

# ICT Integration among Visual Art Education Teachers: A Study on Malaysian Secondary School Teachers

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**Abstract:** The declaration of the nation's Vision 2020 to become a fully developed country has demanded a major transformation of the Malaysian education system. The robust advancement of Information and Communication Technology (ICT) has commended its integration into the education system. However, the rapid development of ICT has caused anxiety and concerns among Malaysian teachers and thus may jeopardize the Ministry of Education's aim of ensuring all schools will be fully ICT-mediated by the year 2015. Visual Art Education, as a subject that places emphasis on creativity, innovation and critical thinking, has urged its teachers to utilize the full potential of ICT. The positive impacts toward integrating ICT into art classrooms have been acknowledged through previous research findings. Despite its huge potential advantages, art teachers were reported not utilizing the full potential of ICT in the art classroom. Moreover, previous research has revealed that art teachers used ICT without knowing its necessity towards conducting successful art instruction. Further, to date, there is no published research on the integration of ICT into Visual Art Education in Malaysia. Recognizing the potential of ICT integration into art classroom, a survey was conducted to investigate the current ICT uptake among Malaysian Visual Art Education teachers. Specifically, this study will explore the most common types of ICT used and how it has been integrated into art classrooms. A total of 296 teachers in Selangor, a state in Malaysia, were the respondents of this study. An on-line survey was undertaken. Finding of the study have indicated that availability and ease of access affect ICT tools usage in the art classroom. In addition, a main usage of ICT by most Malaysian Visual Art Education teachers was for researching information as compared to other ICT usage in art classroom. It is envisaged that findings derived from this study will contribute toward the understanding of the importance of ICT integration in the Visual Art Education subject area.

**Keywords:** ICT, Visual Art Education, Malaysian Secondary School Teachers

## Introduction

Malaysia has set a long-term vision known as the Vision 2020. This lofty vision is aiming to mould Malaysia into a developed country through economic, political, social, spiritual, psychological and intellectual growth [1]. Information and Communication Technology (ICT) has been identified as one of the key foundations to facilitate achieving this vision [2]. Transformation of the national education system was implemented through reviewing the existing curriculum, pedagogy, assessment, teaching, and learning materials [3]. However, numerous initiatives that have been initiated since 1980s, by the Ministry of Education, have not resulted in the successful uptake of ICT integration among Malaysian teachers. Previous research found that teachers were not utilizing the full potential of ICT [4]. In

addition, a contradiction exists between the attempt to integrate ICT and the appropriateness of ICT integration into classroom situation.

As a subject that emphasizes creativity and critical thinking, Visual Art Education requires its teachers to take full advantage of ICT potential [5]. It is believed that by integrating ICT into art classrooms, students will be actively involved in constructing, processing, evaluating and synthesizing their own ideas [6]. However, previous research has reported that art teachers are not utilizing ICT to an expected level [7]. Instead of using it for supporting creativity, most teachers were reported using it for administrative works [8]. Given the importance and consideration of various initiatives and extensive amount of budget that by carried out by the Malaysian government, this study examined the ICT uptake among Malaysian Visual Art Education teachers. Specifically this study sought to explore the common type of ICT used and how it was used in the art classroom.

## **1. ICT Integration in Malaysian Education System**

The promising and rapid development of ICT has highlighted its roles toward enriching the teaching and learning process. Apart from being an object of instruction and disseminator of information, ICT can act as cognitive and mind tools in assisting students to construct their own knowledge. Moreover, ample evidences from previous research have indicated the positive effects of ICT as time saving devices, powerful source of information, tools and media that cater for the varying needs of students [9]. Recognizing those potentials of ICT, the Malaysian government, through the Ministry of Education, has initiated various initiatives to accelerate the integration of ICT into its educational system. Under the main aim of producing technology savvy citizens, all initiatives have highlighted the capabilities of ICT in expanding students' knowledge, skills, creativity and innovative thinking abilities pertaining to technology, thus useful for the next generation of the information age [10].

However, those initiatives and supports did not seem to result in the successful uptake of ICT among Malaysian teachers. A survey by [11] has revealed that, in Kuala Lumpur and Selangor (a state in Malaysia), Smart School teachers have only demonstrated an intermediate level of ICT integration. In addition, research finding by [12] also revealed that teachers had only showed a moderate level of ICT competency and many of them still lacked ICT skills and pedagogical knowledge to integrate it into their instructional process. An urgent intervention is needed in ensuring Ministry of Education's aims of having all school fully ICT-mediated by the year 2015 will be realized.

## **2. ICT Integration in Visual Art Education**

Similar to the other subjects, Visual Art Education teachers were urged to take advantage of ICT by creatively integrating it into art classroom. By promoting student-centred learning, the integration of ICT in the art classroom will provide opportunities for students to construct their own knowledge, and improve problem-solving skills [7] through a simulation, manipulation and creative expression [6]. Similarly, researchers have acknowledged ICT as a tool that provide opportunities among less skilful students to focus more on enhancing their self-expression by exploring a variety of art media and techniques [7]; [13]. These practices will train them to be more mature and creative in producing artworks [6]. In categorizing all those purposeful uses of ICT in the art classroom, four main functions of ICT in art classrooms, namely (1) ICT for planning and administration tools, (2)

ICT as teaching tools, (3) ICT as an art making tools and (4) ICT as research tools have been outline [14].

However, despite all those advantages, many researchers have revealed the low uptake of ICT integration in the art classroom [7]. Majority of art teachers are integrating ICT without knowing its value and necessity towards successful art instruction [8]. Moreover, research by [7] have concluded that many art teachers are reluctant to embrace ICT into the art classroom owing to their misconception that ICT will actually decrease students' creativity, artistic expression and understanding of art form.

Realizing the importance of ICT toward enriching Visual Art Education subject, this study examined the common types and ways of ICT tools used in Malaysian art classrooms. By answering these questions, especially in the Malaysian contexts, it is expected this study will provide some recommendations regarding the appropriate ways to integrate ICT in Visual Art Education to all Malaysian Visual Art Education teachers.

### **3. Research Questions**

This study aimed to examine the current uptake of ICT by Visual Art Education teachers in Selangor, Malaysia and how they integrated ICT in their classrooms. Two research questions were formulated (1) what is the common ICT used by Visual Art Education teachers in the art classroom and (2) how ICT been integrated into the art classroom.

### **4. Research Methodology**

This study collected the data through an on-line questionnaire survey. In order to structured data collection procedure and increase the response rate, a number of measures were undertaken: a pre notice letter, questionnaire and survey, remainder letter and replacement survey. Out of a possible total of 878 Visual Art Education teachers in Selangor, 296 teachers responded, giving the response rate of 33.7%. The questionnaire in this survey was adopted from the Faculty Technology Survey. It consisted of 10 lists of ICT tools (i.e, computer, LCD projector, digital camera and digital video); respondents were asked to determine the most common tool that they used in the art classroom. The Cronbach's alpha reliability of these questions is 0.82. Further, in determining the purposeful use of ICT in the art classroom, four basic ICT applications were applied [14]. Through a Cronbach's alpha reliability procedure, the reliability value of all items was 0.80. The data collected were then analysed using descriptive statistic.

### **5. Research Findings and Results**

#### *5.1 Common ICT tools used by Visual Art Education Teachers*

Table 1 shows the mean scores, standard deviations and percentages for each of common ICT tools used by the Visual Art Education teachers. Specifically Visual Art Education teachers mostly used computer, LCD projector and Internet access. The usage of printer, scanner and digital camera in the art classroom were reported as average. However, digital video camera, interactive whiteboard and graphic tablets were categorize as rarely used with the entire mean score were less than 3.0.

	N Statistic	Sum Statistic	Mean Statistic	Std. Deviation Statistic	Percent Statistic
Computer	296	1371	4.63	0.829	51.46
LCD projector	296	1315	4.44	0.854	49.36
Interactive whiteboard	296	338	1.14	0.674	12.69
Scanner	296	1052	3.55	0.874	39.49
Printer	296	1138	3.84	0.681	42.72
Digital camera	296	888	3.00	0.917	33.33
Digital video camera	296	637	2.15	1.039	23.91
Graphic tablets	296	330	1.11	0.508	12.39
Internet access	296	1183	4.00	0.734	44.41

Table 1: Mean Scores, Standard Deviations and Percentages for Each of Common ICT Tools used by Visual Art Education Teachers

## 5.2 Purposeful used of ICT among Visual Art Education Teachers

The result concerning the purposeful uses of ICT were reported based on average score for each of four categories (planning and administrative tools, teaching tool, art making tool and research tool). Table 2 shows the mean score and standard deviation for all items in each category. Based on the result, research tools were found as the most purposeful used of ICT tool among Visual Art Education teachers. The use of ICT as a planning and administrative tool was found as often. Further, the average score of art making tools was seldom while the usage of ICT as teaching tool was reported as rarely.

	N	Mean	SD
Planning and administrative tools	296	.5593	.10057
Teaching tool	296	.3683	.08699
Art Making tool	296	.5253	.08423
Research tool	296	.6157	.08533

Table 2: Mean Scores and Standard Deviations for All Items in Each Category

## 6. Research Discussion

The first research question related to the most common ICT tools used by Visual Art Education teachers in the art classroom. Results from the study indicates that computer, LCD projector and Internet access as the most commonly used. This finding is parallel with previous research findings [4]; [11]. Through various ICT related initiatives and major programs in providing the necessary ICT infrastructures, those ICT tools were reported to be the most common ICT tools that were available in schools. Continuous efforts by the Malaysian government are likely to ensure all schools will be equipped with ICT tools. The findings from the study also have indicated the limited usage of Visual Art Education related ICT tools. The low uptake of those visual art related tools were influenced by art teachers' misconception that those ICT tools would decrease students' creativity, artistic expression and understanding of art form [7]; [8].

In examining the purposeful uses of ICT in the art classroom, the study found that most teachers used ICT as a research tool. Previous researchers have highlighted the importance of ICT as a research tool [9]. Through a wide range of sources, ICT as a research tool may

facilitate a dynamic discussion and reflecting and sharing ideas [6]. In addition, in ensuring the birth of technologically literate and critical thinking workforce, the Malaysian Ministry of Education has encourage teachers to embark into research and invention projects [10]. However, findings from the present study indicate that ICT usage as teaching tool was the lowest. It was found that, art teachers are integrating ICT without knowing the value and necessity towards successful art instruction [7]. Based upon the findings and supported by previous researches, it is expected that Visual Art Education teachers to make a complex adjustment and substantial rethinking of new possibilities in teaching. Teachers were urged to explore creative and innovative uses of ICT in their art classroom teaching. In ensuring this educational reform program to be successful, it is necessary to provide teachers with necessary pedagogical, technical, social and cultural supports. In addition, sufficient funding and resources are also crucial in enable art teachers to fully integrate ICT into art classroom.

## 7. Conclusion

As a foothold at every levels and areas of education, ICT integration into classroom is essential. The full support from the school administration and the Ministry of Education are also crucial in addressing school infrastructure issues. Sufficient ICT tools for both teachers and students usage are necessary to conduct a meaningful ICT mediated instruction. As a form of encouragement, the readiness of ICT mediated tools will generate interest and willingness among the Visual Art Education teachers to integrate it into their instruction process.

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