

# Examining the Current Status of Using Multimodal Methods for Teaching by ICT Teachers

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## 1. Introduction

Rapid advancement in technology has led to significant transformations in the educational landscape, especially in the approaches in which used in the teaching learning process. It has facilitated active pedagogy with the focus of student-centered methods. Therefore, the use of multimodal (multimedia) teaching methods has become an emerging trend which could impact the design of digital learning. The integration of multimedia into various learning modes seems to encourage students to adopt a more flexible approach on inquiry and knowledge gaining.

Multimodality includes the use of numerous methods of representation, text, visual images, and design (Philippe et al., 2020). For instance, a multimodality might incorporate elements such as PowerPoint presentations, videos, audio, interactive quizzes and polls, simulations, interactive boards and smart boards, images, digital text books and materials. Multimodality influence multimedia and ICT to develop dynamic resources that address different sensory modes and learning styles of learners (Sankey & Birch, 2005).

According to Hazari et al., (2006) student learning becomes more meaningful when a diversity of interactive tools and resources are utilized, rather than relying solely on text. The change from paper-based education to multimodal education needs reimagining the design, approach, and practice of teaching and learning process (Gilakjani et al., 2011). This approach lets main concepts to be presented through various modes, such as both visual and auditory formats. This approach helps learners find the content easier to understand, enhances their attention, and boosts overall learning performance (Sankey, 2006).

Despite these benefits, there are various challenges in the use of multimedia teaching methods by information technology teachers in recent years. Studies suggest that this decline may be due to several factors, such as unclear objectives in the use of multimedia and insufficient training for teachers (Wellington, 2000). As stated by Kennewell and Beauchamp (2007) teachers may face challenges such as limited access to resources, technology, technical challenges, and insufficient training and support. Additionally, there may be student related and school related factors highlighting the need for a balanced approach to integration. To tackle these issues and challenges, it is important to assess the prevailing condition of multimodal resources usage in teaching learning process. This research mainly focuses on exploring current situation of using multimodal approaches in teaching learning process by Information Communication Technology (ICT) teachers

### Objectives of the study

1. To investigate the types of multimedia used by in teaching learning process
2. To investigate the level of awareness of ICT teachers on using multimedia

### Hypothesis of the study

1. H<sub>0</sub>: There is no significant difference in the level of awareness about multimodal teaching among ICT teachers across school types 1AB, 1C, and Type 2
2. H<sub>1</sub>: There is a significant difference in the level of awareness about multimodal teaching among ICT teachers across school types 1AB, 1C, and Type 2

## 2. Materials and Methods

The research incorporated with quantitative approach. The population of this study was choose under convenient sampling technique and the population was all the ICT teachers, who teach ICT from grade 6 to 13 classes in Matugama zone. The data were collected using two separate questionnaires; open ended questionnaire and closed ended questionnaire mainly with short answer questions, multiple choice and Likert scale question. Open ended questionnaire was given to 6 ICT teachers' representing three types of schools (1AB, 1C and Type 2). The closed ended questionnaire was distributed among the teachers via whatsapp groups and a Google form was used as the data collection tool. The data collected from open ended questionnaire was used to formulate closed ended questionnaire. The data was analyzed using excel and SPSS software.

## 3. Results and Discussion

According to the responses, 49 ICT teachers responded to the Google Form questionnaire. Out of the 49, 36 were female and 13 were male. The ages of the respondents ranged from 28 to 56 years. There were 59% from the Matugama education zone, while 17%, 16%, and 8% were from the Walallavita, Agalawatta and Palindanuwara divisions, respectively. The majority of the teachers, 60%, were appointed under the NCOE type. In comparison, 38% held degrees, and 2% were trained teachers. The Percentage of teachers, who obtained a postgraduate degree as their highest educational qualification was 8% while 47% held a degree qualification and 45% held an NCOE qualification. Teachers represented 55% from 1AB schools, 16% from 1C schools, and 29% from Type 2 schools.

In evaluating the frequency of using multimodal methods in teaching, responses are categorized into specific levels. "Never" (1) indicates that these methods are not used at all. "Rarely" (2) corresponds to usage occurring 1-2 times a month. "Sometimes" (3) reflects occasional use, while "Often" (4) represents regular application, typically two or three times a week. The highest level, "Always" (5), signifies frequent use, occurring four times a week or more. This classification provides a structured view of how often educators incorporate multimodal methods into their teaching practices.

Table 1: Frequency of Using Multimedia for Teaching Learning Process

Method of teaching	N	Minimum	Maximum	Mean	Std. Deviation
Using videos	49	1.0	5.0	2.898	1.0457
Using interactive whiteboards	49	1.0	5.0	2.245	1.5074
Using PowerPoint presentations	49	1.0	5.0	2.898	1.0256
Using educational games	49	1.0	5.0	2.061	.8517
Using interactive quizzes/polls	49	1.0	5.0	1.857	.8416
Using interactive E-books	49	1.0	5.0	2.612	1.4407
Using Visual representations	49	1.0	5.0	2.653	1.0518
Valid N (list wise)	49				

Using Videos and PowerPoint presentations have the highest mean scores which indicate relatively higher usage. Interactive quizzes/polls and educational games have the lowest mean scores, indicating usage.

Teachers' level of awareness was measured using questions with Likert scale answers ranging from 1 to 5: 1 for very poor, 2 for poor, 3 for moderate, 4 for good, and 5 for very good. The

mean value of 3.67 indicates a moderately high level of awareness among the teachers and the standard deviation shows a moderate spread of data with the value of 0.7469.

Table 2: Analysis of Variance: Awareness Levels of Multimodal Teaching Among Different School Types (1AB, 1C, Type 2)

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Between Groups	1.051	2	.525	.939	.398
Within Groups	25.725	46	.559		
Total	26.776	48			

The ANOVA results suggest that there is no significant difference in the level of awareness among the different school types (1AB, 1C, Type 2), as the p-value of 0.398 is greater than the alpha value 0.05.

## 5. Conclusion

Considering the frequency of using each type of multimedia, none of the methods has reached a moderate level, which highlights an urgent need for motivational programs to use multimodal methods in teaching learning process. Since with over 50% of teachers using PowerPoint, video, and visual representations more than once a week, depicts a positive trend of using some multimodal methods. However, there is a urgent need of promoting the methods such as interactive quizzes and polls and educational games. To promote using these methods, the authorities need to provide essential resources such as physical resources, internet connection, technical support. Based on the results, teachers' awareness levels about multimodal teaching range from moderate to good. This reveals the necessity of intervention programmes to improve the awareness of multimodal teaching among ICT teachers. These intervention programmes should focus on conducting seminars, workshops, and hands-on practice sessions. However, there is no significant difference in awareness levels among teachers from the three types of schools (1AB, 1C, Type 2), suggesting that the teachers of three types of schools may have got equal opportunities for knowledge gaining. Furthermore, it will be a positive step to promote school based professional teacher development programmes focusing on multimodal teaching.

## 6. Keywords

ICT teachers, Level of awareness, Multimodal teaching

## 7. References

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