional climate and student behavior which mediated by teacher affiliation (Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011). Other studies have shown that classroom climates related with with friendship and learning achievement (Reyes, Brackett, Rivers, White, & Salovey, 2012), classroom climate related with self-efficacy and student achievement (Peters, 2013).

The link between classroom climate and other variables can be understood because the classroom climate related to three general dimensions that measure the psychological and social environment, namely relationship dimension, personal growth/development dimension, and system maintenance and change dimension (Moos, 1979). These three dimensions are completed by physical environment dimensions (Arter, 1989). These four dimensions can be broken down into narrower indicators called scales. The relationship dimension includes personal scale, and student cohesiveness. The dimension of personal growth includes task orientation. The scales included in the dimension of system maintenance and change are innovation and individualization. The dimension of physical environment includes resource adequacy and physical comfort. Once it calculated, there are more than 46 classroom climate scales in four dimensions mentioned above (Hadiyanto, 2016). These scales are summarized from various classroom climate parameters that have been developed in various countries (Fraser, 2015).

In Indonesia, several studies of classroom climate and other variables correlation have also been done by undergraduate, master and doctoral level students. These studies correlate classroom climate with learning outcomes or achievements (Saptiawati & Hadiyanto, 2009), classroom climate with study habit (Ahmad & Ahmad, 2019; Amelia, 2016), and school performance (Gascoigne, 2012), student performance (Falsario, 2014), and school performance (Djigic & Stojiljkovic, 2011). classroom climate with bullying (Usman, 2013), classroom climate and interest in learning with learning outcome variables (Husna et al., 2013), (Sari, 2013). The study was conducted by Maherzi (2011), Silalahi (2008), Aryani & Als (2016) stating the existence of a correlation between classroom climate and student learning motivation. The above studies, in general are correlational studies, reinforce theories or findings of previous studies about the existence of a correlation between classroom climate variables with other variables.

In order to provide better benefit value for education, and convince that the classroom climate is an important variable that correlates to other variables (Maris, Komariah, & Indonesia, 2016), teachers, education facilitators or school managers need to make concrete steps to have more conducive classroom climate. It means that the more conducive the classroom climate is, the better it contributes to learning motivation, achievement or learning outcomes. Based on this statement, teachers or education facilitators must have better efforts to have better classroom climates.

This article discusses several studies on the development of classroom climate instrument that has been done by researchers, continued with classroom climate improvement studies starting from the primary, secondary and tertiary levels through the classroom study cycles.

## II. RESEARCH METHOD

In order to develop the classroom climate instrument, this research used a quantitative approach to examine the validity and reliability of the classroom climate instrument. The study adapted the classroom climate inventory for primary school called 'My Class Environment' (MCE) developed by Grady (1993). MCE was adapted and translated into Bahasa Indonesia and validated by 1.103 elementary school students in Padang. The results of the development showed that the scales of classroom climate measuring tool has not acquired high score of alpha coefficient (Hadiyanto & Mukti, 1997). Therefore, in 1998 the authors conducted a review of the instruments and revalidated to 1.111 students in secondary schools in West Sumatra (Hadiyanto & Kumaidi, 1998).

The next is an adaptation of the classroom climate instrument in universities 'College and University Classroom Environment Inventory' (CUCEI), which was originally developed by (Treagust & Fraser, 1986). The adaptation of the instrument was validated by 1.244 students from various universities in West Sumatra, namely Universitas Negeri Padang, Universitas Eka Sakti Padang, Sekolah Tinggi Syeh Burhanudin Padang Pariaman, STKIP Aisyah Pekanbaru Riau, as well as the students of Universitas Negeri Gorontalo (Hadiyanto, Syahril, Arwildayanto, & Sumar, 2019).

The second approach was classroom action research to adjust the classroom climate. This approach was implemented with following main stages of classroom climate research developed by Fraser, et al (Fraser, Seddon, & Eagleson; 1982, Fraser; 1986), namely, 1) the assessment of classroom climate, 2) feedback to the teacher, 3) reflection and discussion, 4) remedial intervention, and 5) reassessment of the classroom climate (Hadiyanto, 2016). The five stages is a cycle that possible repeated on the next cycles.

To determine the validity and reliability of the instrument, data were analyzed by using quantitative techniques to calculate the alpha coefficient of each scales on the instrument. In classroom action research, data analysis was conducted by descriptive quantitative, to compare the development of the coefficient of each cycle.

## III. RESULTS

Study about the classroom climate which have carried out, basically can be grouped into two main activities. The first main activities are to develop a valid and reliable instrument. The second main activities are to use the instruments to assess and improve the classroom climate.

### 1. The Development Of Classroom Climate Instruments

#### *Classroom Climate Instrument in Elementary and Secondary School*

In order to achieve a valid and reliable classroom climate instrument, the author developed a classroom climate instrument for elementary school. The instrument is adapted from My Class Environment (MCE) (Grady, 1993). This instrument consists of 30 items which was developed in six scales, namely, cohesiveness, satisfaction, speed, difficulty, formality, democracy. The results of this validation showed that alpha coefficient of the instrument scale showed improvement and can be used to capture the classroom climate of grade V and VI of primary schools and secondary schools (Hadiyanto, 2016).

#### *Classroom Climate Instrument in Higher Education*

In order to achieve a valid and reliable classroom climate instrument, the author developed a

classroom climate instrument for college and university. The instrument is adapted from College and University Classroom Environment Inventory (CUCEI). CUCEI consists of 49 items from seven scales, namely: Personalization, Involvement, Familiarity, Satisfaction, Orientation on task, Innovation, and Individualization.

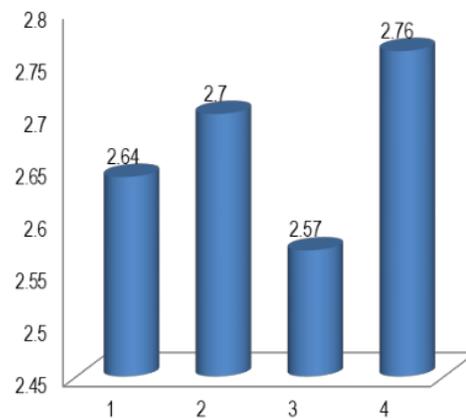
Hadiyanto et al, conducted the development of the CUCEI by adding three more scales, namely Competition, resources adequacy, and physical environments, so that it becomes ten scales, which was developed in 60 items. The 60 items were translated into Bahasa Indonesia by a teacher, graduated from master program of English Department (Hadiyanto et al., 2019). The adaptation of the instrument was validated by 1.244 students from various universities in West Sumatra, namely Universitas Negeri Padang, Universitas Eka Sakti Padang, Sekolah Tinggi Syeh Burhanudin Padang Pariaman, STKIP Aisyah Pekanbaru Riau, as well as the students of Universitas Negeri Gorontalo

## 2. The use of Assessment Instrument to Improve the Classroom Climate

The initial study design about classroom climate which was developed by Fraser, et al (Fraser et al., 1982). Fraser (Fraser, 1986) basically conducted in five main stages started by assessment, feedback, reflection and discussion, remedial intervention and reassessment of the classroom climate (Hadiyanto, 2016).

### *Improvement of Classroom Climate in Elementary School*

Through classroom climate instrument which has been developed by Hadiyanto and Mukti as well as Hadiyanto and Kumaidi, Muhammad et al, took one of the scales of the classroom climate instrument in order to improve the democracy of the class. The classroom action research was conducted in grade V and VI Sekolah Dasar Negeri 19 Padang Utara, Padang. After conducted the improvement in two cycles for four months, it can be concluded that there was improvement of class democracy between before and after the research, as shown in Figure 1 (Muhammad, Hadiyanto, & Nurli, 1998).



**Figure 1.** Improvement of the Undemocratic classroom climate in Sekolah Dasar Negeri 19 Padang Utara, Padang

The next research conducted by Sutjipto and Hadiyanto in grade V in private elementary school in

Rawamangun, Jakarta, using the instruments that had been developed in 2003. The study aimed to improve the scale of satisfaction of the classroom climate. By passing the steps that have been mentioned earlier, the study was conducted for approximately four months and resulted improvement of classroom climate which is figured on Figure 2

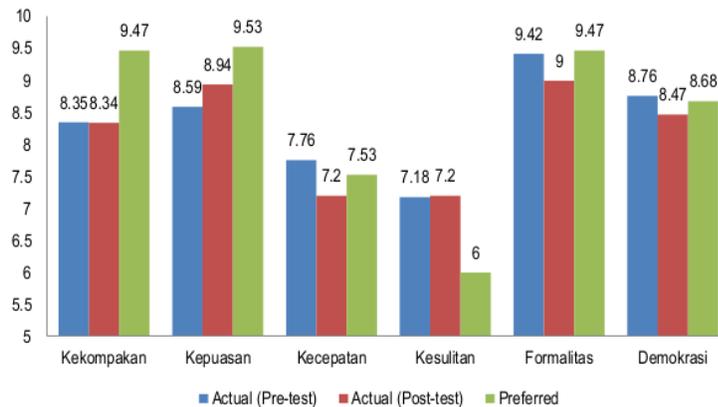


Figure 2. Classroom Climate in grade V SD Rawamangun, Jakarta after Treatment

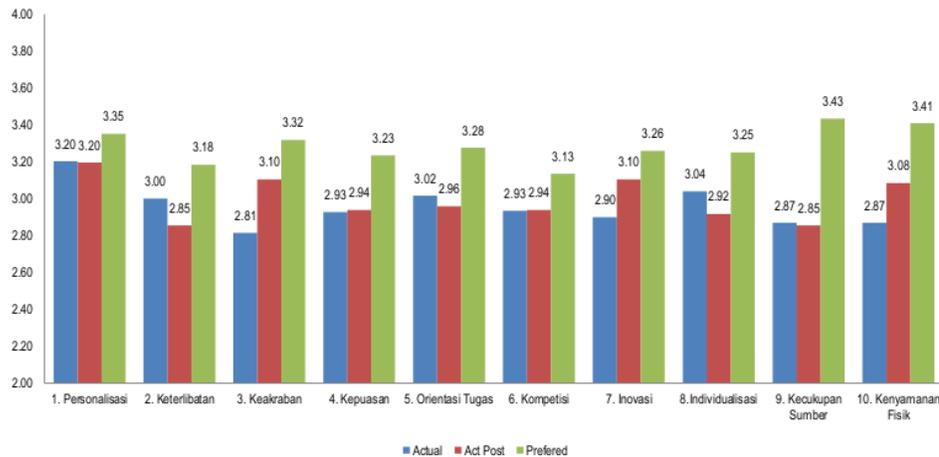
Based on Figure 2, it can be seen that the study of the improvement of classroom climate at new class was able to improve satisfaction scale, and did not improve the other scales (Sutjipto & Hadiyanto, 2003).

#### Adjusting Classroom Climate in Higher School

This was a collaborative classroom action research, conducted by Saptiawati, Biology teacher to the 44 students of grade XI Science class in Bekasi, West Java. The sample was chosen because 50% learning outcomes of the students were still poor and classroom climates did not support the learning process. The study was conducted in two cycles in one semester. The results showed that the achievement of students in Science class can be enhanced through the improvement of the classroom climate (Saptiawati & Hadiyanto, 2009).

#### Adjusting Classroom Climate in Higher Education

After developing and validating classroom climate instrument in universities to 1.244 students in various universities in West Sumatra, Riau, and in Gorontalo, Hadiyanto, et al using the classroom climate instrument to improve the classroom climate through classroom action research. The selected scales to be improved were the cohesiveness and innovation. The research was conducted in 2018, involving 52 students from various departments in the course of Educational Administration and Supervision in Universitas Negeri Padang. After two month treatment, it was found that there was a significant increase in the cohesiveness and innovation scales. In other words, the lecturers succeeded in improving both scales based on what students preferred, as shown on Figure 3



**Figure 3.** Actual Classroom Climate (Pre-test and Post-test) and Preferred on the Educational Administration and Supervision course

Based on the Figure 3, it can be understood that there was a change on cohesiveness and innovation scales. The both scales move closer to the classroom climate preferred by the students. However, the score of the other scale was stable because the lecturers did not do attempt any improvement to cohesiveness and innovation scales (Hadiyanto, Syahril, Arwildayanto, & Sumar, 2018).

#### IV. DISCUSSION

Several studies both in Indonesia and abroad have proven that classroom climate was one variable which influence or being influenced by other variables. The studies have been done by students to complete their studies, and the results generally make a better existing theories or strengthen previous similar studies.

In order to have the accurate classroom climate instrument, a standardized, valid and reliable classroom climate inventory is needed. The classrooms climate instrument that have been validated in 1997 (Hadiyanto & Mukti, 1997), which were later revalidated in 1998 (Hadiyanto & Kumaidi, 1998) are valid and reliable classroom climate instruments for both at the level of primary school grades 4-6 and at secondary school level;

The study conducted at a private primary schools in Rawamangun, Jakarta (Sutjipto & Hadiyanto, 2002), has proven that particular scales of classroom climate can improve as students expectation. Based on this reason, the teacher's task is to create a better atmosphere to have a better scales of the classroom climate.

In the last study, the researchers conducted treatments to improve the scale of cohesiveness and scale of innovation. The efforts made by researchers to increase cohesiveness including: 1) Forming permanent small group of classroom members, each group was given the task of discussing the subject matter stated on the syllabus in each meeting; 2) Emphasize each group member to know each other intimately. This was emphasized because the students came from various study programs at Universitas Negeri Padang, while at first they did not know each other; 3) Make group variations, by making new groups at certain meetings. Therefore, students can get to know each other from different group members; 4) Establishing intimate communication between students and lecturers

through WhatsApp groups to enable group members interact outside academic or lecture difficulties because each student knew the student and lecturer's identity and telephone number.

In order to improve the scale of innovation, researchers have been done these following steps: 1) Using learning media and devices such as LCD for the basic of presentations both by lecturers and students; 2) Optimizing the e-learning in university as facility and instructional media to communicate with students; In e-learning portal, researchers have learning material, such as Semester Learning Plans or syllabus, teaching materials, reference books, and learning videos that can be accessed by students easily; 3) Optimizing e-learning to create learning innovations, such as online assignment, online quiz, online midterm and final exam; 4) Using WhatsApp to form groups in order to have a better communication, such as sharing the presentation material of groups that will perform, and allowing students to quickly respond to lecture difficulties.

## V. CONCLUSION

Based on the discussion of the study about the classroom climate, it can be concluded that, first, the classroom climate as a variable in learning process influences and is influenced by the other variables. Some correlational studies about classroom climate that have been implemented outside Indonesia and held in Indonesia, in general, strengthen the linkages between these variables;

Second, the study of the development of classroom climate instruments which has been implemented has been standardized, valid and reliable. The instruments have been used as a preliminary step to assess, can be followed up with realistic step to improve the classroom climate in accordance to person-environment fit (preferred by students). Adjusted classroom climate can be implemented by every teacher or lecturer according to the choice of scale that allows for improvement.

## VI. SUGGESTION

Several classroom climate instruments have been developed for the regular classes in primary education, secondary and higher education. It is still available to develop a classroom climates instrument in special classes (special education) and inclusive classes ranging from basic education up to university. Through the completion of the instruments, it will add a chance to conducted further study in special class and inclusive classes.

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