



Conceptualizing the Digital Pedagogy in Arts Higher Education: Examining the Roles of Training, Technology Support, and Teacher Mindsets

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Received: 14th May 2024

Accepted: 15th July 2024

Published: 5th August 2024

ABSTRACT

In this concept paper, the propositions for incorporating professional development, ICT awareness, and technical support to introduce technology incorporation practices among College of Arts instructors are discussed. Drawing from past research in practice, this study's conceptual framework posits value and ability beliefs as the mediators of technology integration practices. This research establishes professional development, ICT knowledge, and technical assistance as determinants of technology integration practices for learning in the study and looks at the value and ability beliefs and their impact on the instructors' decision to integrate technology into the teaching practice. This work contributes to the generation of practical and theoretical knowledge for designing effective technology integration in arts education practices, underscoring the centrality of the multipronged perspectives of instructors' belief, content, and practice knowing. In this case, this study seeks to improve the quality of arts education and better prepare College of Arts students for the job market of the still-growing technology focused era by raising the level of preparedness for integrating technology into lessons of the College of Arts instructors.

Keywords: Art teachers, Information communication technology, ICT, Knowledge, Technology integration, and Teaching process.

INTRODUCTION

Technology is an effective medium that opens up great opportunities for presenting the entire spectrum of information and material and helps both teachers and students to overcome the obstacles of traditional classrooms. It offers promotional model of learning through web conferencing, fosters critical skills of reasoning in context and problem solving' skills in context through simulations and promotes assessment and feedback model of learning required for its success (Rajaram & Rajaram, 2021; Tang, 2024). Technological integrations in education requires specific skills that instructors must focus to learn and acquire. When used in the context of art education, computer-assisted learning fosters critical and creative thinking as well as technical, critical, and analytical abilities. Including new technology in Art programmes makes it more important to the public (Ottenbreit-Leftwich et al., 2018; Pittman & Gaines, 2015). Because of this, the greatest benefit of technology is a reduction in the number of negative public perceptions of art. Additionally, the integration of technology contributes to achieving a culture of technology integration, innovation, knowledge sharing, and continuous learning that prepares the students in using new technologies in their careers in emerging industries (Abulibdeh, Zaidan, & Abulibdeh, 2024; Adhikari & Shrestha, 2023).

Advanced research has made more resilient and ambivert efforts to extend the current exhibited knowledge on ICT knowledge and technology integration in the learners' cognitive engagement. Introducing IT in college arts courses is not without difficulty, and even the professors face some specific impediments in the process. Because arts education mostly involves the use of touch, feel, see and do processes, it has heavily depended on the use of tangible objects in teaching. For this reason, dependence on traditional practices poses a monumental challenge when implementing technology since there is a complete overhaul of the techniques of imparting knowledge. Some literature suggests that many arts teachers could be unaware of best-practice ICT and technical skills in integrating technology into arts education (Curtis, 2021; Kaberia, 2024; Kandoli, 2022). Identifying the variables that affect implementation of technology into classroom learning of arts is therefore important in determining the best prevention and management strategies to the challenges.

Another significant aspect is professional development as a means of preparing instructors for proper usage of innovative technologies (Kakhkhorov & Rasulova, 2020). Professional

development of art teachers is possible through proper training which involves the efforts of institutions to arrange structures programs such as seminars, training workshops, e-learning courses and professional meetings for sharing experiences to enhance learning. Education technology plays an important role in facilitating and delivering Teacher Professional Development TPD specifically for remote areas. Moreover, assistance is necessary for technological integration as many resources are required for teaching arts such as computer, projector, digital modelling tools, internet which requires support as instructors need facility of guidance in using technology within the classroom. The paper also tries to establish a link between professional development of art teachers, technical assistance availability and ICT knowledge.

The ICT knowledge involves the familiarity of art instructors with communication technologies which are necessary for communicating arts such as art modelling tools, designing tools, artistic applications and multimedia platforms for displaying digital arts (Ferreira, 2021). The advent of the use of gadgets in learning became the key to change in the application of arts in education (Simamora, 2020). In the case of arts education, ICT knowledge also covers certain technology instruments for production of arts, for instance, the graphical interface designing tools, digital tablets for drawings, and multimedia design tools (Bonney, 2022; Klima & Kárpáti, 2021). Also, it entails the competencies to fix technological problems, learn new technologies and incorporate technology into learning and teaching processes. An understanding of ICT provides the educators with the skills of how to use the technology in the enhancement of the teaching learning process.

When the technology transpired, new varieties of the digital media and software emerged, which brought different ways of creating and developing the art works (Ardalan & Iozzo, 2021). This revolution began to alter the arts education process, and even challenge the previous roles and traditions of art. These tools helped to define mechanisms of abstract ideas, installations, and virtual spaces that could not be achieved by means of traditional media (Gong, 2021). However, the effectiveness of technology in education is underscored due to its ability to prepare the students for the society that is rapidly becoming technological, thereby providing the students with the vocation that is relevant in the twenty first century education. Given that arts learning advocates embracing of new technological tools for use in the learners' creative processes this shift is especially applicable to arts education (Ma, Guan, & Li, 2021). Thus, this study aims at enlightening the advancement of educational reform to reconstruct the significance of technology

in arts education and explore the ways in which its value can be optimised. By fulfilling this aim, this study will suggest a conceptually formulated framework that will be a worthy tool for future studies and practitioners like teachers themselves to understand their underrated job situation.

However, there are several challenges and barriers that one is likely to encounter while trying to implement technology integration in arts education. The whole concept of information distribution and role of teachers in it has been changed completely because of new technological advancements. There is an increased demand for incorporating high-level technologies in education to encourage educators to learn and find new ways of teaching enhancement (Ovcharenko et al., 2020). However, many educational fields are still limited to be taught by traditional methods such as field of arts. Many institutions refuse to incorporate new technologies in teaching arts and still prefer the traditional methods (Siyu, 2020). Moreover, digital illiteracy appears as a major challenge in the professional development PD of the instructors. Instructors lacked the abilities and skills necessary for the integration of digital technologies because of many reasons.

In order to overcome these challenges, empirical research is required to address these issues. By examination of the interplay between ICT knowledge, professional development, technical assistance availability and beliefs of instructor, the research aims to provide with valuable insights into professional and personal strategies that will ensure the successful integration of technology among the instructors of college arts. The subsequent sections of the paper will depict a summarized detail on methods, a comprehensive debate on the previous literature, a proposed conceptual framework and a brief conclusion.

METHODOLOGY

This study examined the dynamic relationship between value and ability attitudes and professional progress, ICT expertise, and technical support using a quantitative research approach. This approach and positivist research philosophy underpinned the study's scientific rigor and empirical evidence. The deductive research technique was used which draws on past theories about how technical assistance, information and communication technology expertise, and professional growth affect technology adoption. Among the techniques for data collection in this particular research study there was a survey and among the tools there was the survey questionnaire as well.

The questionnaire was divided into sections, each of which addressed one of the 5 facets of the study, namely, the participant information, teaching experience, usage of technology, and perception of integrating technology in teaching. The survey data was collected and stored electronically, using a secured format available online, in order to ensure its proper management and analysis. The data was analysed with the help of the software SPSS, Microsoft Excel and Amos. The tests involved descriptive statistics, rotated component matrix, confirmatory factor analysis, structural equation modelling and convergent and discriminant validity.

Unified Theory of Acceptance and Use of Technology (UTAUT)- an explanation of the factors influencing the technological acceptance

The UTAUT paradigm has been widely used to assess technological adoption, including the education sector. The theoretical framework for identifying and analysing the variables influencing users' behavioural intentions to accept and use the digital tools created to integrate technology is the UTAUT model, which was used in this study. The UTAUT model identifies the influencing factors of technological acceptance that are professional development, technical assistance and ICT knowledge (Akinuwesi et al., 2022).

Lately, social and gerontological studies have made understanding this kind of technology adaption a major area of study. Within this context, the objective of this research is to employ the Technological Acceptance Model to determine the primary determinants that affect older people's desire to use digital technology in their daily life. An investigation was conducted. Findings indicate that the Technology Acceptance Model (TAM) has a strong predictive ability in explaining older persons' intentions to utilize digital technology, with perceived usefulness and perceived ease of use serving as the primary predictor variables (Martín-García, Redolat, & Pinazo-Hernandis, 2022)

Instructional technology is the study and use of technology in education. Virtual reality classrooms, online courses, and interactive whiteboards are a few examples of instructional technology. Although there are huge differences in the applications and benefits of instructional technology, all of it has the same main objective (Baek, 2018), to give students excellent and memorable educational experiences of technology for instruction. If educators employ technology to improve instruction, students will be more equipped for success in the digital age (finedo, 2020).

However, the emphasis was on enhancing student motivation and expanding their access to information outside of the classroom, rather than on particular academic achievements. Furthermore, computer-assisted art can create a learning environment that motivates students to help one another, therefore advancing a process of learning where students gain knowledge from one another. With computer-assisted art, an educational setting that promotes student-to-student interaction can be established. The potential advantages of a computer for an art student should also be taken into account, thus the emphasis should be on the pupils and how they can use the computer to accomplish their aesthetic objectives (Wong et al., 2023).

There are several barriers that affect how educators use technology in the classroom. Access to technology, institutional culture and vision, and professional development opportunities are examples of first-order barriers. Barriers of a second order comprise of abilities and value beliefs. A lack of perceived knowledge or abilities for incorporating technology into the classroom is one example of an ability belief. To effectively implement technology integration policies and make significant improvements to the way technology is used in the classroom, it is critical to comprehend these obstacles. Moreover, it is crucial to integrate ICT into teacher preparation programs, and teacher educators should get support and encouragement to adopt a positive learning mindset and use ICT into their instructional strategies (Ngao, Sang, & Kihwele, 2022). Hueso-Romero (2021) said that when it comes to integrating modern technology into their lessons, teacher educators should have hope. All these studies stated proved the relationship between all the variables according to the proposed framework that is the dependency of Professional development, ICT knowledge, technical assistance on technology integration practices mediated by ability and value beliefs.

OVERVIEW OF THE KEY FACTORS

Professional Development of Art Teachers

Professional development is the process of acquiring new skills, staying current with industry trends, and advancing one's career through ongoing education and career training after entering the job. Teacher education and professional development are central features in the promotion of technological literacy and competency among teachers. Art has been included in the professional development programs over the past decade, for educating teachers in US. The attitude of the

teacher towards art applications or arts education processes in the practice of teaching. For meeting up the needs of development, professional development of teachers has become much significant. They are supposed to get new skills and knowledge. This professional development of teachers provides advantages to schools and students also (Ekinici & Acar, 2019). A model for effective professional development was provided through a study by considering the views of the primary school educators on professional development. To get proper model, at first, the views of the contributors about the idea of professional development, the procedures of providing professional development and the features of operative professional development were reserved. The results elaborated that, efficient professional development model groups are, objective setting, preparation, feeling a requirement, progress process, and assessment respectively and these groups found a series in itself. It was determined that there should be provision and monitoring actions to guarantee management between the main groups and instructor (Ekinici & Acar, 2019).

Another study traced the regional network that was arranged in order to build the capacity of teacher with the involvement for design, sustainability and effectiveness of the professional development of the teachers. In the year one, the teachers enhanced their apprehension of arts integration and the ability to assess how to reflect on the work of student. In the year two, the activity of professional development focused on aiding teachers and the co-teaching to enhance the diligence of learning goals of the students as a mean to improve the learning of students in the content areas of arts and non-arts subjects. The findings of the project and the challenges to sustain the opportunities of network professional learning are offered for the future research (Richard, Treichel, & Ideas, 2013). Professional development program worked on the promotion of particular teacher talk known as inquiry dialogue in order to achieve the objective of developing argument literacy of students. In contrast to the expectations, no alterations in the epistemology of teachers such as beliefs of teachers about knowledge justification and knowledge remained at equivocator stage in the whole course of program, recommending that teachers viewed the opinions as valid and regarded arguments and utilization of reasons as idiosyncratic (Wilkinson et al., 2017). A study traced the regional network that was arranged in order to build the capacity of teacher with the involvement for design, sustainability and effectiveness of the professional development of the teachers. The findings of the project and the challenges to sustain the opportunities of network professional learning are offered for the future research (Richard, Treichel, & Ideas, 2013).

Technical Assistance Availability

Technical assistance (TA) is a main building approach that is utilized to support the evidence-based practice and the development of community and efforts for improvements. The most candid and predominant purpose of TA noted by Choudhury (2001) was the transmission of novel information along with newfangled expertise to others who do not know about it. An article summarized the evidence on effectiveness and assessment of TA. The findings showed that publications enhanced, representing growth in the reporting of TA. TA is applied across various settings that serve under-resourced and socially vulnerable population. 5% of the studies evaluated the sustainability of outcomes of TA. The findings also demonstrated that there was lack of standards in the regards of definition of TA and reporting levels across evaluation categories of TA (Scott et al., 2022).

A study was conducted which proposed instructional plans for online teaching which can effectively deliver technical assistance to teachers. This study established numerous approaches for online teaching without negotiating student education. These approaches can provide aid in scheming positive online study meetings. The study recommended that HEC should sort partnerships with telecommunication businesses. It would be helpful in incapacitating Internet-related matters. There are numerous issues that aid in increasing distant learning. These issues comprise receiving response from pupils, proposing flexible teaching and evaluation strategies. These instructional plans would be helpful as an outstanding tool in running online programs (Mahmood, 2021). Scholar assessed the expectation of teacher with regards to behaviour of student and form of issues in which they need technical assistance. Intense differences were found among the teachers. Not much difference was observed in special as well as regular education. However, for the groups differing on dynamics of self-efficacy and responsibility, significant differences were observed. Therefore more studies are required in future to assess the significance of technical assistance influence on the teaching practices (Kauffman, Lloyd, & McGee, 1989).

ICT Knowledge

ICT skill is required as a foundation for applying ICT-based learning. The encounters of emerging ICT are progressively significant on teachers as managers of modification in the arena of education, by evolving teacher competence that is information in the arena of ICT to support

advanced learning procedures. The use and application of Information Communications Technology in classroom practices has been deemed very important in today's world of education. Studies have shown that the teachers who studied ICT tremendously affects their competency in the process of developing innovative and engaging classroom learning environments, which greatly promotes student engagement, student-centred approaches and improved learning outcomes (Julian, 2022).

Teacher professional development in ICT is defined as training that is applied and ongoing, integrated with other training where possible, that allows the use of technology in learning and that invites continuous learning about the use of ICT (Hofmeister & Pilz, 2020). There is the need for professional learning in order to ensure teacher effectiveness through enhancement of their content knowledge and depicting the progress of technology from an embryonic stage of development to integration into educational practice (Abdellatif et al., 2022).

In addition, ICT also supports flexible learning approaches, whereby teachers can easily address the requirements and needs of students in their teaching process. This is made possible through the application of the adaptive learning technologies and online assessments that can enable the teachers to first determine the areas of strength and the areas of content knowledge that students have gaps in and then attend to those gaps appropriately (Moriña & Biagiotti, 2022). Also, ICT helps to complement classroom learning with real life experiences in that it brings real-life situations into the classrooms. Incorporating digital sources into teaching, teachers can present students with what is happening around the world, new discoveries, and important topics which are significant in making the learning content relevant. Telecollaboration activities, such as virtual field trips, guest speaker sessions through video conferencing, and opportunities to join global networks enable learners to connect with people and communities beyond their own sphere, which exposed them to a different world view and make them a more global and open-minded individual (Yamada, 2021). Possible studies should examine the long-term consequences of the ICT knowledge on teaching strategies and assessments of the learners. This will help in designing of a professional development programmer which will effectively meet the need of the teachers (Scheerens et al., 2020).

Technology Integration Practices

Introduction of technology in learning institutions is among the most important aspects that policy makers, teachers, curriculum developers, instructional designers and other stakeholders in education have continued to focus on in the recent past. The technology integration in teaching and learning has become among the most critical aspect that prepares pre-service teachers to enhance their pedagogy knowledge, skills, and attitudes for effective management of diverse learning contexts. This phase lays down a base, for the formative attitude and approach towards the use of technologies in teaching by these teachers. Similarly, a study revisited revealed that many pre-service teachers commented insolently as not fully prepared to integrate the technology when teaching thereby revealing a need for holistic and efficient teacher education programs (Hill-Jackson & Lewis, 2023).

This means that the entire process of technology integration is supported by the professional development proponents for teachers as well. Alemdag, Cevikbas and Baran (2020) emphasized that schools and educational leaders must make professional learning the continuous process to improve the craft to address the technical and pedagogy of the technology integration. Available material, and online support, including training and follow-up sessions can assist teachers in tackling contemporary technology, and other teaching improvement techniques, in the best way possible (Yurtseven Avci, O'Dwyer, & Lawson, 2020). Consequently, the integration of technology for intelligent learning needs a pluralistic model involving collaboration of learning communities, increasing the teachers' practices, preparation of pre-service teachers that are usable in various teaching fields, and developing the professional learning communities and support. Through addressing these aspects, different levels of education stakeholders will be equipped with skills, knowledge and confidence in deploying and integrating various technologies to support teacher practices and students' learning processes.

Impact of professional development of art teachers on technology integration practices

Teachers' attitudes, technological knowledge, and skills are critical to the successful integration of technology in the classroom. In light of earlier research conducted in Pakistan over the preceding five years, the current study offers instructors' perspectives concerning a combination of technology into their teaching-learning practices at all educational levels. The results show that

teachers have favourable opinions about the use about tech in teaching and learning procedures. They feel that using technology into the classroom helps them improve their methods of guidance, keep students engaged, and make learning fascinating and dynamic (Akram et al., 2022). The incorporation of technology into livelihood education and its effects on teacher empowerment and students' readiness for a digital future are examined in this systematic review.

Teachers have a significant influence on how children learn, thus it is important that they have the skills and self-assurance to use technology in the classroom. Research has indicated that initiatives aimed at empowering teachers through technology integration have a noteworthy effect on the academic achievements of students, increasing teachers' proficiency with digital technologies led to higher levels of motivation and engagement from their students. After completing the training, teachers felt more comfortable incorporating technology into their lessons, which improved pupil achievement (Kilag & M., 2023). Moreover, a critical consideration in technology integration is the balance between technical education and the development of soft skills. While technology offers invaluable opportunities for vocational training, nurturing essential human qualities, including creativity, adaptability, and critical thinking, must remain a priority. Vocational education programs should strive to integrate activities that promote the simultaneous development of technical and soft skills (Kilag & E., 2023).

The word "technology integration" appears to be devoid of a precise definition. This might be because many authors avoid mentioning specific technology that could date or limit the scope of their work. Dredge (2019) gave instances of various perspectives on technology integration that share a similar vocabulary. Teachers, administrators, and other staff members are given opportunity to expand their knowledge, abilities, and approaches to technology integration pedagogy. The development of individual and group attitudes toward technology integration is a significant emphasis of this type of staff development. This necessitates the formation of a technology committee as well as the development of a technology plan. According to Dwivedi (2020), as a researcher, he felt compelled to investigate this subject and create a product that not only could serve his own future needs, but possibly the needs of others. Some school administrators have acted with appropriate responses that were well planned, utilizing a high degree of shared decision making, while others have not. According to Hasan (2020), teachers are supposed to help pupils build their technical literacy, which is described as an individual's understanding of

technology at a level that allows her/him to operate effectively in a modern technological society. The use of technology into the teaching and learning process has emerged as a key educational project and reform effort in teacher education.

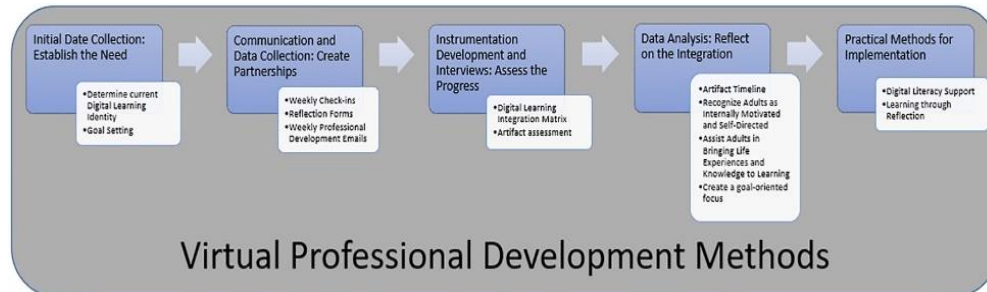


Figure 1: Professional development methods
 Source: (Zimmer & Matthews, 2022)

Impact of technical assistance availability on technology integration practices

Ertmer (1999) was one of the first scholars to articulate a vision of digital technologies integration. It is noteworthy to note that, despite being from the 1990s, this concept is still in line with the modern understanding of digital technology as a dynamic element that interacts with pedagogy and content rather than being alone (R. Tovar Viera, 2020). A lot of people are using online education to alleviate the disruption in the classroom that the Covid-19 outbreak has caused. Unfortunately, there are noticeably few descriptions in the literature that is currently available of teachers' and students' experiences with this sudden change in instructional modality. The results of a study that examined the experiences of instructors and students with online learning during the pandemic in the context of higher education are presented in this article. According to the results of the online survey, they utilize the digital artifacts' action potentials to tailor them to local settings and make the greatest use of them to improve student learning and communication under trying conditions. The main obstacles and difficulties people encounter while switching to online learning include a bad network, a lack of digital literacy, and a lack of technical help (Gomez et al., 2022).

For their online education, the majority of students used computers and mobile phones. Students did, however, utilize their mobile phones more often for learning than their laptops. Moreover, iPads and tablets were the least popular teachers in both nations contacted students via Facebook, Zoom, Google Meet, email, Messenger groups, WhatsApp, Viber, and phone calls during their

campus shutdown, according to the qualitative data. In terms of the community of practice, all of these technological support resources foster close relationships among educators to support one another in managing their online instruction. For example, teachers often turn to more seasoned colleagues for guidance (Shrestha et al., 2022). The process of integrating digital technologies into schools is intricate and ongoing, affecting various players in the school ecosystem. It is important to demonstrate the connections between these effects and pinpoint the elements that might support a successful and efficient transformation of the learning settings. The nature and breadth of education have changed as a result of digital technology. New avenues for improving education have been made possible by disruptive and adaptable technological advancements such software apps, block chain, smart devices, the Internet of Things (IoT), artificial intelligence (AI), augmented reality (AR), and virtual reality (VR) (Gaol, 2022).

Teachers should demonstrate how to utilize technology to assist the curriculum so that students can understand how it should be done. Numerous studies have documented the advantages of using technology into language acquisition. Computer Assisted Language Learning (CALL) improved learners' learning attitudes and enhanced their self-confidence (Ma, 2018). According to Mittal (2018), technology assists learners in gathering knowledge and interacting with materials such as images and videos. The use of technology allows teachers to select their preferred multimedia and applications, resulting in more participatory teaching.

Impact of ICT Knowledge on Technology Integration Practices

ICT knowledge has a combined impact of information, communication and technology, involving the skills regarding applying and understanding a significant range of software, computer programs and other applications (Buabeng-Andoh, 2019). A study conducted regarding the relationship between ICT knowledge and technology integration practices revealed that there is a significant role of ICT knowledge in the successful implementation of the technology integration practices (Coleman et al., 2016). This involves utilization of the technology tools in a general content area for the application of technology and computer skills for the purpose of problem solving. Another study proposes that information, communication and technology related knowledge can not only result in significantly effective implementation of the technology integration practices but will also result in significant level of modification, augmentation and redefinition of the information technology related factors in an organization (Georgiou et al., 2020). Along with the technical

skills, the right knowledge and information also plays a very significant role in the integration of various technical practices that can result in better professional development and significant technical assistance availability (Gil-Flores, Rodríguez-Santero, & Torres-Gordillo, 2017; Gilkes, 2020).

Aligned with the previously cited research, another empirical evidence targeted the integration of ICT in the educational institutes and used the teachers' perceptions to define the model. Using the quantitative data, the study decoded that individuals' personal level attitudes are significant predictors of the ICT integration and their effective utilization for learning processes (González-Sanmamed, Sangrà, & Muñoz-Carril, 2017). This depicted that individual-level personality traits like beliefs, attitudes and behaviours lie a central tendency to stimulate or diminish the healthy integration of ICT for technology integration and people who are the first-hand dealers of ICT must have a strong willingness, knowledge and belief about the integrity of the technology and its incumbency.

Regarding the teachers' knowledge of ICT, a study used a specific phrase of TPACK which stands for the technological pedagogical content knowledge, and analysed the sequential dependence of ICT integration through TPACK and the associated barriers that hinder the healthy nexus between the targeted constructs. The mixed method approach of the study identified that although TPACK acts as a significant fuelling agent for technology integration, still it encompasses many significant hurdles in its healthy connection. The main challenges are technological infrastructure, teachers' pedagogical beliefs, time constraints related to curriculum etc. are present. (Spangenberg & De Freitas, 2019). Similarly, TPACK, digital skills, skills in data literacy, content safety, digital competencies, and communication and collaboration are additional ICT-based knowledge parameters that facilitate the teachers to improve their services with technology integration (Cebi et al., 2022).

A study disclosed different enablers (ICT infrastructure, software, labs and tools) and challenges (limited required training and knowledge for ICT integration, lack of infrastructure, and limited competencies of the teachers for online learning) that have a significant role in technology integration (Akram et al., 2022). Along with it, in an empirical literature research, (Gilkes, 2020) used a multi-dimensional approach and investigated the influence of teachers' competencies through TPACK, their self-efficacy and their basic characteristics as experience, subject taught

and experience) on the dependent variable i.e., technology integration in the classrooms of high schools. Thus, all this vigorous discussion and well-spread report on ICT knowledge over recent times, its associated antecedents and descendants and its relevant effective functioning in the digital future of students, this study has golden stripped the phenomenal setting of ICT knowledge for the technological integration in the learning processes by the teachers.

Mediation of Value Beliefs

Educational technology research should centre on developing professional development programs that cultivate positive teacher traits, such as ability and value beliefs, since they are significant variables in technology integration. Research has shown that teachers are more likely to incorporate technology into their lessons when they see its value in the classroom and have confidence in their own abilities to do so (Atman Uslu & Usluel, 2019). Teachers' attitudes about their own value and competence have been defined and operationalized variously in the field, despite several attempts to explore the relationship between these beliefs and the incorporation of technology in the classroom (Scherer, Siddiq, & Tondeur, 2019). Teachers' value beliefs can be reshaped or altered through the use of various experiences in professional development. In an effort to improve people's values as they pertain to technology, there are a number of programs available, the Episode-Centred Belief Change (ECBC) model being one of them which was presented in a study by (Bowman et al., 2022). The potential impact of professional development programs on teachers' value beliefs as they pertain to technology necessitates further investigation. In fact, a number of scholars have pointed out that future PD programs and associated research should pay more attention to participants' value beliefs. One of the goals of PD programs should be to help people develop their value beliefs, as pointed out by (Konstantinidou & Scherer, 2022). Instead of presenting technology apart from the curricular needs, Xie et al. (2023) noted that good technology PD programs should cater to teachers' present interests and needs. In this way, a high-quality professional development program can address teachers' value beliefs around technology integration methods while also illuminating the practical applications of technology.

The study proposes that there is a significant role of the value beliefs when it comes to the professional development of the teachers regarding technology integration and information and knowledge regarding the technology (Xie et al., 2021). Another related study has also elaborated

regarding the professional development programs for the teachers and proposes that there must be an inclusion regarding the factors of value beliefs and ability beliefs in order to positively and significantly enhance the technological integration and information and knowledge regarding the technology within the characteristics of the teachers (Mirzajani et al., 2016; Rich et al., 2017).

Furthermore, it has been demonstrated that factors impacting one variable can also have an effect on another. Perceived ability and value judgments were found to be impacted by degrees of technological knowledge (Thurm & Barzel, 2020). Professional development programs should improve teachers' perceived competency and reinforce their values. Both impacts are anticipated. Understanding the relationship between teachers' perceived competency and their value perspectives, as well as how professional development programs can influence both elements simultaneously, helps create future programs that actively target flexible characteristics. This knowledge is needed to create programs that aggressively target such traits.

Mediation of Ability Beliefs

Other than these generic straight relations, ability beliefs have been also used as intervening variables to strengthen the professional development integration with the technology integration. In this domain, a research study concluded the nexus between ability beliefs, problem-based learning and professional acquisition with ability beliefs as a mediating variable and highlighted that if a person has a firm belief in his qualities or skills, this belief can strengthen the professional excellence which can enable the person achieving and implementing any expected task or system like technology (Orji & Ogbuanya, 2022).

In the very recent literature, a study investigated the correlation between the teachers' professional capital and their technology-based enhanced teaching innovation (Liu & Zhang, 2024). The study the Chinese teachers as the population and using the SEM approach, the study identified that the teacher's professional capital and their technology-integrated teaching innovation have a strong significant association. These recent studies presented a strong foundation to claim that ability beliefs as teachers' self-efficacy, beliefs and values are significant predictors that stimulate the professional development and better technology usage.

CONCEPTUAL FRAMEWORK

Based on the discussion and the theoretical evidence, presented above, the following conceptual framework is proposed. It suggests the relationship between all the factors that have been studied in the study that are instilling technology integration practices in college arts instructors through professional development, ICT knowledge and technical assistance: mediating role of value and ability beliefs. So, in this study independent variable is technology integration practices and dependant variable are professional development, ICT knowledge and technical assistance and mediating role is played by value beliefs and ability beliefs all these variables are interconnected playing crucial role in instilling technology practices. Hence the devised framework for this study is as follows:

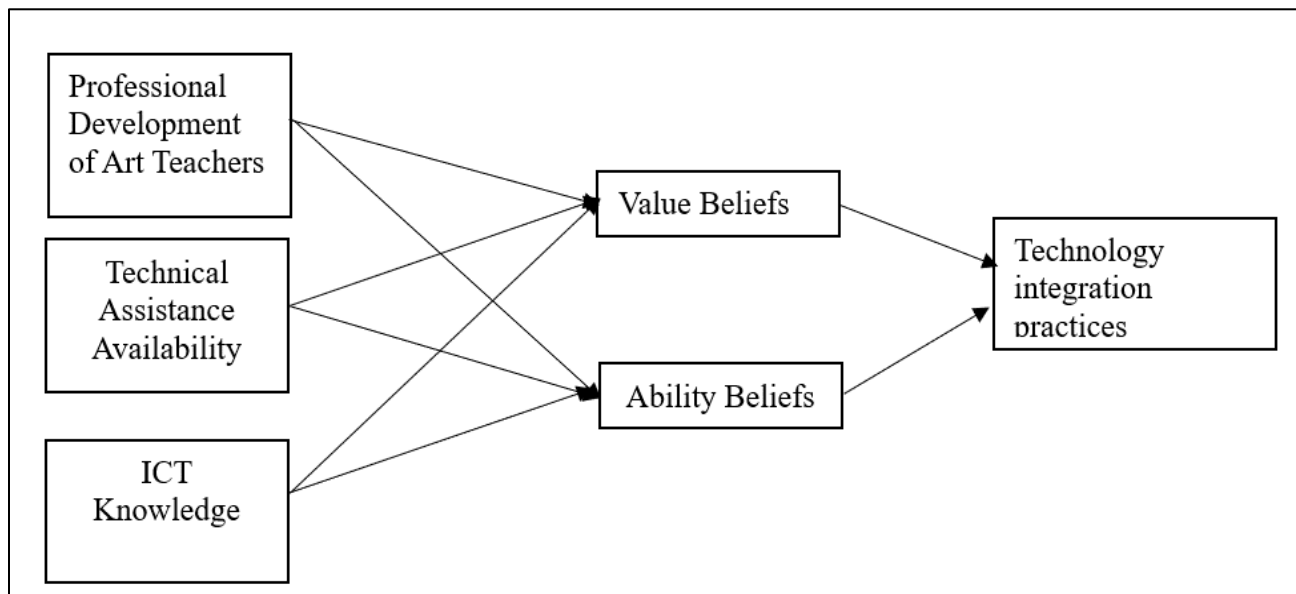


Figure 2: Conceptual Framework
(Source: Author generated)

CONCLUSION

Referencing the previous research, it can be concluded that the professional development improves the technology integration of teachers by equipping them with the crucial knowledge, skills and confidence through which they can effectively incorporate digital tools within their practices of teaching. Through professional development, teachers are engaged in active learning, receives experiences and attain exposure to different technologies which are relevant to their subject areas.

This process not only enhances their technical proficiency but also aligns the usage of technology with educational goals. Technical support should be tailored in a way that the specific needs of teachers are addressed. Moreover, the process of requesting for technical assistance should be made easier and ensure that support should be provided during convenient hours. Institutions can also establish clear communication channels so that teachers can seek help. Integration of technical assistance in daily routine also enhances its effectiveness. Moreover, for the effective application of ICT knowledge there is need of robust support system. The institutions should hire that technical staffs that is expert in both technology and its practical application. The tools get updated with the passage of time so the technical support staff should also be provided with training in order to keep them updated. The conduction of regular evaluations helps in generating feedback that helps in improving the quality of support (Yurtseven Avci et al., 2020). The teachers should be open to ask for assistance through any channel like email or in-person. The more the assistance process is simpler, the more efficient it becomes.

This study will fulfil its prolonged journey to share the reflections, thoughts and viewpoints of art teachers for the innovative upcoming advanced technology. This study has used a radical idea to highlight the role of ICT knowledge, professional development and technical assistance in the technology integration practices of art teachers. The study has shared the art teachers' perspective by highlighting the fact that the art teachers have acquired a reliable piece of robust knowledge in terms of ICT technology that facilitates them with enough understanding to integrate and use new technology for the teaching process. In addition to this, the study will also contribute a significant role of professional development in enhancing the proportion of technology integration practices of art teachers. Along with the theoretical implications, the study will also imply some critical knowledge facts that are vital for the managers, higher authorities, and the teachers of different subjects. This study will imply that its contributions are itself a complete strategy for the education institutes managements who are interested to use technology in their teaching process.

Lastly, this study can be used as an initial guide and a roadmap by future scholars, potential researchers and new authors to empirically analyse the proposed framework, highlight the significance of this conducted effort and extend the current useful contributions for instilling technology integration practices in college of arts instructors through professional development, ICT knowledge, and technical assistance. This study suggests that we need to move beyond

showcasing skills to promoting value beliefs through focused professional development and support. Moving in this direction, education stakeholders can increase technology use but, more importantly, achieve better teaching and learning outcomes by addressing issues related to both technology knowledge and value beliefs.

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