ANALYSIS OF INTERACTION PATTERNS IN SECONDARY SCHOOL ECONOMICS CLASSROOMS IN KWARA STATE, NIGERIA

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Abstract
The descriptive research design of the observational type was adopted for this study. A sample of 10 Economics classes from five LGAs of 16 in Kwara State, were purposely selected for observation, a total of 219 students during each classroom lesson observed twice. Flander's Interaction Analysis Category System (FIACS) was used to observe interactions in the classes. The data gathered were analyzed with percentages and charts. The study found that 86% of classroom interaction was teacher-talk, 95% verbal interaction, 62% interaction pattern of the non-numerate classroom, while activity in Economics classes was mostly academic (83%) in Kwara State; all teacher-centred. It was recommended that that teaching technique should be more learner-cantered.

Keywords: Classroom, Interaction Pattern, Flander's Interaction Analysis Category System (FIACS), Interaction

Introduction

Interaction is seen as a complex social phenomenon comprising non-verbal and social properties and its verbal characteristics. Interaction is the flow of conversation, ideas, and thoughts both in spoken words and actions between one or more individuals in the day-to-day activities in the classroom instructional process. Interaction is usually an expression of ideas in a wholesome manner. Interaction in a classroom implies a set of learners who perceive what is happening similarly, communicate this to each other, and define appropriate action together at any time. In this way, chorusing or shouting an answer to a teacher can be an example of interaction, when individuals consider that he/she is being given support by smiles or laughter from others present. This study is focused on the interaction patterns in Economics classrooms.

Classroom interaction is an essential ingredient in the instructional process and a prerequisite for healthy academic growth. Therefore, teacher-student interaction's quality and quantity are critical aspects of effective classroom teaching (Amatari, 2015). According to

Herliani (2016), interaction in class holds an essential role in influencing the teacher-student relationship. As such, an effective teacher-students classroom interaction provides a better atmosphere for teaching and learning. **Brackett, Reyes, Rivers, Elbertson,** and **Salovey (2011)** defined classroom norms and values as behaviour that relate to a specific description of a situation in a typical interaction set, where an interaction set represents a shared knowledge among a group of pupils or students who are associated especially in patterns of behaviour and joint action.

Flander's Interaction Analysis Category System (FIAC) has been used extensively to observe and measure classroom interaction patterns. According to Amatari (2015), the FAIC

system is an observational tool used to classify teachers and pupils' verbal behaviour as they interact in the classroom and innovation, which made possible significant insights into the analysis and improvement of classroom instruction. The FIAC system has ten categories: accepting feeling, praising and encouraging, accepting or using ideas of the student, asking questions, lecturing, giving directions, criticizing or justifying authority, and student-talk response student-talk initiation, and silence (Kumpul, 2012; Septiningtyas, 2016).

Ghosh (2010) suggested a few objectives of classroom interaction. They are helping learners to identify instructional contents, to guide learners on how to communicate with their peers easily, to give students or learners exposure to learning language, to help learners come face to face with the various types of interaction that can take place inside the classroom, to probe into the learners' prior learning ability and their way of conceptualizing facts and ideas, to bring about meaningful communication among the students, and to help the teacher to have a detailed study of nature and the frequency of student interaction inside the classroom. Classroom interaction is a practice that enhances the development of the two fundamental language skills, which are speaking and listening among the learners (Ghosh, 2010). These skills help learners to be competent enough to think critically and share their views among their peers. It further leads to a deeper understanding of the learners' part as questions could be asked, and the teachers' response is expected to clarify areas of confusion or any misconception on the subject matter. Wragg (1995) described classroom interaction as significant because it is how the learner understands the teaching and learning structures and derives meaning from classroom events. It also gives learners the opportunities to incorporate teaching and learning structures into their speech (the scaffolding principles).

Several research types have been done on classroom interaction patterns (Black & Harrison, 2001; Ogunniyi, 2002; Chapin, O'Connor & Anderson, 2003; Chin, 2006; Brown & Hirst, 2007; Inamullah, 2005; Brackett et al. **2011**). These studies were based on science subjects' classrooms; and not on Economics. This study aimed to analyze classroom interaction patterns in Economics achieved by asking the following questions:

a) What is the profile of interaction patterns in Secondary School Economics classrooms in Kwara State?
b) What is the proportion of verbal and non-verbal interaction in Secondary School Economics classrooms in Kwara State?
c) What is the interaction pattern based on the nature of the secondary school economics classroom in Kwara State?
d) To what extent do non-academic activities feature in Secondary School Economics classrooms in Kwara State?

Methodology

The descriptive research design of the observational type was adopted for this study. All Senior Secondary School Economics classrooms in Kwara state constitute the population of the study. This study's target population consists of all Senior Secondary one (SS 1) classes, a population of 93 classrooms with students having an average age of 14 years. This group is chosen because they are beginners in the Senior Secondary class who could benefit the most from this study's findings. There are sixteen Local Government Areas (LGAs) in Kwara State. 5 LGAs were selected using a simple random technique from which ten public schools were selected

using a purposive sampling technique in terms of ownership and funding, admission policy, scheme of work using the modules in their recommended text and teachers' qualification).

The study instrument was adapted from the Flanders Interaction Analysis Categories System (FIACS) extensively used for coding the interaction in the classroom. This instrument was developed by Flander (1970) to code teacher and student verbal and non-verbal interaction, and the researcher was using it during Economics lessons to code the classroom observation. The FIACS initially used three seconds, but the researcher used an adaption of five seconds to allow for a more consistent and convenient time range during the coding exercise because, during the training exercise of research assistants, it was noticed that the use of three seconds was quite cumbersome. Not everybody could cope with it consistently. The items in FIACS were converted into an observation sheet called a coding chart by Gay (2000). The observational sheet represents 150 seconds for ten categories of FIACS. Each block in the observational sheet represents five seconds.

The following observation procedure was adopted:

i. In each class of 45 minutes duration, 22.50 minutes (1350secs) were used for observation.
ii. 22.50 minutes (1350 seconds) were divided into an observation session.
iii. Each observation session was for 2.30 minutes (150 seconds).
iv. One observation sheet was used for each observation session of 150 seconds.
v. Each observation session constituted 30 observation periods.
vi. Each observation period was of five seconds duration.
vii. The teacher's behaviour for five seconds was observed, classified, and recorded in the relevant block of the observation sheet until the termination of the observation session of 150 seconds.
viii. The observation in a single classroom lasted for about 22.50 minutes (1350 seconds).

Observation of each class was carried out using a simple random sampling technique. The observation technique used was the non-intrusive which is viewing participants without actively participating in the activities in the classroom. Each teacher was observed twice in an Economics class that is two lessons each. The instructional process in each of the selected Economics classrooms was coded on the Flander matrix. Only classroom interactions during Economics lessons were observed and coded. Each coded Flander matrix was analyzed and interpreted by using percentages and graphs.

Results

The research questions were answered using coding from the FIACS observation sheet was analyzed using frequency counts and percentages presented with chats.

Research Question 1: What is the profile of interaction patterns in Senior Secondary Schools Economics classrooms in Kwara State?

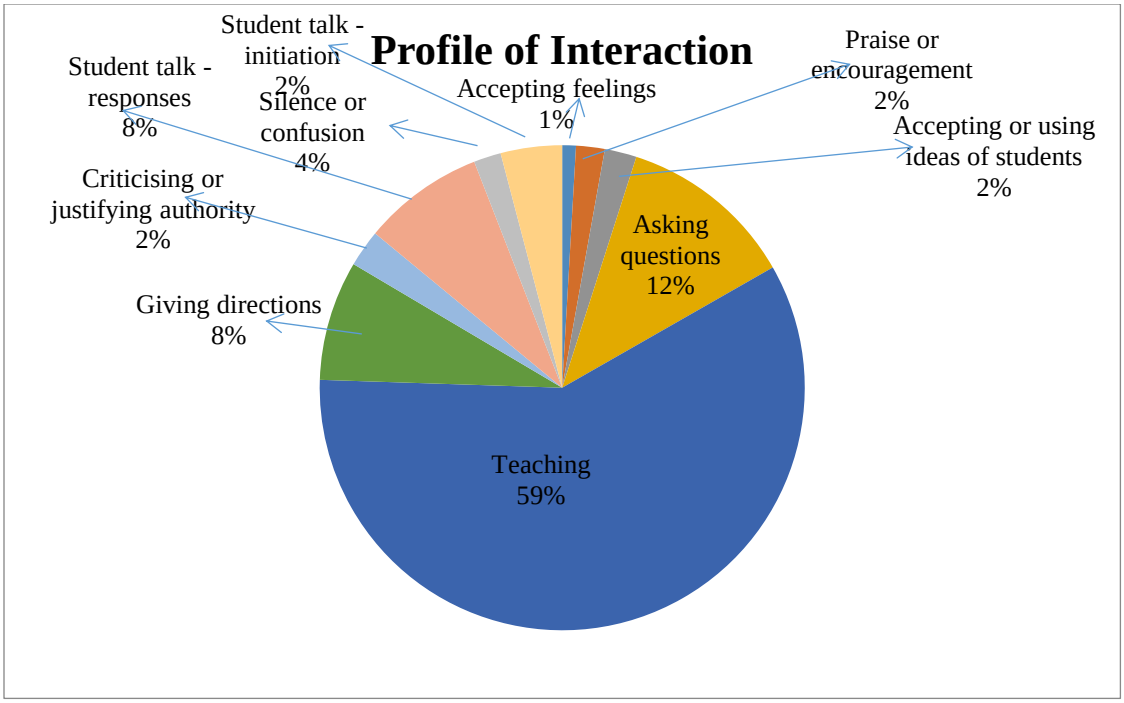

Figure 1: Profile of Interaction Patterns

Figure 1 reveals that the most substantial portion of the pie chart in the interaction pattern of the teacher-talk is the teaching category with 59% (pale blue), asking questions category follows with 12% (lilac), giving directions by the teacher with 8% (orange), accepting or using students' idea by the teacher with 1% (green), praise or encouragement with 2% (red) and criticizing or justifying authority with 2% (sky blue). This result shows that the Economics class was dominated by teacher-talk, with 2% using students' ideas and encouragement/praise. This finding strengthens the fact that the interaction pattern in Economics is not only of the teacher but also indirectly related to students' since teachers' use their ideas and accept their feelings in the Economics classroom. Student talk – initiation with 2% (light green) and student talk – responses with 9% (pale pink), which indicates that students' responses are also to reckon with when analyzing interaction patterns in Economics class.

Research Question 2: What are the proportions of verbal and non-verbal interactions in Senior Secondary Schools Economics classrooms in Kwara State?

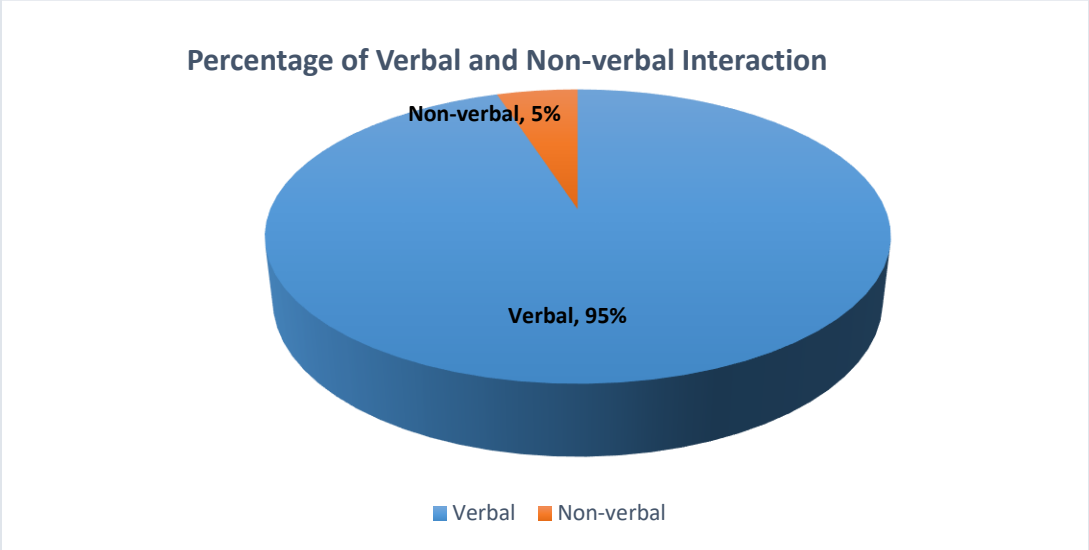

Figure 2: Verbal and Non-Verbal Interaction

Figure 2 revealed that the most substantial part of the pie chart is the verbal interaction of 95% which has the 'teaching category' as 59%, 'asking questions' as 12% and others making the remaining 24% while the non-verbal interaction is 5% where silence or confusion takes 4% and 'accepting feelings' is the remaining 1%. This result implies that verbal interaction accounts for 95% of the interaction in an Economics classroom.

Research Question 3: What is the interaction pattern based on the nature of the topic in the Senior Secondary Schools Economics classroom in Kwara State?

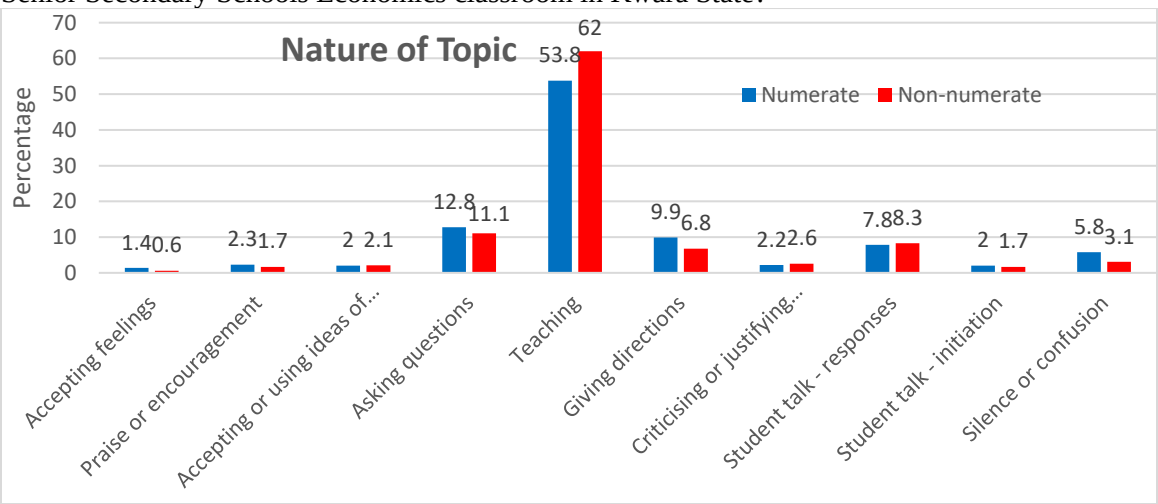

Figure 3: Interaction based on Nature of Topic

Figure 3 shows that in the teaching categories of the non-numerate classroom (62%) and numerate class (53.8%). The asking questions showing 11.1% for the non-numerate class and numerate 12.8%, this implied that student's participation tends to increase in a numerate class as they ask more questions than in a non-numerate class which corresponds to silence or confusion being higher in a numerate class (5.7%) compared to a non-numerate class (3.1%). Giving directions in a numerate class (9.9%) is higher to a non-numerate class (6.8%), which supports that the interaction in a numerate class for students is higher to the teacher.

Research Question 4: To what extent do non-academic activities feature in Senior Secondary Schools Economics classrooms in Kwara State?

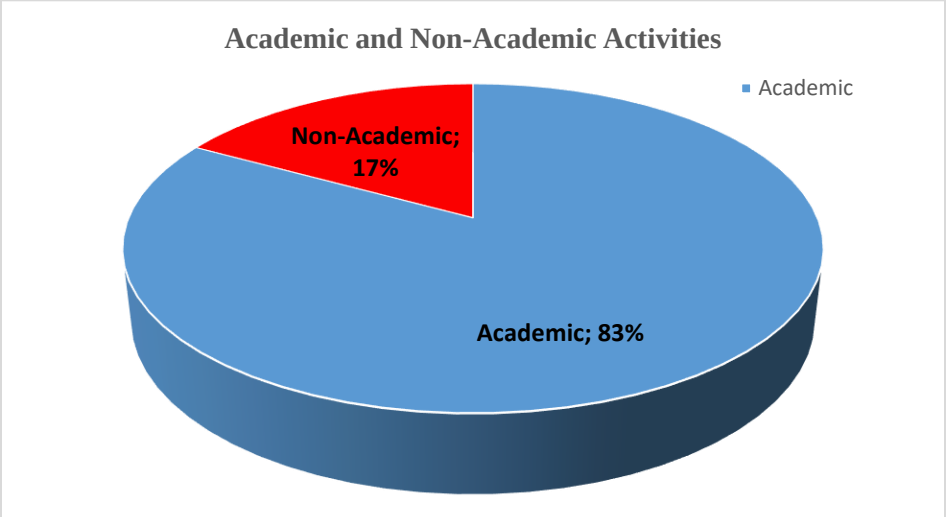

Figure 4: Academic to Non-Academic Activities

Figure 4 shows that 17% of the interaction in an Economics class is the non-academic part, while the remaining 83% is the academic activities. The non-academic activities have its largest portion: giving directions with 8%, silence or confusion, praise or encouragement, accepting feelings, and justifying authority shared the remaining 9%.

Discussion of Findings

One of the findings revealed that teacher-talk dominated Economics classrooms talk time, which implies that an Economics classroom is teacher-cantered. This finding aligns with Inamullah (2005) and Hai and Bee (2006), who reported that two-third of classroom time is devoted to talking. Furthermore, the study also revealed that Economics classrooms were dominated by verbal interaction compared to non-verbal interaction. This finding is an expected outcome because classroom interaction cannot be purely by non-verbal interaction except for the special classroom situation where the hearing impaired or other challenged groups are. This study's findings corroborate Brown and Hirst (2007) findings, whose study revealed that ninety-one percent of talk time in an elementary mathematics classroom accounts for verbal talk. Inamullah (2005) also supported this view.

Another finding revealed that teachers' have a more substantial and direct influence on students' participation than their indirect influence concerning students' participation in

Economics classrooms in Kwara state. Moreover, this is not farfetched because teachers' direct influence includes categories like lectures, giving directions (giving of command with which students' are expected to comply with) and criticizing or justifying authorities solely teacher's responsibilities in Economics classrooms. Goe, Bell and Little (2008) also found out that teachers directly influence student participation than their indirect influence through student participation.

Finding also revealed that academic activities dominated Economics classrooms as teachers accept and clarify students' feelings by nodding his/her head and making expressions like 'uh-huh,' go on, among others are meant to praise or encourage students.' Only when he/she is correct in his/her expression to the classroom subject matter only then does such non-academic activities occur in the Economics classroom since it has more to do with students' already understanding of the class's subject matter. Considering criticizing or justifying authority category, teachers make statements that intend to change student behaviour from non-acceptable to an acceptable pattern that is more of a non-academic activity less featured in Economic classrooms. Brackett et al. (2011) also corroborated this outcome, whose finding also revealed that classrooms' interaction was more of academic activity. More so, a class that has a well-prepared lesson note tends to have to experience more academic activities than non-academic activities.

Conclusion

This study concluded that Economics classrooms were more teacher-centred in terms of teacher-talk with more verbal interactions, while students' participation was directly influenced by the teacher who centres more on academic activities in the classroom.

Recommendations

Given the teacher-centeredness of Economics classrooms, teachers should accommodate more of students' talk, to facilitate active participants in the teaching and learning process. Economics teachers should use the knowledge of classroom interaction to improve their teaching skills and help learners' abilities to learn in an Economics classroom, most especially imputing into students' level of self-confidence to have higher student participation, leading to enhancing of the subject.

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