

VISUAL ART EDUCATION TEACHER'S BELIEFS AND ATTITUDES TOWARD INCORPORATING ICT INTO ART CLASSROOMS

Mohd Khairezan Rahmat

*Faculty of Education, Universiti Teknologi MARA (UiTM), Malaysia
mohdk787@salam.uitm.edu.my*

Wing K. Au

*School of Education, University of South Australia (UniSA), Australia
wing.au@unisa.edu.au*

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ABSTRACT

Visual art is a subject that emphasizes on creativity, innovation and critical thinking, therefore, Visual Art Education (VAE) teachers have been urged to utilize the full potential of Information and Communication Technology (ICT). Despite numerous literatures have highlighted the benefits of ICT, VAE teachers were found not serious toward integrating ICT in teaching. Hence, this study was carried out to determined Malaysian VAE teachers' attitudes and beliefs and their level of confidence toward incorporating ICT into art classrooms. This study explored teachers' specific approach of ICT and factors that influence their integration of ICT into art classrooms. The participants of this study were eighteen VAE teachers from three-selected secondary school in the state of Selangor, Malaysia. Data for the study was gathered by face-to-face interviews. The findings of the study indicated that Malaysian VAE teachers were still at moderate levels of ICT integration. The support from school administrator and continues professional development were identified as two main factors that contribute towards successful ICT integration. In light of the published research on the integration of ICT in the VAE subject area, hopefully, the findings of this study will assist school organization, teachers training institutions and the Ministry of Education toward establishing a standard for successful ICT integration, especially in the context of the VAE.

KEYWORDS: Visual Art Education (VAE), Information and Communication Technology (ICT), Teachers; beliefs and attitudes

INTRODUCTION

Malaysia has set a long-term vision known as Vision 2020 to help Malaysia to be a developed country through its economic, political, social, psychological and intellectual growth. Information and Communication Technology (ICT) has been identified as one of the key foundations to facilitate the achievement of the Vision 2020 (Mohammad, 1991). Realizing the importance of ICT and its impact on the nation's vision, Malaysia has allocated huge amount of budgets and initiated numerous initiatives since the last 20 years. By the year

2020, the Ministry of Education is expecting all Malaysian schools and students would have been instilled a certain degree of innovation practices of using ICT (MDeC, 2009). However, the implementation of those initiatives has not reflected a successful ICT uptake among Malaysian teachers. Previous local research findings revealed that teachers were still not utilizing the full potentials of ICT (Mohd Khairezan & Au, 2017). Clearly, an urgent intervention is needed to ensure the aim of the Ministry of Education and vision of the Malaysian government will be realized.

Similar to other education field, Visual Art Education (VAE) teachers were urged to utilize the full advantage of ICT. Eisner (2002) did emphasise that as the time change, technology will change and the way art teachers respond towards it also need to be changed. In similar vein, Maljkovic (2017) suggested that through the embracement of ICT, a conventional art classroom approach would become more contextual and meaningful. This new form of teaching strategies will support and extend the VAE pedagogy and thus promote new creative way of perceiving and practising arts. Nevertheless, in ensuring the successful of ICT integration in the art classroom, VAE teachers were required to develop theoretical, practical and pedagogical understandings of essential visual arts and ICT concepts. This is due to the facts that, ICT and its peripherals have brought a new dimension in conducting successful art instructions (Tondeur et al., 2017).

Given the importance of above-mentioned statements, this study examined the Malaysian VAE teachers' beliefs and attitudes toward integrating ICT into their instruction process. Eighteen VAE teachers, from three different levels of ICT integration secondary schools, were interviewed in respond to their attitudes, beliefs and level of confidence toward incorporating ICT. Furthermore, VAE teachers' specific approach of ICT and factors that might influence their decision to integrate ICT were also tested. Although incorporating ICT has been testified in science and technology subject areas, but is still not many published local researches that examine this research area. It is expected that this study will provide some advices for VAE teachers, school administrators and the Malaysian Ministry of Education to successfully integrating ICT, especially into art classrooms.

LITERATURE REVIEW

Integration of ICT into Malaysian Education System

Recognizing the promising impact of ICT in boosting national economy growth and social development, Malaysia citizens are needed to be technology savvy, thus incorporate knowledge, skills, creativity and innovative thinking abilities pertaining to technology (Mohammad, 1991) is deemed essential. Hence, multi-millions projects were initiated in supporting various ICT related initiatives to accelerate the integration of ICT into the national educational system. For instance, under the Ministry of Education computerization projects, computers were supplied to schools, while teachers were equipped with comprehensive computer knowledge and skills.

However, those initiatives do not guarantee successful integration of ICT among Malaysian teachers. A number of local researches have indicated that Malaysian teachers do not utilize the full potential of ICT (Ebrahimi & Jiar, 2018; Kamarulzaman, Che Anuar & Mohd Noor, 2017; Hassan et al, 2016). Teachers were found incompetent in using computer and other ICT peripherals, even after attended training in various aspects of computer literacy. Previous

researches were also reported that the usage of ICT were only limited to basic applications, viz. word processing, record keeping and administrating works, thus do not reflect the full utilization usage of ICT (Mohd Khairezan, 2015).

Undoubtedly, there are many factors that might influence teachers' successful ICT integration. Noted as a driver of successful integration factors, teachers' attitudes and beliefs have been indicated as the major enabling and disabling factor, pertinent to effective usage of ICT in schools (Teo & Zhou, 2017; Eickelmann & Vennemann, 2017). In addition, insufficient numbers of computers and ICT peripherals (Teo & Huang, 2018), unsupportive support from institution and administration are important factors that have impacted teachers' ICT integration (Moghavvemi & Janatabadi, 2018). Furthermore, researchers have acknowledged the lack of opportunities for professional development courses has obstructed teachers from integrating ICT (Makki et al., 2018; O'Neal, Gibson & Cotton, 2017).

Given the importance of ICT initiatives and substantial amounts of budget allocated, it is extremely important to conduct an in-depth study to examine the current attitudes and beliefs of Malaysian teachers toward ICT integration especially among VAE teachers. It is envisaged that the findings of this study will contribute towards proper intervention to ensure the Ministry of Education aim of instilling innovative practices using ICT will be realized.

ICT in the Visual Art Education (VAE)

Undeniably, ICT has provided opportunities for transforming and enriching the VAE subject area. Apart from promoting student-centres learning approach, where the students construct their own knowledge, meaning and solution (Hopper, 2016), ICT integration into art classrooms will boost student's creativity and critical thinking skills in expressing their artistic ideas (Chou, Chang & Chen, 2017). In addition, ICT will also promote a real problem solving and collaborative approach. It offered a real world experience through simulation, manipulation and creative expression that never have been highlighted before in conventional art classroom (Mohd Khairezan, 2014).

However, despite all the listed advantages, many researchers have indicated that ICT integration into art classrooms were far from reaching its target (Mohd Khairezan & Au, 2017). Roland (2010)'s research on art teachers' priority level of ICT integration in the art classroom revealed that majority (44%) of them consider ICT integration as moderate priority, while 33% stated that it's as a low priority. Furthermore, research by Coleman and Cramer (2015) also have indicated that many art teachers are reluctant to embrace ICT into art classrooms due to the concern that it will decrease students' creativity, artistic expression and understanding of art forms. This misconception towards ICT integration among art teachers has reflected their negative attitude and thus become a major issue that requires an extensive concern among researchers (Konak, 2018; Mohd Khairezan, 2014; Roland, 2010).

Realizing the importance of ICT in expanding and enriching the VAE subject area, this in-depth study will determine the VAE teachers' beliefs and attitudes toward integrating ICT into art classrooms. In relation, their common ICT approach and factors that might influence their integration of ICT in the art classroom were also determined. Due to very limited research that focuses on ICT integration in the VAE subject area, it is hoped that findings from this study will initiate appropriate interventions and guidelines for schools administrator and the Ministry of Education.

RESEARCH METHODOLOGY

This study involved eighteen Visual Art Education teachers from three selected secondary schools in the state of Selangor, Malaysia. Those three selected schools (less, average, high) were chosen based on the Smart School Qualification Standard (SSQS) star rating scale (Selangor State Education Department, 2010). Ranging from one star for schools with merely basic condition of ICT integration, to five stars advanced ICT integration schools; this SSQS outlines four major ICT integration areas in each school. These four areas are: utilisation (40%), human capital (40%), applications (10%) and technology infrastructure (10%) (MDeC, 2009). The duration between 20 to 30 minutes for each of eighteen Visual Art Education teachers (six per schools) were held to determine: (1) teachers' attitudes and beliefs toward incorporating ICT, (2) teachers' level of confidence of integrating ICT, (3) teachers' specific approach of ICT used, and (4) teachers' concerns toward integrating ICT into art classrooms.

RESEARCH FINDINGS

Teachers' attitudes and beliefs toward incorporating ICT into art classroom

Majority of the VAE teachers agreed that ICTs have major roles in the VAE subject area. They expressed that students need to be previewed with a lot of projected visuals during the instruction process. This statement was consistently mentioned by all teachers regardless their different levels of ICT integration. Mrs. SA from the high integration school explained her view by indicating that ICT integration will make students' learning process become easier and thus promote a motivated environment for the students. She stated,

For me the importance of ICT is good for students because when we (teachers) used ICT, it's easier for students to see, easier to learn, they will see whatever we (teachers) show more clearly.

The same idea was mentioned by Mrs. N; a VAE teacher from the average integration school. She noted that ICT was very important in art classrooms. It's the needs for the student, as it's required for their career path and job prospect. She added that ICT was an effective mechanism for developing students' creative minds. She stated,

In the current age, the role and importance of ICT is very much needed in teaching and learning process of the Visual Art Education. It's desperately needed ... it's very important because when they (the students) go into their career, they (the student) are required to apply ICT into their routine job ... so this must start from school. So to me it's really necessary. Instruction process will become more successful and effective with the use of ICT in classroom. Obviously, we (teacher) can develop their (students) creativity through ICT. It's also a very good method of delivering instruction. Students have been exposed to ICT.

Although the importance of ICT in the VAE has been addressed by most of teachers, Mrs KM a head of VAE teachers from less integration school, described ICT was mainly used only as a teaching tool. She stated,

It (ICT) is not very important. It's more of a teaching tool. ICT will help us (teachers) to make our teaching process become quicker as we (teachers) only have limited time in delivering our instruction.

Mr K, a senior VAE teacher from the same school has raised the same argument. To him, instruction topic will determine the need of ICT used in the art classroom. He stated,

It's depending on the topics. To me, ICT will only serve as a teaching tool when it has been applied in drawing topic. But for graphic communication related topics, such as poster production, signage design, ICT usage is indispensable. Through ICT we (teachers) can show a lot of examples. So, if you use OCT on that topic, it might be more meaningful. We (teachers) have to depend on the topic of instruction. Not all topics appropriate and needs ICT.

Teachers' level of confidence of integrating ICT

In regards to VAE teachers' confidence level of ICT integration, most of interviewed teachers were recognized at a moderate level. Through a rating scale of one that represents lowest level of confidence to three the highest level of confident; most teachers identified their level as moderate. This decision was connected with their concern towards challenges that they need to face in ensuring successful ICT integration. For instance, half of teachers from the high integration school identified themselves at high level of confident. Mr R indicated that although he has so much confidence of using ICT, however constraints that occur have affected his confident level. He stated,

To me, I am at the moderate level. I am confidence. But I am still not reached the maximum level. The reason I said that is due to constraints that have been mentioned before. Those problems have effected my confidence and enthusiasm for using ICT.

For Miss SN, from the same school, constraints that occur have decreased her confident level. Although she really loves and enjoys using ICT during his early teaching years, Unsupportive school environment has reduced her confidence level. She stated that,

I am really like to use ICT. However, when I am in this school, I have become a teacher with less integration of ICT, due to the constraints of ICT in this school. If the facilities are ready, school environment is encouraging; perhaps my confidence level will be higher.

Conversely, there are half of the VAE teachers have identified themselves to be at the low confidence level. One of them was Mr K. He mentioned that his confidence level was dropped gradually every year. For him, it's required a lot of efforts if he wants to integrate ICT. Unsupportive school environment has really decreased his confident level. He stated that,

My confidence with ICT integration is low. I have intention to upgrade it. I want to integrate ICT into my instruction. But when I start thinking of all things that needs to be prepared, with limited resources and factors that have hindered it, I don't think I can do that. So, I will use whatever things that I can.

Teachers' specific approach of ICT used

This study has examined the VAE teachers' common approach of ICT used. Result shows that majority of the teachers have used ICT as common teaching tool. Only few of the interviewed teachers were using ICT as a tool for demonstration and art production. Mrs H, from the high integration school did share her idea in relation to this issue. She stated that,

To me, the use of ICT is more preferably during the art production process. From there we (teachers) can clearly illustrate to the students on methods, steps and procedures of art making process. We (teachers) also can show all equipment used the appropriate techniques. To me we can even use papers in delivering our instruction, especially in explaining theories.

Many interviewed teachers were also indicated ICT tools as their planning and administrating tool. For instance, majority of the VAE teachers from the average level of ICT integration schools have mentioned that ICT tools were frequently used in their instruction. Mrs N, expressed her view that due to limited numbers of ICT facilities in the art classroom, she needs to use Internet (ICT tool) at home in prepare better instruction process. She stated,

Usually ICT has been used for the purpose of preparing my instruction process. I will seek information from the website at home; to find pictures, relevant examples and then print out while making notes for the students. In the art room, ICT equipment and resources are usually limited.

Apart from that, some teachers did acknowledge ICT tools as a research tool for their students. As a research tool, Mr M, from the average integration school mentioned that ICT has broadened art instructions. Teachers can provide address from related websites, where students can explore after school hours to expand their understanding. He stated that,

If we see, the students themselves have a computer and Internet at home, so they (students) can continue their learning process at home. Teachers can give homework to students, the websites address, and title. Students will then explore themselves on the Internet. They will use ICT to access additional information. However, limited of equipment and instruction time at school has stopped them for doing that.

Teachers' concerns toward integrating ICT into art classrooms

Notably, most interviewed VAE teachers have identified limited ICT-related resources and insufficient instructions' time as main factors that have hindered their ICT integration into art classrooms. Mr K, from the less integration school, has expressed her concern pertaining to limited numbers of ICT tools in school. He stated that,

There are very limited numbers of computer (ICT tool). Student could not use it. There's only one computer in the art room. When the students use it, we (teachers) need to watch them closely. We (teachers) afraid they will crash the

computer. There's the only one we (teachers) have. If its crash, it will be more problematic.

Constraints in terms of teachers' instruction time have also been expressed by most of the teachers. Mrs L, from the less integration school indicated that,

Time was also a problem. We (teachers) need time to prepare our teaching materials, and bring it into the classroom and setting all those equipment. We (teachers) need time for all that. We only have one hour and ten minutes. Within that time, we need to ensure the students are ready for explanations, show demonstration and run the activities. The time is too short.

Moreover, factors such as the lack of the school administrator support and limited training courses were highlighted during the interview session. Mrs E from the less integration school expressed her concern toward school administrators' supports. She mentioned that school administrator priority was given to core subjects have actually jeopardised the VAE subject. She stated that,

There is no support from the school administrator. To them, priority should only go to core subjects (Science and Technology related subjects). They did not give attention to art teachers. They may feel that art does not really require ICT. To them, art is just a subject that involves colours, brushes and pencils (conventional materials).

Furthermore teacher's lack of training has also been addressed by quite a number of interviewed teachers. Further, some teachers did express their concerns pertaining to unrelated and unspecific courses as the reason. Mrs H from the average integration school stated that,

School did organize courses, twice a year. But it's more of general course. Sometimes it is not even related to ICT and totally unrelated to the subject area taught in school.

RESEARCH DISCUSSION

Based on the findings, this study indicated that the interviewed VAE teachers have exhibited a high positive attitudes and beliefs towards ICT integration into art classrooms. This significant result was expressed through their concerns toward their students' needs. Through the use of ICT, students' understanding, satisfaction and motivation toward the delivered instruction were increased. In accordance to suggestion from previous researchers (i.e. Lawrence & Tar, 2018; Kale & Goh, 2014), it is crucial for teachers, as change agent for educational transformation, to possess positive attitudes and beliefs, pertaining to educational changes (Tondeur et al., 2017). These positive attitudes and beliefs toward educational change may lead to more positive reactions and practices in the classrooms.

Nevertheless, there were also concerns mentioning that teachers' ICT used is depending on delivered instruction topic. Successful learning process is highly depending on its contents and teachers' teaching strategies. Obviously, teachers must play important roles in choosing the best medium and strategies of instruction (Mohd Khairezan, 2015), thus determine

students' best practices in integrating with ICT. In regards to the study, majority of the interviewed VAE teachers used ICT as a teaching tool, as compared to other approaches. The basic used of ICT among VAE teachers, has created concerns among many researchers (Mohd Khairezan & Au, 2017; Coleman and Cramer, 2015), which indicate VAE teachers still lack of knowledge and skills to integrate ICT creatively in art classroom.

The findings from the present study have also revealed that most VAE teachers have moderate confidence level of using ICT. Although teachers are aware of the benefits of using ICT in conducting better instruction, their proficiency, ability and readiness were reported as low. Similar situation was reported by previous studies (i.e. Makki et al., 2018; Tondeur et al., 2017). Most teachers did express some limitations that blocked their confidence toward successful ICT integration into their instruction process. For example, majority of the VAE teachers articulate that the lack of computers and ICT peripherals as the main issue that has jeopardized their interest toward ICT integration. This statement is parallel with previous research findings (i.e. Teo & Huang, 2018; Gil-Flores et al., 2017), which indicated that teachers have expressed their needs for more access to ICT in instruction.

In relation, supports from school administrators were also noted as crucial in ensuring successful ICT integration into art classrooms. The interviewed VAE teachers indicated that school administrators' unsupportive behaviour and misunderstanding toward the need of the subject has demoralized teachers for integrating ICT. The necessity for continuous and relevant ICT-related professional development courses have also been mentioned. As addressed by previous scholars (i.e. Makki et al., 2018; O'Neal, Gibson & Cotton, 2017), many ICT professional development courses have only highlighted on user's skills to operate computer applications, which have jeopardised teacher's interest to attend it. Instead of acquiring basic ICT and technological skills, ICT professional development courses are expected to include a comprehensive pedagogical content (Tondeur et al., 2017).

RESEARCH CONCLUSION

Derived from the findings of the study, it appears that VAE teachers have demonstrated a high positive attitudes and beliefs towards ICT integration into art classrooms. However, this finding does not reflect teachers' level of confidence. The result indicated that teachers' only possessed a moderate level of confidence. Furthermore, findings of this study show that teachers do not utilize the full potential of ICT in their instruction process. They just used ICT commonly as a teaching tool, especially in delivering their instructional materials.

As the heart of any education change, teachers must have ultimate power to ensure successful ICT integration happen. The needs of their positive attitudes and beliefs toward ICT are demanded. Comprehensive professional development courses must be offered to teachers continuously. It is hoped that through relevant professional development courses, teachers will be exposed to more meaningful and creative use of ICT. Apart from enhancing teachers' confidence level, this initiative needs to be considered as one of the mechanisms in ensuring full potential of ICT used among teachers. In addition, cooperation from school administrator and the support from the Ministry of Education in ensuring the availability of ICT-related facilities are essential in making successful ICT integration happens. Besides, teachers need to possess an instilled positive mind-set toward integrating ICT to guarantee cutting edge ICT-mediated teachers and students will be produced.

REFERENCES

- Chou, P. N., Chang, C. C., & Chen, M. Y. (2017). Let's draw: Utilizing interactive whiteboard to support kindergarten children's visual art learning practice. *Journal of Educational Technology & Society*, 20(4), 89-101.
- Coleman, M. B., & Cramer, E. S. (2015). Creating meaningful art experiences with assistive technology for students with physical, visual, serve, and multiple disabilities. *Art Education*, 68(2), 6-13.
- Ebrahimi, S. S., & Jiar, Y. K. (2018). Technology at Malaysia public high school. *Merit Research Journal of Education and Review*, 6(3), 54-60.
- Eickelmann, B., & Vennemann, M. (2017). Teachers' attitudes and beliefs regarding ICT in teaching and learning in European countries. *European Educational Research Journal*, 16(6), 733-761.
- Eisner, E. W. (2002). *The arts and the creation of mind*. Yale: Yale University Press.
- Gil-Flores, J., Santero, J. R., & Gordillo, J. T. (2017). Factors that explain the use of ICT in secondary education classrooms: The role of teacher characteristics and school infrastructure. *Computer in Human Behaviour*, 68(2), 441-449.
- Hassan, M., Mahmud, R., Mohd Ayub, A. F., & Wong, S. L. (2016). Teachers' acceptance of ICT and its integration in the classroom. *Quality Assurance in Education*, 24(1), 26-40.
- Hopper, J. H. (2016). Digitizing the easel: Student perspectives on tutorial videos in the art classroom. *Art Education*, 69(4), 23-28.
- Kale, U. & Goh, D. (2014). Teaching style, ICT experience and teachers' attitude toward teaching with Web 2.0. *Education and Information Technologies*, 19(1), 41-60.
- Kamarulzaman, K., Che Anuar, C. A., & Mohd Noor, I. (2017). Integrating ICT in teaching and learning: A preliminary study on Malaysia private preschool. *International Journal of Academic Research in Business and Social Sciences*, 7(11), 1236-1248.
- Konak, A. (2018). Opinions of art teachers on the standards of the international society for technology in education: The case of Western Mediterranean Region, Turkey. *Journal of Education and Training Studies*, 6(3), 100-111.
- Lawrence, J. E., & Tar, U. A. (2018). Factors that influence teachers' adoption and integration of ICT in teaching and learning process. *International Journal of Educational Media*, 55(1), 79-105.
- Makki, T. W., O'Neal, L. J., Cotton, S. R., & Rikard, R. V. (2018). When first-order barriers are high: A comparison of second and third order barriers to classroom computing integration. *Computers & Education*, 120(2), 90-97.
- Maljkovic, V. (2017). Directing technology to encourage creativity among digital artist practitioners. *International Journal of Infonomic*, 10(3), 1380-1389.

- MDeC, Multimedia Development Corporation (2009). *Smart School Qualification Standard (SSQS)*. 2nd Edition. Kuala Lumpur: Ministry of Education.
- Moghavvemi, S., & Janatabadi, H. S. (2018). Incremental impact of time on students' use of e-learning via Facebook. *British Journal of Educational Technology*, 49(3), 420-432.
- Mohammad, M. (1991). *Malaysia: The way forward*. Kuala Lumpur: National Printing Department.
- Mohd Khairezan, R., & Au, W. K. (2017). Integrating technology into art classroom: Does the Malaysia Visual Art Education teachers ready? *International Journal of Education, Psychology and Counselling*, 2(5), 310-317.
- Mohd Khairezan, R. (2014). Are future teachers ready to be the change agents? *Taylor's 7th Teaching Learning Conference 2014 Proceedings*. Springer, Singapore.
- Mohd Khairezan, R., & Au, W. K. (2015). The moderating effect of teachers' professional development courses on the relationship between their perceptions toward continual intention to integrate ICT. In *Proceeding of the 23rd International Conference on Computers in Education*. Asia-Pacific Society for Computer in Education.
- O'Neal, L. J., Gibson, P., & Cotton, S. R. (2017). Elementary school teachers' beliefs about the role of technology in 21st century learning. *Interdisciplinary Journal of Practice, Theory, and Applied Research*, 34(3), 310-321.
- Roland, C. (2010). *The art teacher's guide to the Internet*. Worcester, MA: Davis Publication.
- Teo, T., & Huang, F. (2018). Explicating the influences that explain intention to use technology among English teachers in China. *Journal of Interactive Learning Environment*, 26(4), 400-413.
- Teo, T., & Zhou, M. (2017). The influence of teachers' conceptions of teaching and learning on their technology acceptance. *Journal of Interactive Learning Environment*. 25(4), 513-527.
- Tondeur, J. V., Johan, E. P., & Anne, O. L. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A systematic review of qualitative evidence. *Educational Technology Research Development*, 65(3), 555-575.
- Tondeur, J., Scherer, R., Siddiq, F., & Baran, E. (2017). A comprehensive investigation of TPACK within pre-service teachers' ICT profiles: Mind the gaps. *Australian Journal of Educational Technology*, 33(3), 46-60.