

Observer-Cameramen as New Role in Educational Research: Case Study

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A B S T R A C T

In educational research, observers and camera operators typically have distinct roles. However, these roles may not always function optimally in data collection due to certain limitations. As a result, the concept of merging the observer's role with the camera operators was introduced to address these challenges. This study explores the role of the idea in expanding the role of observers as cameramen (camera operators), which is presented in several cases conducted in North Kalimantan and East Java. The case studies in this research are based on three classroom settings with different observer characteristics regarding positioning, number, and role. This idea is also expanded through the discussion section in the paper, which presents an expansion of how to train observer-cameramen and maximize observers based on classroom size.

Keywords: *Observers, Cameramen, Case Studies*

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INTRODUCTION

The observer's role in educational research is essential in collecting and recording data during learning (O'Leary, 2020; Yusrina & Bima, 2020). The observer can be classified into two types: pure observer and participant observer. Pure observers typically observe from a distance without direct involvement in the learning activities (Ciesielska et al., 2018; Hartmann & Wood, 1990). In contrast, participant observers are actively involved in the activities as group members or as external participants joining temporarily (Hurst, 2023; Seim, 2024).

On the other hand, a cameraman's role is vital in capturing critical moments during studies (Kilburn, 2014). Research methods like discourse analysis, classroom action research, and other qualitative approaches focusing on learning observations rely on video as part of the data collection process (Catelli, 2010; Jones, 2021; Lofthouse & Birmingham, 2010; Lovett, 2007). However, due to limited resources and equipment, some studies use only one cameraman (camera operator), which may lead to incomplete documentation (P. J. Fadde & Zhou, 2014; Matthews & Matthews, 1987). Another noteworthy finding stated that it was unrecorded due to the camera operator's inability to capture every event in large, unpredictable classroom environments (P. J. Fadde & Zhou, 2014; Matthews & Matthews, 1987).

To address these issues, this paper proposes the example of observer-cameraman, expanding the role of the observer to include that of a camera operator. Case studies in some educational research conducted by the author support this idea and become an example of how to implement it in the classroom setting. It aims to show how the combined role of observers as camera operators can improve data collection by ensuring key moments are

optimally captured, as the camera operator would have the observational skills necessary to identify significant events in the learning process.

METHOD

Study Context

This case study (Feagin et al., 2016; Flyvbjerg, 2011) draws from multiple educational research projects conducted by the author in North Kalimantan and East Java. It focuses on the secondary data in video derived from an analysis of observer roles within these studies, specifically emphasizing case studies that highlight exploration and description (Lucas et al., 2018).

Data Collection

The primary data for this study comes from the analysis of classroom environments where observers actively participated. The primary dataset consists of video recordings captured during the learning activities.

Data Analysis

The data was analyzed by mapping the observer's position throughout the learning process. Charts were used to create a visual representation of this information. Key elements analyzed include the observer's positioning, the number of observers involved, and the roles they fulfilled while simultaneously acting as cameramen in the classroom setting.

FINDING AND DISCUSSION

This study identified three distinct conditions for observers functioning as cameramen, based on the aspects outlined in the method section: observer position, number of observers, and observer roles. These conditions are described as follows: (1) two observer-cameramen, one moving in front of the class and the other behind; (2) one observer-cameraman moving behind the class, and (3) one observer-cameraman moving around and one stationary observer (non-cameraman) positioned at the front of the class. These conditions will be discussed in detail in the following section.

Case 1: Two Observer-Cameramen, One Moving in Front of the Class and the Other Behind

In case 1, two observer-cameramen were placed at the front and back of the classroom. These observers moved in a coordinated pattern to capture key activities of the learning process. Figure 1 illustrates the classroom layout, showing the placement of the teacher and observers. The two observers, labelled as Observer 1 and Observer 2, shift between positions to record both broad views of the entire class and detailed footage of individual students or group students. The classroom is arranged in a U-shape, with each observer responsible for recording three student groups in detail.

Figure 2 provides the viewpoint of the second observer, while the first observer focuses on capturing specific moments within one student group. The observers' mobility allows them to alternate roles, with one capturing broader classroom views while the other focuses on detailed interactions, resulting in wide data collection. The U-shaped seating arrangement not only enhances the observers' mobility but also facilitates smooth interactions between the teacher and students, minimizing any interference with the observers' movements.

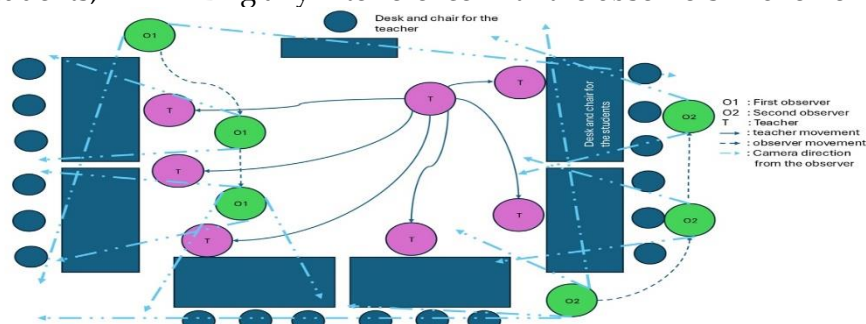


Figure 1. Case 1: Observers and Teacher Position



Figure 2. The Image Illustrates the Classroom Layout as Captured by the Second Observer's Video, Providing a Wide-Angle View of the Entire Classroom.

Case 2: One Observer-Cameraman Moving Behind the Class

In the second case, a single observer-cameraman is responsible for capturing video footage in the classroom, moving between different positions to document various aspects of the learning process. This observer captures both general classroom dynamics and specific activities within student groups. Figure 3 shows the observer moving behind the class to different seating areas to record the learning process. Figure 4 highlights a detailed video capture focusing on student group activities.

Compared to Case 1, which involves two observer-cameramen, this case presents certain limitations in data collection. The single observer must move between locations to capture important moments, which can lead to delays and potentially missed events during the learning process.

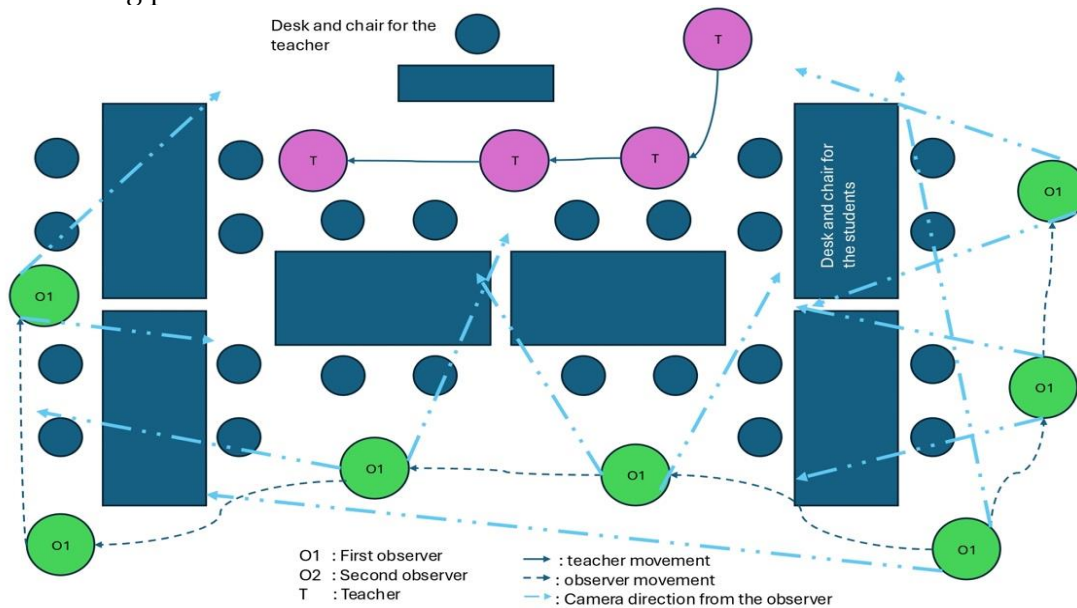


Figure 3. Case 2: Observer and Teacher Position

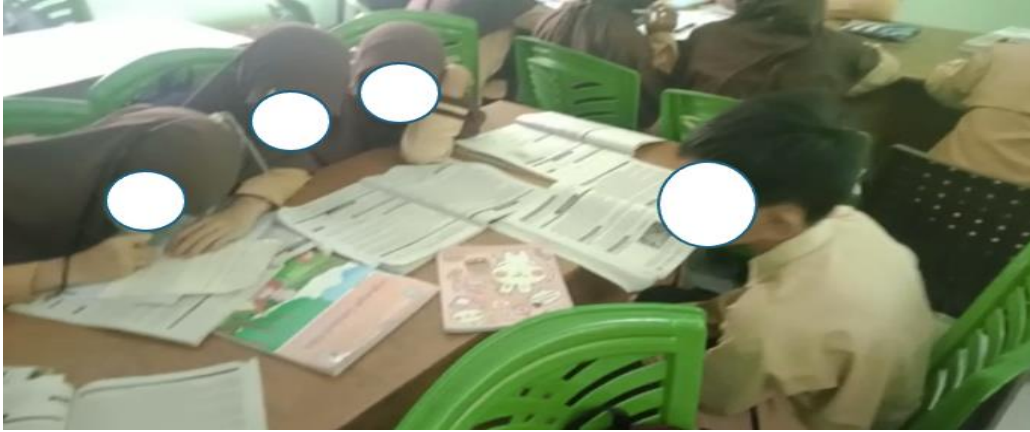


Figure 4. Video Footage Captured by the Observer in Case 2, Documented One of the Student Activities.

Case 3: One Observer-Cameraman Moving Around and One Stationary Observer (Non-Cameraman) at the Front of the Class

The third case presents a unique setup, as there is only one observer-cameraman, while the second observer is a stationary non-cameraman, as shown in Figure 5. Observer 1 is responsible for capturing detailed video footage of each student group, while Observer 2 monitors the entire classroom without moving from the front. Observer 2 directs Observer 1 to focus on specific student groups when needed. This division of roles is noteworthy because Observer 2 remains stationary, focusing on the overall classroom dynamics, while Observer 1 moves around to ensure important moments are recorded from their direction.

In Figure 6, Observer 2 and the teacher can be seen at the front of the classroom, with the image captured from Observer 1's perspective. In this case, the task division is particularly effective, as the collaboration between observers optimizes capturing critical moments in the learning process. Similar to Case 1, Case 3 emphasizes a more interactive partnership, where one observer acts as a broad-scale monitor, and the other follows instructions to capture specific vital moments in detail.

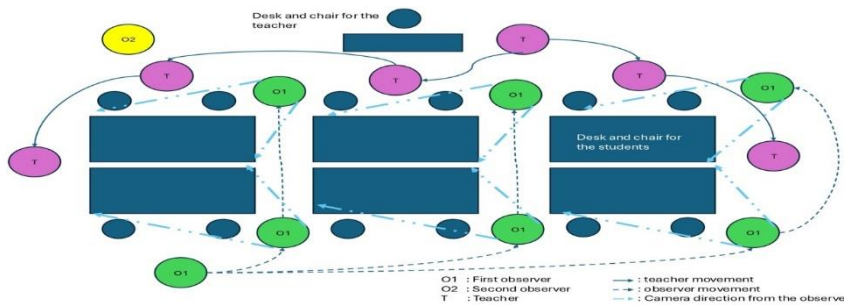


Figure 5. Observers and Teacher Position in Case 3



Figure 6. Position Of Observer 2 and Teacher at the Front of the Class, from Observer 1's Point of View.

Discussion

Observer-Cameramen as New Role in Educational Research: Case Studies

From the three cases examining the roles and positions of observers as data collectors in educational research, this section highlights three key aspects: the availability of observers, potential challenges and opportunities for observer-cameramen, and strategies for maximizing data collection in future research.

Availability of Observers in Educational Research

In the studies conducted by the author, the number of observer-cameramens was limited to a maximum of two based on the moderate classroom size and manageable student numbers. In previous research, the number of observers often reached three, with observations conducted multiple times to ensure comprehensive data collection (e.g. Ndiokubwayo et al., 2021). This approach acknowledges the need for multiple observers and repeated observations to capture complete data.

However, in some studies, the number of observers is limited to one or two (e.g. Weinrott et al., 1978). This indicates no fixed guideline for the number of observers needed in classroom research. Nonetheless, observers are crucial for gathering extensive data and insights in the field. Beyond collecting data, observers often serve as peers in post-lesson reflections, offering expertise that can inform improvements for future lessons (Nyaumwe, 2010). In certain studies, as mentioned in the introduction, participant observers immerse themselves in the learning environment to gain deeper insights into the classroom dynamics (Seim, 2024).

Potential and Opportunities for Expanding the Role of Observers as Cameramen

In this study, observers who serve as camera operators contribute to analyzing key moments during the learning process and enhance data collection through video recording. This dual role allows researchers to rely on both observation notes and video footage, providing richer, more comprehensive data. Traditionally, the roles of observer and cameraman have been separate in most studies (P. Fadde & Rich, 2010). However, combining these roles offers promising potential for future research, as training observers in video recording skills could lead to more efficient and effective data collection.

There are challenges to this approach. One major concern is that an observer might lose focus on classroom conditions while managing the task of filming, especially if they are new to the dual role. This issue can be mitigated over time with practice and familiarization. Initially, a model similar to Case 3 could be adopted where one observer is responsible for filming while another focuses solely on observation. As observers gain experience, the model can evolve to something akin to Case 1, where both responsibilities are seamlessly integrated.

Ideas for Observer-Cameramen in Future Research

The author proposes several ideas for developing the observer-cameraman role in future research based on the three cases. As shown in Figure 7, training programs can be designed to equip observers with key filming skills. This includes learning shot composition techniques, such as capturing wide classroom views and close-up shots, understanding classroom dynamics to identify important interactions, reviewing footage to evaluate video clarity, and performing basic editing.

The author also suggests a tiered approach to deploying observer-cameramen based on classroom size, see Figure 8. A single observer should focus on capturing individual and group interactions for small classrooms. Two observers can be used in medium-sized classrooms: one focusing on the overall classroom environment and the other on specific student interactions. Three or more observers would be ideal for large classrooms, with each assigned tasks such as general classroom coverage, student interactions, and ensuring that any missed moments are captured.

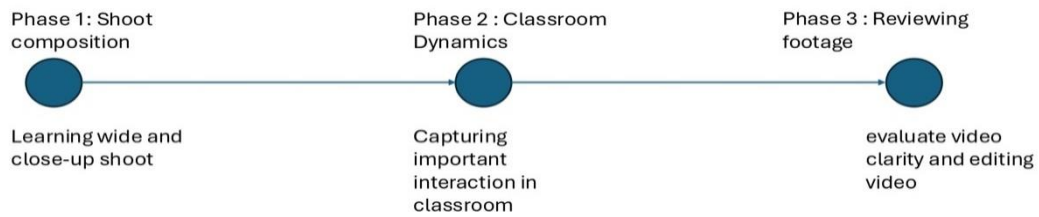


Figure 7. Idea of the Training Program for Observer-Cameraman

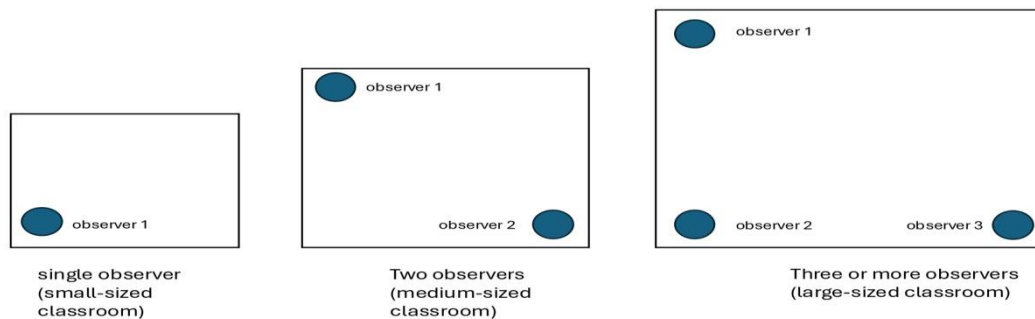


Figure 8. Observer-Cameraman Based on the Classroom Size

CONCLUSIONS

In conclusion, this research examines the implementation of observer-cameramen across several case studies conducted by the author. Three distinct types of observer-cameramen roles and positions within the classroom are identified and discussed. However, due to the case study approach, these findings cannot be generalized, and other researchers may employ different strategies in using observers and camera operators in their studies. These findings serve as a foundation for future researchers to develop further and optimize the role of observer-cameramen in educational research, building on the insights provided in the discussion section.

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