

Scaffolding Students' Learning Through Lesson Clarity And Instructional Variety As An Effective Teaching Behaviour

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Abstract

The purpose of the study is to showcase the teaching behaviours: lesson clarity and instructional variety proposed by Borich (2012) and to divulge how these teaching behaviours can be used as scaffolding by teachers. The study tested the hypotheses that teachers do not use lesson clarity and instructional variety in the selected subjects in sampled college and there is no association between the results of Secondary School Certificate (SSC) and First year (HSSC) of the sampled students. The sample comprised 120 students and 15 teachers from a population of 338 and 34 respectively from Jinnah College for Women, University of Peshawar. The data was collected from teachers and students through a questionnaire adapted from the works of Borich (2012); Byers (2014); and Murray (1994). In addition, SSC and HSSC results of the students were also obtained to find out students' achievements. The data obtained from both types of respondents were correlated by employing gamma correlation and results of SSC and HSSC (first year) were tested for significance through person correlation. The result of the study elicited that lesson clarity and instructional variety did not correspond with students' academic achievements as teachers did not know these behaviours; however, they used to come prepared in the classes as per students' opinions since teachers' entire focus was on the completion of the courses. The result also showcased a strong correlation between the SSC and HSSC (first-year) results of the sampled students, which means students were self-motivated to study hard and secure good marks in the succeeding exams.

Keywords: Effective teaching behaviour, Instructional variety; Lesson clarity; Scaffolding

Introduction

Who makes a good teacher? A variety of other personality attributes would have been used to define the question posed a century ago, including a noble teacher, a role model, a responsible citizen, and a spiritual parent (Borich, 2012). It is possible to think of a teacher as a combination of Fatima's commitment, Jabir Bin Hayyan's knowledge, Al Kindi's philosophy, Ottoman insight, and King Solomon's wisdom. However, without specific goals and performance expectations for

teachers, these qualities cannot be attained. The academic success of the students and their comprehension of the subjects presented serve as indicators of how effective the teaching is (Borich, 2012; Murray, 1994).

One of the most important components of school improvement is effective teaching (Ko et al., 2016). Students who get effective instruction are inspired and interested in their learning, and their skills and aptitudes are tailored to them specifically (Good & Brophy,

2009). When a teacher adheres to specific guidelines, clearly specifies tasks, and has high standards for student behaviour, teaching is effective.

Vygotsky's sociocultural theory provides bases for Scaffolding as an effective teaching strategy. It provides the ability among students to develop new knowledge based on the previous one. (Olson & Platt, 2000). Vygotsky defined scaffolding as the role of teachers and others in supporting the learner's development and providing support structures to get to that next stage or level (Raymond, 2000).

What is behavior and teaching behavior? Behaviour is a response and/or result that an individual shows or reveals to his/her environment at different times. Teaching behavior certainly influences and promotes prudent student achievement: satisfactory grades, higher scores on standardized tests, positive attitudes toward school, and refined problem-solving skills. Good and Brophy (2016) conducted research-coded categories for question-answer-feedback sequences, response form, and measuring individual praise, and rooted in a new dimension of teaching i.e. behavior of effective teaching. Dyer and Osborne (1996) stated that the selection of appropriate teaching behavior is one of the most important processes to have teaching success and student achievement.

What are some key effective teaching behaviors? Borich (2012) stated that lesson clarity, instructional variety, teacher task orientation, engagement in the learning process, and students' success rate are the five key behaviors of effective teaching. Teaching behaviors play a critical role in creating classrooms conducive to learning (Creemers, 1994). These behaviors are regarded as essential for effective teaching, however; Lesson clarity and variety of Instructions are the most important and initial behaviors for effective teaching that further leads to the attainment of the following three. If the first two are not achieved it is very difficult for the

teachers to attain the last three. Owing to this argument the researcher has selected the two behaviors to explore their effect on creating effective teaching in the classroom.

Lesson clarity refers to the clarity and precision of the teacher's presentation to the class. Effective teachers convey the concept in a clear way, without complication and, with distraction-free oral delivery. Instructional variety refers to the teaching behavior of using instructional materials. The use of teaching tools (technology, materials, activities, space, and displays) and variation in voice and gestures, rewards, and reinforcer contributes to student achievement (Borich, 2012).

Instructional variety as the second pattern of effective teaching, in this study, includes variability in instructional material, questioning, types of feedback, and teaching strategies. Good and Brophy (2016) revealed that positive academic achievement of the student is based on teachers' use of instructional variety and technique, reinforcement, and feedback. First, questioning is considered to be the best way of creating variety in instruction. An effective teacher may develop the skill of asking a question to discriminate between multiple formats of questions; fact question, process question, convergent question, and divergent question. In learning material, the basic focus is the physical texture and visual variety to engage students with the content of the lesson. The display of AV aids, and exposition of items: reading items, and reference items, all can affirmatively contribute to learning. The influence of instructional variety is examined through unit tests, assessments, and evaluation. Emmer et al. (2003) studied that varied materials and activities minimize disruptive behaviors in the classroom.

Theoretical Framework

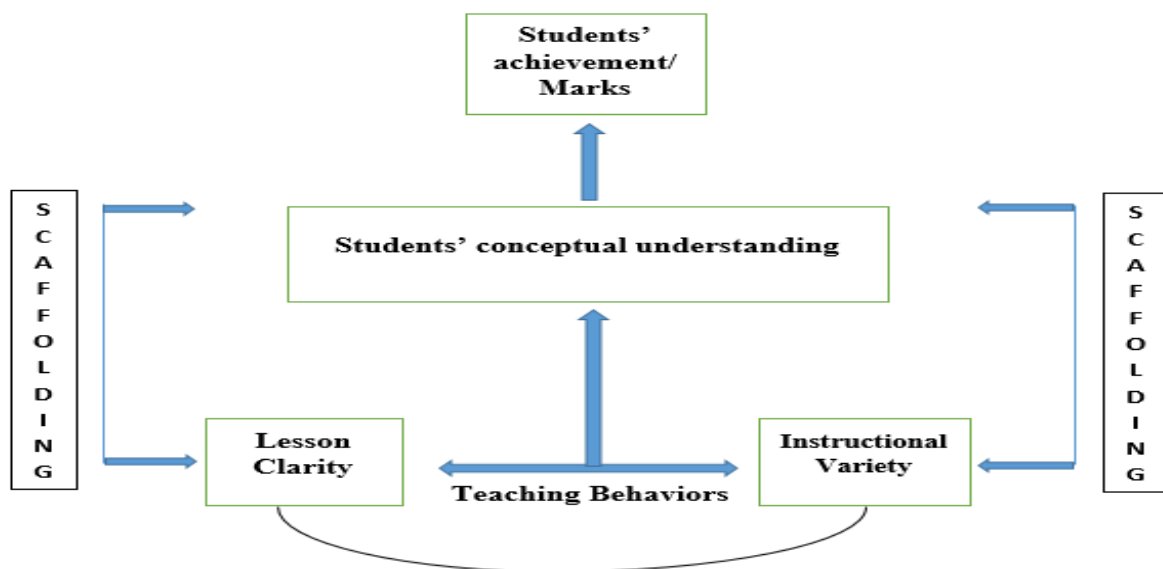
The study lays its foundation on the work of Borich (2012), which he considered as the key behaviors of effective teaching and puts lesson

clarity and instructional variety at top of the list. Almost all research on successful teaching published in the last few decades has been based on this system (Borich, 2010; Muijs & Reynolds, 2005; Lunenburg & Ornstein, 2012). Such research has posed many important points about both our interpretation of variables and how research can provide evidence about how various aspects of teaching can contribute to effectiveness. Lesson clarity, instructional variety, instructor role orientation, participation in the learning process, and student success rate are all considered important for successful teaching (Borich, 2010). Teachers should strive to participate in constructive engagement with their students, which involves teaching methods, teaching attitudes, and teaching strategies, as well as the opportunity to engage their students using a variety of tools, activities, and resources Teachers should aim to participate in constructive experiences with their students, which involves teaching methods, teaching attitudes, and teaching strategies, as well as the ability to use a variety of tools, events, and resources to engage students in learning (NSWIT, 2006). Vygotsky's principle of scaffolding, which is used to capture the essence of support and

instruction in learning, has a well-known functional implication that can help teachers understand and improve those methods, as well as students apply the action.

Teachers' scaffolding is a way for teachers to effectively participate in their students' learning, and it provides what most educational literature lacks: an important conceptual metaphor for the quality of teacher involvement in learning (Mercer 1994, as cited in Hammond, 2002). Over the last two decades, a significant number of educators and researchers have used the idea of scaffolding to define and illustrate the role of teachers and more knowledgeable individuals in guiding students' learning and growth (Daniels, 2001). Scaffolding has been used in a variety of learning situations. In the mathematical sciences, O'Toole and Plummer (2004) investigated the features of scaffolding. Donovan and Smolkin (2002) investigated various aspects of scaffolding in reading and writing instruction. The role of scaffolding in teaching English as a second language was investigated by Hammond (2002).

Conceptual Framework



Significance of the Study

The study signifies the importance of lesson clarity and instructional variety. In Pakistan, especially at the secondary level, teachers lack lesson clarity and instructional variety in all academic fields, which leads to conceptual misunderstanding and misinterpretation. Students and teachers both can have difficulty understanding and delivering the lesson (Leanak & Amalo, 2018). Students are unable to understand the content and subject matter of concern subject, which results in poor performance in higher classes and other experiences of life. This study focuses on the alarming issue of teaching effectiveness and observes teacher knowledge with regard to lesson clarity and instructional variety that includes the development of sound reasoning, content organization, and delivery of lectures through discussion, recitation, question, and answer. Moreover, whether the teacher uses learning material, and displays to make teaching and learning more comprehensive. This study is helpful for practitioners to visualize teaching effectiveness in terms of the betterment of student success and reshaping, the teaching strategies adopted by teachers in the classroom environment. In teaching lessons, clarity and instructional variety can be thought of as a byproduct of the methods that faculty members use to shape academic curricula, and through the reflection of these behavior educational practices such as student-faculty interaction or active and collaborative learning become possible. Considering the research evidence and past experiences on teaching behaviors this study helps in designing future academic endeavors to address student learning needs.

Population of the Study

Polit and Hungler (1999) defined a population as an aggregate or totality of all objects, subjects, or members that meet a set of criteria. The accessible population of the study comprised the faculty members and students of one constituent college of the University of

Peshawar namely Jinnah College for Women the researcher draws the sample. All the teachers in the college teaching in the faculties of social sciences, pure Sciences, and mathematical sciences comprised the population. The total number of teachers in the subject of social sciences, pure sciences, and mathematical sciences in the sampled college are 09, 10, and 15, respectively which makes a total of 34. The target population consists of 338 students i.e. pure sciences (Pre-medical and general sciences) 87 and 38, respectively, whereas mathematical sciences (Pre-Engineering) is 34, and Social Sciences 179 students (University of Peshawar, 2021-22)

Sample of the Study

Since it is impossible to test every single person in the population, sampling is used. It's often done to save time, money, and effort during the study process (Majid, 2018). Every unit in the population has an equal chance of being chosen as a research subject in probability sampling. This approach ensures that the selection process is entirely unbiased and randomized. Because the study included 05 teachers from each subject category, for a total of 15 teachers in the college, the sample unit provides researchers with a manageable and representative subset of the population. The stratified sampling technique's equal allocation method was used to select teachers. Students were randomly selected from each class, and a total of 10 students were randomly selected to be the sample. This makes a total of 60 from each category, and makes a total of 180 students. The sample was calculated using Krejice and Morgan's sample table (1970). To study a specific subgroup within the population, the researcher employs stratified random sampling. It's also preferable to simple random sampling because it ensures more accurate statistical results.

Research Instrument

For data collection 02 research questionnaires

were designed one each for the teachers and students. The items in the questionnaires were adapted from the works of (Borich, 2012; Byers, 2014; Murray, 1994). The items solicited the responses from the respondents on a 5-point scale ranging from (almost never) to (almost always). Each questionnaire consisted of two parts: Lesson Clarity and Instructional Variety. The total number of items was 21 and 19, respectively. The sample questions items for Lesson clarity are (teacher uses vivid language while describing the content; the teacher can explain the content in simple terms; teacher explains the concept logically), and for Instructional Variety the question items are (teaching styles and resources; teacher speaks in multi-toned; teachers use a variety of teaching methods).

Validity and Reliability

The study is made possible by pilot testing as it is a necessary component of a questionnaire that can be used to assess the feasibility of a research design before data collection begins. The expert opinion approach is used to determine the research's validity and reliability in order to provide evidence for the study

(Bogner et al., 2009; Cooke, 1991). As a result, two experts from IER, University of Peshawar, having PhD in Education, verified the validity of the questionnaire before making serious decisions, such as implementing an innovation suggested by a researcher to achieve the desired results. Experts recommended improvements in syntax, grammar, and vocabulary, which were implemented. The questionnaire had 47 items at first, but after validity and pilot testing they were reduced to 40 items. The reliability of the instrument was made through Cronbach alpha, and its value is found to be .83.

Data Analysis and Interpretation

Data was collected through questionnaires. The data collected through both questionnaires were analyzed for testing the hypotheses through the Gamma coefficient. Gamma is a correlation technique that is used to determine the relationship between two ordinal variables. The gamma coefficient indicates how closely two data points "match." In addition, the results of the sampled students' SSC and HSSC (first year) were also compared using the Pearson correlation.

Table-1: Correlation between teachers and students' responses (Lesson Clarity)

| S. No. | Items | Value | Approx. Tb. | Approx. Sig. |
|--------|---|-------|-------------|--------------|
| 1.1 | Teacher presentation is comprehensible | .316 | .383 | .453 |
| 1.2 | Teacher informs students about the objectives of the lesson | -.023 | -.059 | .953 |
| 1.3 | Teacher explains the terms used in topic | .158 | .521 | .602 |
| 1.4 | Teacher asks students about their previous knowledge | .302 | .867 | .386 |
| 1.5 | Teacher communicates clearly during the lesson | .750 | .452 | .146 |
| 1.6 | Teacher uses concrete examples to focus on important points | -.579 | -.958 | .338 |

| | | | | |
|------|--|-------|--------|------|
| 1.7 | Teacher remains focused in the class | -.111 | -.248 | .804 |
| 1.8 | Teacher teaches with enthusiasm | .077 | .138 | .890 |
| 1.9 | Teacher explains the concepts according to the students' mental level | -.524 | -1.383 | .167 |
| 1.10 | Teacher articulates with clarity | 1.000 | .582 | .010 |
| 1.11 | Teacher uses vague (unclear) sentences | -.105 | -.405 | .686 |
| 1.12 | Teacher re-explains the concept when the student asks her to do | .349 | .968 | .333 |
| 1.13 | Teacher spends more time on explanation the content | -.172 | -.528 | .598 |
| 1.14 | Students answer correctly to the questions teacher asks | -.102 | -.285 | .775 |
| 1.15 | Topic clarity is an essential aspect to the teaching | .391 | 1.178 | .239 |
| 1.16 | Teacher uses various teaching strategies in the class | -.345 | -1.243 | .214 |
| 1.17 | Teacher uses discussion method in the class | -.458 | -1.520 | .129 |
| 1.18 | Teacher involves students in the class discussion | -.636 | -2.044 | .041 |
| 1.19 | Students consider teacher's lesson clarity as an important aspect of your learning | -.489 | -1.317 | .188 |
| 1.20 | Teacher summarizes at the end of each lesson | -.428 | -1.418 | .190 |

Data presented in table 1 solicit the responses of teachers and students regarding lesson clarity. The table contains a total of 20 items. Each item discusses various aspects of lesson clarity that are visible from the items themselves. The results obtained from teachers and students are correlated by employing the Gamma correlation coefficient. Each item is explained with three categories of the test. The significance value suggests the significance and insignificance of each item. The significance

value of each item is tested at 0.05. All those values which fall below 0.05 are considered significant. The item on serial No. 1.10 and 1.18 are statistically significant and the rest of the 18 items are statically insignificant. Based on the data presented in the table it is concluded that the null hypothesis-1, H_0 , "Teachers do not use lesson clarity in the selected subjects in sampled College" is hereby **accepted**.

Table-2: Correlation between teachers and students' responses (Instructional Variety)

| S. No | Items | Value | Approx. Tb. | Approx. Sig. |
|-------|---|-------|-------------|--------------|
| 2.1 | Teacher shows flexible behaviour during the teaching-learning process | .143 | .332 | .740 |
| 2.2 | Teacher uses various questions for attention gaining | .024 | .062 | .951 |
| 2.3 | Teacher uses a variety of teaching styles and resources | .321 | 1.050 | .293 |
| 2.4 | Teacher encourages and motivate students | .400 | .689 | .491 |
| 2.5 | Students' intonation changes according to the teaching-learning situation | -.170 | -.649 | .516 |
| 2.6 | Teacher shows enthusiasm and through variation in teaching | .123 | .415 | .678 |
| 2.7 | Teacher uses nonverbal communication during the teaching-learning process | .088 | .352 | .725 |
| 2.8 | Teacher asks different types of questions within the lesson taught | .174 | .448 | .654 |
| 2.9 | Teacher uses learning material: (activity-based teaching) | -.564 | -2.172 | .030 |
| 2.10 | Teacher displays different reading materials during lesson | .474 | 1.560 | .119 |
| 2.11 | Teacher uses audio and visual aids during lesson | .065 | .222 | .825 |
| 2.12 | Teacher frequently demonstrates appropriate task-approach strategies | .136 | .404 | .686 |
| 2.13 | Teacher explains the reference (source) of material used in the class | -.152 | -.719 | .472 |
| 2.14 | Teacher encourages students to book reading | .375 | .669 | .503 |
| 2.15 | Teacher evaluates students' involvement in the learning process | .000 | .000 | 1.00 |
| 2.16 | Teacher minimizes hard behavior through a variety of activities | .085 | .304 | .761 |
| 2.17 | Students pay attention to variety of material teacher used | .076 | .683 | .495 |

Data presented in table 2 solicit the responses of teachers and students regarding instructional variety. The table contains a total of 17 items. Each item discusses various aspects of instructional variety that are visible from the items themselves. The results obtained from teachers and students are correlated by employing the Gamma correlation coefficient. Each item is explained with three categories of the test. The significance value suggests the

significance and insignificance of each item. The significance value of each item is tested at 0.05. All those values that fall below 0.05 are considered significant. The item on serial No. 2.9 is statistically significant and rest of the 16 items are statically insignificant. Based on the data presented in the table it is concluded that the null hypothesis-2, H_0 , "Teachers do not use instructional variety in the selected subjects" is hereby **accepted**.

Table-3 Correlation between SSC and HSSC (first year) Marks

| | | |
|-----------------------|--------|--------|
| | M | F |
| M Pearson Correlation | 1 | .385** |
| Sig. (2-tailed) | | .000 |
| N | 120 | 120 |
| F Pearson Correlation | .385** | 1 |
| Sig. (2-tailed) | .000 | |
| N | 120 | 120 |

Data presented in Table 3 elaborates that the Pearson correlation method is used for numerical variables, it assigns a value between -1 and 1, where 0 is no correlation, 1 is a total positive correlation, and -1 is total negative is a negative correlation. This is interpreted as follows a correlation exists between the result of Matric and FA/FSc. Correlation signifies that if the Matric result goes up then FA/FSc result will also go up.

Data analysis shows the lowest or no correlations between Matric and FA/FSc results with teaching behaviour lesson clarity and instructional variety. Hence the conclusion is that lesson clarity and instructional variety do not have a correlation with SSC and HSSC (first-year) marks. Tables of questionnaire show that lesson clarity and instructional variety have significantly lowest reliability in terms of learning and ultimately results. Hence,

the null hypothesis-3 H_0 "There is no association between the results of Secondary School Certificate (SSC) and First year (HSSC) of the sampled students" is hereby **rejected**.

Findings

The findings begin with key tenets of lesson clarity and instructional variety as reported in the review of the literature. Afterward, findings are reported from the administration of the questionnaire. The questionnaire was administered to teachers and students at the undergraduate level in the faculty/category of Mathematical Sciences, Social Sciences, and Pure Sciences.

Overall responses of Students

1. The overall students' responses regarding lesson clarity were analyzed

on every statement of the questionnaire where (43%) of the respondents agreed to the response option “Often” in lesson clarity.

2. A total of (28%) of the respondents agreed to the category “Sometimes” on the overall responses of the students on instructional variety

Overall Response of Teachers

3. Data explains the overall responses of the teachers on lesson clarity. (70%) of the respondents agreed to the response option ‘Almost Always’.
4. Similarly responses on instructional variety also comprised majority of the respondents “Almost Always” which is (65%).

Overall Correlation between Teachers and Students

5. Overall Correlation between teachers’ and students’ responses were statistically significant and rest of the 18 items were statistically insignificant. Based on the data presented in the table it is concluded that the null hypothesis-1, H_0 , “Teacher does not use lesson clarity in the selected subjects in sampled College” is hereby **accepted**.
6. A total of 16 items were statically insignificant. Based on the data presented in the table it is concluded that the null hypothesis-1, H_0 , “Teacher does not use instructional variety in the selected subjects” is hereby **accepted**.

Correlation between SSC and HSSC (first year) Marks

7. The Pearson correlation method was used for numerical variables, it assigns a value between -1 and 1, where 0 is no

correlation, 1 is total positive correlation, and -1 is total negative is negative correlation. A correlation existed between the result of Matric and FA/FSc. Data analysis elicited the lowest or no correlations between Matric and FA/FSc results with teaching behaviour: lesson clarity and instructional variety.

Conclusions

This study documents the extent to which students are exposed to variations of teaching such as lesson clarity and instructional variety of students’ experiences. A significant proportion of first-year and second-year students report that their teachers came to class well-prepared and explained course contents clearly; while, fewer students experienced lesson clarity and instructional variety behaviours associated with higher levels of learning and achievements. Instructional variety is thought to be a good way to handle students' different educational levels. It enables students to pursue information in a self-directed, imaginative, and contextually sensitive manner by using key principles and concepts (Pham, 2012). It is obvious that all learners are special, necessitating differentiated instruction (Adami, 2014), and the use of multiple intelligences to allow a broader variety of students to participate effectively in classroom learning. Students with a higher sense of self-efficacy, commitment, and enthusiasm for learning benefit from successful practice with differentiated instruction. Differentiated teaching is recommended as a teacher's lifeline to success in the classroom, considering the wide variety of preferences, skills, and learning styles among students. In today's classrooms, it should be readily accessible and seen as a valuable teaching strategy. The outcomes of the research also showcased that the students of the college had a good academic record in SSC exams and after getting admission to the college they used to study on their own as mostly the responses of

teachers and students on lesson clarity and Instructional variety did not correspond. Nevertheless, teachers always come prepared to the classes and taught to the best of their abilities; however they did not have the cognizance about the importance of these teaching behaviours in their teaching profession; Hence, teachers are required to take care of these two behaviours during teaching-learning. It is also pertinent to state that lesson clarity and instructional variety as teaching behaviours proposed by Borich (2012) are of great importance when it comes to the scaffolding of the students' learning.

Recommendations

1. University/Jinnah College for Women may arrange training for the teachers to educate and/or train them regarding the proper use of scaffolding as it requires certain expertise. Meanwhile, teachers may tap into students' prior knowledge, give students; a good talk time, use AV Aids, etc. as scaffolding.
2. Teachers can model and/or explain how to solve a problem for their students while scaffolding. Since students can learn by example, modeling is one of the most successful ways to teach. When teaching new concepts, teachers may strive to build on students' previous experiences and expertise.
3. Teachers may be clear and open about the learning objectives for their students, such as what they want them to know and be able to do. A summative evaluation task(s) that accurately assesses the expected learning as lesson clarity.
4. Teachers may use lesson clarity by organizing and sequencing the tasks within a lesson which would aid in reviewing and double-checking

students' comprehension skills.

5. Teachers may use instructional variety by taking into consideration students' suggestions and sharing them with the rest of the class. Thorough modifying and rephrasing a student's idea would help and understand learning concepts more lucidly.
6. A different teaching-learning setting outside regular may allow for a critical understanding of a student's concept. Comparing and contrasting the idea and relating it to something similar is also a good instructional technique.

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