

Effectiveness of Multi-Grade Teaching in Improving Students' Learning Outcomes at the Primary Level Schools of Faisalabad Division



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Abstract: *The main aim of this study was to investigate the “Effectiveness of Multi-grade Teaching in Improving Students’ Learning Outcomes at the Primary Level in Faisalabad Division.” The study adopted a survey research approach and employed a descriptive research design. All primary school teachers and head-teachers in public schools of Faisalabad Division constituted the population of the study. The total sample consisted of 600 respondents. The researcher used a multistage sampling technique to select the respondents. The questionnaire was adapted and developed based on the existing literature. The researcher ensured the validity of the instrument by obtaining expert opinions. To confirm its reliability, a pilot study was conducted, which showed a Cronbach’s alpha score of ($\alpha = .84$). Data were collected through personal visits and online using Google Forms. After data collection, SPSS software was used to analyze the quantitative data. The study concluded that three teaching strategies, including activity-based learning, collaborative learning, and real-life examples, were used by multi-grade teachers at a higher level, while the other strategies were used at a moderate level to improve learning outcomes in multi-grade classrooms. Female multi-grade teachers used activity-based learning, discussion, storytelling, real-life examples, project-based learning, and technology integration strategies at a higher level compared to male teachers. The study recommends that regular training for multi-grade teachers should be initiated to enhance the effective implementation of this teaching approach and improve students’ learning outcomes.*

Keywords: Multi-grade Teaching, Learning Outcomes, Primary Level Schools, Faisalabad Division

Introduction

Multi-Grade teaching (MGT) is a type of teaching in which a single teacher teaches students across multiple grade level in the same classroom (Saifuddin et al., 2024). Isler (2022) also defined multi-grade teaching as a method of instruction where students from several grades study together in the same class. Globally, the multi-grade teaching approach is now recognized as an essential strategy to increase educational access in remote areas. It ensured the continuity of learning in those areas where schools face numerous challenges. Multi-grade teaching aims to provides opportunities to interaction among children of different age groups (Suwahyo, 2026). Multi-grade teaching is a common instructional approach, particularly in rural and underdeveloped areas, in which a single teacher instructs students in many grade levels in the same classroom (Pandey & Bajpai, 2023). Research conducted in developed countries recommends that multi-grade teaching may promote collaborative learning, social skills and self-regulation among learners (Fatima & Mahmood, 2024).

According to Fatima et al. (2024) there are several teaching strategies that multi-grade teachers use to improve students’ learning outcomes. The first strategy is known as peer teaching in which older students teach their younger class fellows and help them to complete different tasks. The second teaching strategy of multi-grade teaching is collaborative learning in which students work in groups and completely different activities in a teamwork. The third strategy is differentiated instruction in which teacher design lesson

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according to the abilities of the students. The fourth strategy is independent learning in which teachers assign different self-direct tasks to the students. The fifth strategy is activity-based learning in which students engaged in different projects, games and hands-on activities. The sixth strategy is cooperative learning in which students learning in small groups through discussion. The seventh strategy is project-based learning in which students work with other grades students on different projects.

Thus, multi-grade teachers require several pedagogical competencies in order to deal students of different personalities and background (Minaz et al., 2024; Jauod, 2026). According to Shareefa (2021), in multi-grade teaching, the teacher employs different instructional methods in order to bring significant changes in students' behavior, attitude, and learning. This approach of differentiated instruction is considered interactive, in which teachers modify the curriculum, teaching strategies, resources, and learning activities to address the diverse needs of learners.

The students' learning related to the psychomotor domain focuses on the physical development, including coordination and practical performance. In multi-grade classrooms, teachers often use activities such as demonstrations, projects, and peer-assisted jobs that involve students participating in and practicing various skills. In this way, multi-grade teaching improves students' handwriting abilities, drawing skills, use of learning materials, practices of creative activities, motor skills, coordination, craft and technical skills, and hands-on learning activities (Minaz et al., 2024).

Literature Review

Codotco et al., (2025) stated that multi-grade teaching is a kind of instructional approach in which a single instructor simultaneously teaches two or more grade levels within one classroom. Ares-Ferreirós et al. (2025) also defined that it is an instructional method that involve a single teacher's instruction in order to teach students of different grade levels, ages, and ability level in the same classroom. This teaching approach often implements in rural areas or low enrollment areas to meet diverse learners' need and for school sustainability. Similar to previous definitions, Khalid et al., (2024) too documented multi-grade teaching as a teaching method that involve a single teacher to teach children of different grade levels at once. This arrangement is different from regular teaching, in which children learn in a single grade according to the same age level. The learners' age and skill levels in multi-grade classrooms differ, that poses unique challenges for teachers struggling to impart quality education.

Bua and Martin (2020) emphasized that a teacher as a planner takes into account every factor that influences his or her teaching career. To meet the needs of the students, a variety of teaching strategies should be used and practiced. The strategies that are employed should be appropriate for the children. Therefore, it is equally vital for the teacher to understand and know how to apply a strategy, as well as to know when to utilize these teaching approaches or what combination of strategies to adopt. Teachers who instruct students in multi-grade classroom typically provide individual examples of their teaching strategies. In other words, teachers should begin utilizing differentiated instruction and explicit teaching.

Fatima et al. (2024) concentrated on coping strategies and survival abilities displayed by students in multi-grade classrooms and demonstrated how adaptable these pupils adjust to different challenges presented in diverse learning situations. According to Dy et al. (2024), classroom strategies are the different approaches and tactics teachers employ to encourage learning and accomplish educational objectives. It is difficult to deliver effective education in multi-grade classes since teachers must accommodate students with different skill levels across several grade levels. Multi-grade classrooms are found in more than 10% of US public schools, according to a National Center for Education Statistics (NCES) research. Examining the teaching strategies employed by instructors in multi-grade classes and their effects on academic performance is essential given the popularity of these classrooms. Effective classroom practices have been found to have a positive effect on academic attainment. Academic achievement can be improved in multi-grade classrooms, but only if teachers employ the right teaching techniques.

There are some common teaching strategies that a multi-grade teacher adopts to teach the students of different age group and ability levels. These strategies include peer tutoring (older children act as a tutor for younger children), differentiated instruction (teacher teach the same core topic to whole children), theme-based teaching (teaching using a thematic approach) and independent learning (a self-guided learning by the multi-grade students). Besides these teaching strategies there are various others that a multi-grade teacher uses to teach children in order to develop their core abilities (Camsa, 2025).

The most common and oldest teaching strategy throughout the globe is considered a lecture strategy. The primary goal of the lecture strategy is for a teacher to present information orally to students (Camsa, 2025). The activity strategy focuses on engaging students through hands-on tasks and practical experiences (Camsa, 2025). The discussion teaching strategy is documented as an interactive and student-centered teaching method. In this teaching method, the teacher and student collaboratively exchange an idea and ask questions to solve a problem (Yilmaz & Culha, 2025). The teaching strategy known as “direct instruction” is a kind of teaching method in which a teacher explicitly models a skill or concept (Chiappe et al., 2025). The storytelling teaching strategy is known as the oldest kind of teaching around the globe. In this teaching method, teachers tell different stories related to the concept of the curriculum. In this method, teachers perform the role of storytellers. This method helps learners better understand a topic (Galope, 2024). The collaborative teaching-learning strategy is a kind of teaching method in which teachers form teams or groups among students. Students work together to meet their learning goals (Camsa, 2025). The real-life teaching strategy is a kind of teaching method in which teachers use real-life examples in their teaching to connect abstract concepts to the learners’ daily experiences. This teaching strategy promotes engagement, assists long-term memory, and provides learners more understanding of the concept in real-life situations (Velasco et al., 2022).

According to Dioso (2025), multi-grade teachers employ a variety of classroom tactics, including the integration of technology. To employ technology to teach and develop new learning opportunities, educators must possess the requisite knowledge and abilities. being online and making sure that ICT is incorporated into the process of teaching and learning. Learning can be more fun when technology is used. According to a 2023 study, technology not only makes educational activities more enjoyable and interesting for pupils, but it also motivates them to put in more effort over time. With virtual courses, videos, or tablets, even subjects that students find difficult or dull can become more engaging. Additionally, this method can make learning difficult subjects more pleasurable for learners (Bharti et al., 2024).

Personalized learning is one of the many advantages of utilizing technology in the classroom. In the same way, Fatima et al. (2024) reported that teachers are essential to the efficient use of technology in multi-grade classrooms. In addition to developing critical information literacy skills, students must use digital tools appropriately. Abbas et al., (2019) also reported that digital technologies improve students’ communication skills and learning outcomes. Furthermore, Taole (2024) emphasized that technology makes group learning easier by enabling students of all ages to exchange resources and ideas. Additionally, Magallanes et al. (2024) reported that multi-grade classrooms can make use of a variety of web-based teaching technology.

Recla and Potane (2023) claimed that the use of technology in multi-grade classrooms enables the customization of educational experiences. Teachers can customize training to each student’s unique needs by using adaptive learning platforms to evaluate each student’s strengths and shortcomings. Additionally, research by Chounta et al. (2022) has demonstrated that integrating instructional technology including artificial intelligence (AI) effectively helps teachers in multi-grade classes overcome some of their obstacles.

Additionally, Masdoki and Din (2023) stated that teachers are essential to the integration of technology in the classroom. The devices like computers, tablets, and cellphones can be utilized for instruction. As a result, in a classroom setting that incorporates technology, the teaching methodology shifts from being teacher-centered to learner-centered, with teachers serving as facilitators. According to Alhajeri and Safian (2023), educators must use cutting-edge teaching techniques to successfully engage students, promote group learning, and attend to each student’s unique learning needs. If not properly handled, the inherent challenges of managing multi-grade environments might result in un-favorable educational outcomes.

Project-Based Learning (PBL) is a teaching strategy in which an educator involves students to work for a long time to acquire knowledge and skills (Chatmaneerungcharoen et al., 2025). Bagay (2024) also agreed that a successful strategy employed by multi-grade teachers to accommodate different academic levels and sustain student enthusiasm is involving students through project-based learning and practical exercises. The personalized learning strategy is documented as an approach that adapts instruction and learning resources that fit with each learner’s need, strength and interests (Cevikbas & Kaiser, 2022). According to Shemshack and Spector (2020), apprenticeship and mentoring have been forms of personalized learning for hundreds of years. According to Niknam and Thulasiraman (2020), the educational community has expressed interest in a personalized learning system that adapts the curriculum, pedagogy, and learning environment to students’ individual needs and preferences. According to Schmid and Petko (2019), a review of international research literature revealed that personalized learning is a multifaceted concept with multiple definitions and implementation strategies. Based on literature the below objectives were developed.

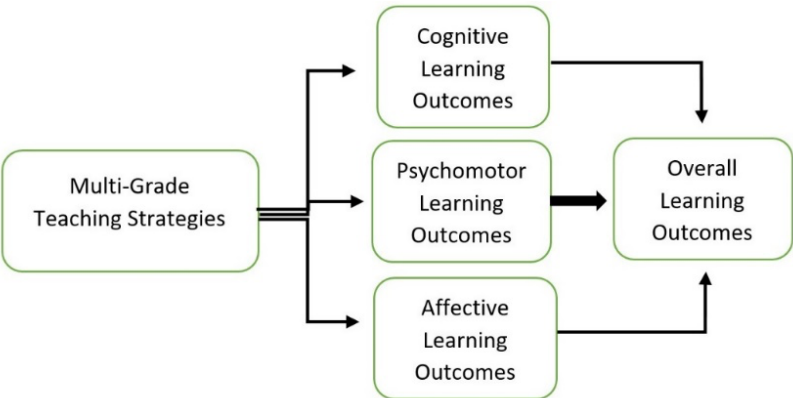
Objectives of the Study

- 1. To evaluate the practices of multi-grade teaching strategies for improving students’ overall learning outcomes.
- 2. To compare the differences among teachers regarding multi-grade teaching strategies based on their gender.

Research Methodology

This study was completed by using descriptive research design. In this study, all primary school teachers and head teachers in public schools of Faisalabad Division constituted the population. The total sample consisted of 600 respondents. The researcher used a multistage random sampling technique to select the respondents. The instrument used in this research was a closed-ended survey questionnaire adapted and developed based on the existing literature, consisting of 45 positive items. The questionnaire was based on a five-point Likert scale, ranging from strongly disagree to strongly agree. Its validity and reliability were assessed through expert opinions and pilot testing. The questionnaire demonstrated a reliability coefficient of ($\alpha = .84$). The researcher herself collected data from the respondents through personal visits to the sampled public primary schools where multi-grade teaching was practiced and which were located in Faisalabad Division. The researcher also used an online data collection method through Google Forms. The quantitative data were analyzed using SPSS software through descriptive statistics, including frequencies, percentages, means, and standard deviations, to examine the characteristics of the demographic variables. The following diagram presents the conceptual framework of the study.

Figure 1
Conceptual Framework



Results and Findings

Table 1

Summary of Descriptive Results (Teaching Strategies)

Sr.	Variables	Items	Mean	SD	Perceived level of agreement	Rank
1.	Lecture strategy	05	3.25	1.20	-Moderate	8
2.	Activity strategy	05	3.44	1.18	-High	2
3.	Discussion strategy	05	3.39	1.15	-Moderate	4
4.	Direct instruction/demonstration	05	3.34	1.19	-Moderate	6
5.	Storytelling strategy	05	3.37	1.18	-Moderate	5
6.	Collaborative learning strategy	05	3.43	1.12	-High	3
7.	Real-Life example Strategy	05	3.46	1.14	-High	1
8.	Project-based learning Strategy	05	3.29	1.18	-Moderate	7
9.	Technology integration Strategy	05	3.25	1.20	-Moderate	9
	Total	45				

Perceiving criteria for mean (1.00-1.80=very low, 1.81-2.60=low, 2.61-3.40=moderate, 3.41-4.20=high, 4.21-4.50=very high).

Results reflected in Table 1 showed the overall results of the descriptive analysis for teaching strategies that multi-grade teachers used to develop students' cognitive, psychomotor, and affective abilities. Results showed that the lecture teaching strategy achieved a mean score of ($M = 3.25$ & $SD = 1.20$), and placed at a moderate level with 8th rank. Results found that the activity teaching strategy secured a mean score of ($M = 3.44$ & $SD = 1.18$), which stood at a high level with 2nd rank. Results revealed that the discussion teaching strategy attained a mean score of ($M = 3.39$ & $SD = 1.15$), and reached a moderate level with 4th rank. Results explored that the direct instruction/demonstration teaching strategy obtained a mean score of ($M = 3.34$ & $SD = 1.19$), and placed at a moderate level with 6th rank. Results declared that the storytelling teaching strategy got a mean score of ($M = 3.37$ & $SD = 1.18$), and reached a moderate level with 5th rank. Results discovered that the collaborative learning strategy achieved a mean score of ($M = 3.43$ & $SD = 1.12$), and stood at a high level with 3rd rank. Results exposed that the real-life example teaching strategy attained a mean score of ($M = 3.46$ & $SD = 1.14$), and reached a high level with 1st rank. Results found that the project-based teaching strategy acquired a mean score of ($M = 3.29$ & $SD = 1.18$), and stood at a moderate level with 7th rank. Results discovered that the technology integration teaching strategy achieved a mean score of ($M = 3.25$ & $SD = 1.20$), and secured a moderate level with 9th rank. Therefore, three teaching strategies, including activity, collaborative learning, and real-life example, achieved higher means than the others strategies, which revealed that multi-grade teachers used these strategies at a higher level, while the others were used at a moderate level in order to develop students' learning outcomes in terms of developing students' cognitive, psychomotor, and affective abilities.

Table 2

Gender-wise Comparisons among Multi-grade Teachers

Teaching strategies	Gender	N	Mean	SD	t-value	p-value
lecture strategy	Male	256	3.22	.948	-.562	.571
	Female	344	3.27	1.005		
Activity strategy	Male	256	3.34	.962	-2.104	.037
	Female	344	3.51	.919		
Discussion strategy	Male	256	3.28	.946	-2.527	.012
	Female	344	3.47	.910		
Demonstration strategy	Male	256	3.27	1.042	-1.599	.117
	Female	344	3.39	.927		
Storytelling strategy	Male	256	3.28	.965	-2.023	.044
	Female	344	3.43	.924		

Teaching strategies	Gender	N	Mean	SD	t-value	p-value
Collaborative strategy	Male	256	3.43	.906	.086	.931
	Female	344	3.42	.863		
Real life example	Male	256	3.34	.954	-2.932	.003
	Female	344	3.56	.877		
Project based strategy	Male	256	3.17	1.015	-2.791	.005
	Female	344	3.39	.900		
Technology integration strategy	Male	256	3.11	1.027	-2.885	.004
	Female	344	3.35	.957		

The outcomes reported inside Table 2 demonstrates the gender comparisons of multi-grade teachers' attitudes towards teaching strategies they adopted for developing students' cognitive, psychomotor and affective abilities. The statistical results revealed that were significant differences among male and female multi-grade teachers regarding activity strategy (Male, Mean=3.34, Female, Mean=3.51, $p=.037 < .05$ level), discussion strategy (Male, Mean=3.28, Female, Mean=3.47, $p=.012 < .05$ level), storytelling strategy (Male, Mean=3.28, Female, Mean=3.43, $p=.044 < .05$ level), real-life example strategy (Male, Mean=3.34, Female, Mean=3.56, $p=.003 < .05$ level), project based strategy (Male, Mean=3.17, Female, Mean=3.39, $p=.005 < .05$ level), and technology integration strategy (Male, Mean=3.11, Female, Mean=3.35, $p=.004 < .05$ level). While, results discovered insignificant differences among multi-grade teachers based on their gender in three teaching strategies including lecture (Male, Mean=3.22, Female, Mean=3.27, $p=.571 > .05$ level), demonstration (Male Mean, 3.27, Female, Mean=3.39, $p=.117 > .05$ level), and collaborative strategy (Male, Mean=3.43, Female, Mean=3.42, $p=.931 > .05$ level).

Discussion on Findings

This study indicated that multi-grade teachers use teaching strategies including activity based, collaborative learning and real-life examples strategies at higher level to enhance students' learning outcomes in cognitive, psychomotor and affective domains. These outcomes suggest that multi-grade teachers have well understanding about the importance of student-cantered teaching strategies that engage learners and accommodate them according to their need inside multi-grade classes. This finding was supported by the findings of Jucan (2023) who also agreed that activity teaching strategy is student-catered teaching approach as compared to lecture method and effective for students' learning in multi-grade classrooms. Moreover, the higher use of collaborative learning by multi-grade teachers in multi-grade classroom also reflects teachers' commitment and struggle to encourage peer interaction, and collaborative learning in multi-grade classroom. This finding was in line with Naparan and Alinsung (2021), who stated that a collaborative learning strategy is a very effective teaching method to develop students' learning in cognitive, psychomotor, and affective domains. This study reported that multi-grade teachers use real-life examples strategy to increase students' learning outcomes. This finding was consistent with the findings of Velasco et al. (2022) who highlighted that real-life teaching strategy is an effective teaching method to increase students' learning by involving students to their daily life experiences to understand the key concepts.

Conclusions

This research study concluded that three teaching strategies, including activity-based learning, collaborative learning, and the use of real-life examples, were used by multi-grade teachers at a higher level, while the other teaching strategies, such as lecture, discussion, direct instruction/demonstration, storytelling, project-based learning, and technology integration, were used at a moderate level to develop and enhance students' learning outcomes in the cognitive, psychomotor, and affective domains. The study revealed that female multi-grade teachers showed a higher use of activity-based learning, discussion, storytelling, real-life examples, project-based learning, and technology integration strategies compared to male multi-grade teachers. However, no significant differences were found based on respondents' gender regarding the use of

lecture, demonstration, and collaborative teaching strategies in multi-grade classrooms. The study further concluded that trained multi-grade teachers demonstrated significantly higher use of four teaching strategies in multi-grade classrooms, including activity-based teaching, discussion, project-based teaching, and technology integration. On the other hand, no significant differences were found between trained and untrained teachers in the use of lecture, demonstration, collaborative teaching, storytelling, and real-life example teaching strategies. The study recommends that regular training for multi-grade teachers may be initiated to enhance the effective implementation of this teaching approach to improve students' learning outcome.

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