

Management Support and Acceptance of the Implementation of Classroom Technology Integration Among Private School Teachers

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Abstract. This study evaluated the level of support provided to teachers in leadership, instructional practices, technology infrastructure, and professional development, and measured the extent of technology integration in classrooms. It also investigated the correlation between classroom technology integration, management support, and teachers' acceptance of technology. The study employed a quantitative, descriptive analytical approach. Findings indicate that teachers have a positive perception of technology integration, particularly when they receive robust support from school leaders, have access to adequate resources, and possess sufficient technological knowledge. Furthermore, the study reveals a significant relationship between management support and teachers' acceptance of technology integration in the classroom, underscoring the crucial role of administrative support in facilitating technology adoption in education. Based on these results, the study offers recommendations for policymakers, school leaders, and educators to enhance technology integration. Recommendations include developing comprehensive ICT policies, ensuring adequate support and resources for teachers, implementing mentorship and training programs, and fostering a culture of continuous professional development. The study highlights the importance of aligning management support with teachers' acceptance to effectively integrate technology and improve educational outcomes in private secondary schools.

Keywords: Classroom technology integration; Management support; Teacher acceptance; Private secondary schools; Educational technology.

1.0 Introduction

Technology integration has become an essential tool inside the classroom. As 21st-century learners adapt to the new way of learning, methodologies of teaching with ICT integration have also been widely used. It also shows that education has evolved from the traditional way of teaching. Teaching with technology is far way different from the old way of teaching since teachers have to incorporate technology in the class in such a way that the learners will also have to engage also to technology to make learning more possible. Research conducted by Hussain, Iqbal, & Akhtar (2010), determined the effectiveness of technology integration in the classroom towards learners' academic achievement. Allowing learning to have access to electronic whiteboards and software applications like Google Classroom helps learners to learn complex concepts and at the same time experience the world of technology advancement.

The 21st-century learners are so used to digital media, that teachers should also maximize the use of Information Communication Technology (ICT) so that teachers can gain the attention of the learners. These learners are curious by nature, and so teachers must fill in the gaps of their curiosity about concepts with the help of technology. Teachers' proficiency in using technology can deliver quality education and make their learners compete with the global standards of education. Integration of technology in the school relies on support from school Leaders, ICT

equipment availability, instructional materials, and adequate teacher training. Mirzajani et al. (2016) stated that teacher knowledge of ICT facilitates the learning of the learners. Additionally, DepEd has mandated the use of ICT in both public and private schools. It also emphasizes collaborative instruction and assessment processes.

The transition stage of technology-based instruction is crucial for teachers especially since they need to acquire this new skill (Tripple, 2010) to be able to deliver the lessons well to the learners. Due to the pandemic brought by COVID-19 great importance of technology was realized. This research was conducted by the ICT teachers in the divisions of Misamis Oriental and Valencia City. This study aims to widen the understanding of technology integration and acceptance among teachers in the Division of Valencia. Results from this study will provide information to administrators, teachers, and policymakers in guiding them on the crafting of training programs and support systems to facilitate effective technology integration and acceptance in private schools.

2.0 Methodology

2.1 Research Design

This study employed a quantitative research design. The data were collected from the sample in this study to assess their relative opinions and perceptions. This method required not just data collection, tabulation, and computation, but also data analysis and interpretation. Furthermore, the survey approach was utilized to determine management support and teachers' technology acceptance which influenced the implementation of technology integration in the classroom.

2.2 Research Participants

The respondents of this study were 176 private secondary school teachers in the division of Valencia City. To obtain the sample size, the researchers used Cochran's equation and arrived at the recommended sample size of 176 from 321 total population. Proportionate stratified random sampling was employed to get the appropriate number of respondents in every school. Then simple random sampling was applied in every school.

2.3 Research Instrument

The tool utilized in this study was a survey questionnaire which comprises three parts. Respondents' demographic profile was measured in the first part of the questionnaire. On the other hand, the adapted and modified survey questionnaire from Anup Kumar Das's "Survey Questionnaire Technology-Enabled Learning in Educational Institutions" was the second part. This second part of the survey questionnaire aimed to assess the degree of managerial backing on technology integration in the classroom on the aspects of leadership, instructional, technology equipment and facilities, and training. The third part was also an adapted and modified instrument from Ghavifekr and Rosdy's (2015) research on "Teaching and Learning with Technology: Effectiveness of ICT Integration in School". It was used to measure the extent of technology integration in the classroom. The last part was also an adapted and modified instrument from Agrupamento de Escolas de Atougua da Baleia – Portugal "Teacher Questionnaire on the Use of Information and Communication Technology (ICT)". This was used to assess the level of teachers' acceptance of technology.

2.4 Data Gathering Procedure

A letter of request to research the Division of Valencia was sent to the Schools Division Superintendent. Once the letter was approved, the permission letter was sent to the school principals of private secondary schools in the said division. The data was gathered through Google Forms. Although Google Forms were used by the researchers, consent was also provided to them. Their rights as respondents were also stated on the Google form and their act of volunteerism for this research will not have any effect on their performance as teachers. A Google form link was sent to the school heads. They were the ones who forwarded the link to the respondents. They were also given an assurance of the privacy of the data that they would provide.

2.5 Data Analysis

This study used multiple statistical methods to examine correlations between management support, teachers' technology acceptance, and classroom technology integration in private secondary schools. Descriptive statistics were also used to summarize how much management support was available and what the average level of acceptance among teachers was as well as classroom technology integration by providing mean scores and standard deviations for each indicator. Inferential statistics namely correlation analysis were then carried out to

probe these variables' relationships. Pearson correlation coefficients were then performed to determine the strength and direction of the relationships which indicated significant positive relationships between management support with classroom technology integration, as well as teacher's acceptance with management support.

2.6 Ethical Considerations

This research followed ethical guidelines to ensure the safety and confidentiality of the respondents' data. Before data collection, informed consent was obtained from all participants, who were provided with a consent form outlining the study's objectives and their voluntary participation. The researchers modified the survey questionnaires to fit the research context. The acknowledgment and citation of this adjustment were properly made in the research paper. All participants who agreed to participate in this study gave their consent to have their responses used for only scientific purposes without any doubt on how the researcher would protect confidentiality. More so, participants were assisted by guidance that helped them comprehend what was needed from them throughout the process of conducting a survey. This study has adhered to ethical standards and maintained credibility, transparency, and integrity as regards research ethics and conduct.

3.0 Results and Discussion

3.1 The Extent of Management Support in the Implementation of Classroom Technology Integration

In terms of Leadership

Table 1 shows teachers' perception of the extent of management support in the implementation of classroom technology integration in terms of Leadership.

Table 1. Descriptive statistics for management support in the implementation of classroom technology integration in terms of leadership

INDICATORS	MEAN	SD	INTERPRETATION
1. The leadership of the organization is active in participating in the implementation of Technology-Enabled Learning.	3.77	0.935	Large Extent
2. The senior management of the organization routinely evaluates the advancement of Technology-Enabled Learning.	3.63	1.011	Large Extent
3. The senior management of the organization consistently oversees and assesses the advancement of Technology-Enabled Learning.	3.63	1.011	Large Extent
4. The highest leadership within the organization is supportive of enabling faculty and staff to utilize technology for learning to accomplish academic objectives.	3.81	0.982	Large Extent
5. The top leadership of the organization actively encourages and motivates the faculty and staff to work to achieve academic goals..	3.81	0.982	Large Extent
Overall	3.73	0.984	Large Extent
Legend: 3.26 – 4.00 Large Extent 1.76 – 2.50 Small Extent			
2.51 – 3.25 Moderate Extent 1.00 – 1.75 Very Small Extent			

The result in Table 1 shows that support from school leaders is necessary for integrating technology to achieve quality learning experiences. The overall mean of 3.73 (SD-0.984) indicates a large extent of support contributed by the school leaders in integrating technology into the teaching-learning process. The respondents believed the significance of support given by the school leaders and its positive impact on the teaching and learning process. Teachers need more time and preparation for incorporating activities that would improve students' abilities with technology. The support from school leaders would motivate the teachers, thus tirelessly improving the quality of education through technological integration. On the other hand, table 2 shows teachers' perception of the extent of management support in the implementation of classroom technology integration in terms of Instruction

In terms of Instruction

Table 2. Descriptive statistics for management support in the implementation of classroom technology integration in terms of instruction

INDICATORS	MEAN	SD	INTERPRETATION
1. A comprehensive Technology-Enabled Learning curriculum is thoroughly documented.	3.53	1.019	Large Extent
2. The Vision and Mission of the Technology-Enabled Learning program are harmonized with the organization's overarching mission.	3.70	1.016	Large Extent
3. The Vision and Mission of the Technology-Enabled Learning program are widely comprehended throughout the organization.	3.73	1.010	Large Extent
4. Institutional leaders are dedicated to leveraging technology to accomplish key academic objectives.	3.82	0.914	Large Extent
Overall	3.70	0.990	Large Extent

Table 2 presents the mean and standard deviation of management support levels regarding classroom technology integration, specifically focusing on Instruction. It has an overall mean of 3.70 (SD=0.990) which belongs to the range of Large Extent. The level of management support shows the success of technology integration in the classroom. Teachers may possess the necessary tools and training to integrate technology into their lessons only if they receive support from the district's leadership and school administration.

In terms of Technology Equipment and Facilities

Table 3 shows teachers' perceptions on the extent of management support in the implementation of classroom technology integration in terms of technology equipment and facilities.

Table 3. Descriptive statistics for management support in the implementation of classroom technology integration in terms of technology equipment and facilities

INDICATORS	MEAN	SD	INTERPRETATION
1. Sufficient hardware infrastructure is available for teaching and learning purposes, including student and learner access to computers.	3.31	0.935	Large Extent
2. Adequate online and offline applications and software are always accessible for teaching and learning needs. It includes the availability of the appropriate software, intranet access, and a Learning Management System.	3.32	1.011	Large Extent
3. The organization acquires adequate networking infrastructure that ensures sufficient access to bandwidth for its operations.	3.27	1.011	Large Extent
4. Robust policies and procedures are in place to safeguard privacy and organizational data, providing adequate protection for sensitive information.	3.52	0.982	Large Extent
Overall	3.36	0.982	Large Extent

The findings in Table 3 show the overall mean of 3.36 (SD=0.982), which is described as a Large Extent. Providing adequate resources like technology funds, infrastructure and equipment, regular maintenance, and technical support, should be part of management support. Teachers' preparation is essential in the fulfillment of the goal of technology integration in the classroom instructions. This would not be possible without access to equipment and facilities. Fortunately, the private schools are doing their best to provide the needed equipment and facilities, as shown in the table above. Lack of computers, poor internet connectivity, printer and computer malfunctions, computer virus attacks, and other difficulties were identified as major barriers to technology integration (Pelila et al., 2022). This is also supported by the studies of (Dela Rosa, 2016; Ghavifekr & Rosdy, 2015; Noori, 2019) that schools with a lack of computers, printers, and other learning and teaching tools is one of the major issues.

In terms of Training

Table 4 shows teachers' perceptions on the extent of management support in the implementation of classroom technology integration in terms of training.

Table 4. Descriptive statistics for management support in the implementation of classroom technology integration in terms of training

INDICATORS	MEAN	SD	INTERPRETATION
1. Faculty members possess qualifications and receive training to effectively utilize technology for teaching and learning.	3.61	1.031	Large Extent
2. To keep faculty and staff updated on technological advancements, they are provided with regular training.	3.30	1.088	Large Extent
3. To provide support for Technology-Enabled Learning initiatives, sufficient staff members are available.	3.30	1.123	Large Extent
4. A structured framework was established by the organization to create teams who are responsible for content development and delivery of Technology-Enabled Learning	3.34	1.052	Large Extent
5. Faculty members have adequate confidence in the support provided by instructional designers and technology support staff during the development and delivery of courses.	3.39	1.106	Large Extent
6. The IT staff members are highly skilled and they receive ongoing training to provide necessary support effectively.	3.58	1.108	Large Extent
Overall	3.42	1.084	Large Extent

Table 4 illustrates the level of management support regarding classroom technology integration, particularly in training, with an overall mean of 3.42 (SD=1.084). It belongs to the range of Large Extent. Effective use of technology in the classroom is effective if teachers have enough knowledge of the use of technology equipment. Pelila et al. (2022) underscored the importance of enhancing digital pedagogies, implementing policies to foster digital literacy, revising school curricula, and conducting more ICT development training sessions and seminars

to facilitate technology integration in classrooms. Technology plays a vital role in the classroom. Its use is no longer optional, rather, it is a requirement to unlock possibilities of ineffective teaching and learning processes. Training emerges as an essential in technology integration in the classroom. Teachers' knowledge is an essential element in integrating well technology in class discussions. Their comfort in using it comes from, training, seminars, and workshops. Their computer skills, capabilities, and attitudes required in using ICT come from the knowledge that teachers gain from their training. (Singhavi & Basargekar, 2019).

3.2 The Extent of Classroom Technology Integration of Private School Teachers

Table 5 shows teachers' perceptions of the extent of the classroom technology integration of private school teachers.

Table 5. Descriptive statistics for classroom technology integration of private school teachers

INDICATORS	MEAN	SD	INTERPRETATION
1. I feel optimistic about acquiring new technology skills.	3.56	0.541	Large Extent
2. I find it more convenient to use ICT in teaching.	3.52	0.565	Large Extent
3. I know that ICT offers a lot of potential opportunities for more efficient teaching and learning.	3.64	0.515	Large Extent
4. I think that teaching with the use of ICT can make learning more effective.	3.65	0.512	Large Extent
5. I think that using ICT aids in the improvement of teaching with more updated materials.	3.65	0.512	Large Extent
6. I think that using ICT leads to a more developed quality of teaching.	3.60	0.546	Large Extent
7. I think that using ICT helps prepare efficient teaching resources and materials.	3.65	0.512	Large Extent
8. I think that using ICT allows students to be more dynamic and involved in the lesson.	3.59	0.548	Large Extent
9. I think that using ICT gives me more time to address my students' needs.	3.35	0.641	Large Extent
10. I am still capable of teaching effectively even without ICT.	3.21	0.722	Moderate Extent
Overall Mean	3.54	0.561	Large Extent

Table 5 shows that the respondents had a large extent in classroom technology integration, as indicated by the overall mean of 3.54 (SD=0.561). This means that respondents are more engaged in technology integration in their classrooms. They must know how to use ICT in promoting higher-order thinking skills in all subject areas. This requires extensive and ongoing exposure to ICTs to evaluate and select the most appropriate resources to be integrated into every topic. If teachers integrate well ICTs in their classes, they have the great possibility of developing globally competitive students.

3.3 The Extent of Acceptance on Classroom Technology Integration of Private School Teachers

Table 6. Descriptive statistics for acceptance on classroom technology integration of private school teachers

INDICATORS	MEAN	SD	INTERPRETATION
1. I utilize online browsing and searching to gather pertinent information in preparation for my lessons.	3.53	0.622	Very High Acceptance
2. I utilize internet browsing and searching to gather articles, as well as video and audio clips, for incorporation into my lessons.	3.54	0.649	Very High Acceptance
3. I create my lesson presentation using Canva, Keynote, and others.	3.30	0.704	Very High Acceptance
4. I consistently make my digital learning materials for my students.	2.82	0.798	High Acceptance
5. I assess and evaluate students using a variety of activities such as (Kahoot, Notability, Popplet, etc.)	2.74	0.907	High Acceptance
6. I post homework on Google Classroom and other social networking platforms.	2.49	0.974	Low Acceptance
7. I require my students to submit their assignments through email or other networking platforms.	2.51	1.008	High Acceptance
8. I evaluate my students' progress and/or provide feedback via email and other social networking sites.	2.24	0.968	Low Acceptance
9. I carefully select digital learning resources (graphics images, video/audio clips, slides, animations, etc.) in the subject that I teach.	3.13	0.873	High Acceptance
10. I communicate online (Messenger, Skype, Viber, etc.) with parents to raise concerns about their child's performance in my class and/or in school.	3.12	0.870	High Acceptance
11. I download/browse materials from educational websites and platforms.	3.31	0.770	Very High Acceptance
12. I extend my classroom activities using social networking sites like Facebook, Twitter, Instagram, and others.	2.61	0.950	High Acceptance
13. I allow my students to use their smartphones to access topics discussed in class.	2.76	0.975	Low Acceptance
14. To reinforce my lesson, I use audio and video clips..	3.07	0.842	High Acceptance

15. To allow my students to post their journal entries, reflections, and journals, I require them to make a Blog account (Blogger, Tumblr, Pinterest).	2.28	1.014	Low Acceptance
Overall	2.90	0.862	High Acceptance

Table 6 shows that the overall mean is 2.90 (SD=0.862). It indicates a high level of acceptance of classroom technology integration among the respondents. Technology acceptance is very great importance to teachers, especially in the teaching-learning process. This claim is confirmed by Andoh's (2012) research, in which he states that the positive attitude of teachers towards the use of technology plays a large role in the success of its integration in the class.

3.4 Relationship between Classroom Technology Integration and Management Support

Table 7 shows the correlation result between the extent of classroom technology integration on management support.

Table 7. Correlation analysis between classroom technology integration and management support

INDICATORS	r-value	p-value	DESCRIPTION
Leadership	0.226**	.003	Significant
Instruction	0.201**	.007	Significant
Technology equipment and facilities	0.192*	.011	Significant
Training	0.285**	.000	Significant

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

The data in Table 7 revealed a significant correlation between classroom technology integration and management support. The null hypothesis then is rejected. This indicates that increased support from higher management enhances the probability of teachers integrating technology into their classrooms. This is supported by Chiu's (2022) study revealing that teachers' motivation to integrate technology in the classroom, leadership, and peer support is essential. Meanwhile, table 8 shows the correlation result between the level of teachers' acceptance and management support.

3.5 Relationship between Acceptance of Classroom Technology Integration and Management Support

Table 8. Correlation analysis between acceptance of classroom technology integration and management support

INDICATORS	r-value	p-value	DESCRIPTION
Leadership	0.424**	.000	Significant
Instruction	0.407**	.000	Significant
Technology equipment and facilities	0.342**	.000	Significant
Training	0.400**	.000	Significant

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

The data in Table 8 revealed that there is a significant relationship between classroom technology integration and management support with a p-value of .000. The null hypothesis, is therefore rejected. It implies that higher levels of support from management are associated with greater acceptance of technology integration among teachers. These findings were supported by the research conducted by Mirzajani et al. (2015), which underscored the essence of leadership support, sufficient knowledge of the teachers in using ICT in their classroom, and maximizing its use to make lessons more enjoyable. Further, the study highlighted the influence of technical support and quality equipment availability in the school. The support that the teachers gain will enable them to have sufficient courage to accept the implementation of the use of ICT.

3.6 Relationship between Classroom Technology Integration and Acceptance

Table 9 shows the correlation result between the extent of classroom technology integration and level of acceptance among teachers. The data in Table 9 revealed a significant relationship between classroom technology integration and the level of acceptance among private school teachers. The null hypothesis was rejected. This finding is connected with research conducted by Fathema et al. (2015), regarding the extension of the technology acceptance model to measure how teachers use learning management systems the use of structural equation modeling

showed a positive correlation between teachers' perception of the ease of use on technology and attitudes toward it.. Similarly, Hero (2020) observed a significant correlation between teachers' preparedness and acceptance of ICT integration and their actual ICT integration practices.

Table 8. Correlation analysis between the extent of classroom technology integration and level of acceptance

INDICATORS	r-value	p-value	DESCRIPTION
Test of the relationship between the extent of classroom technology integration and level of acceptance among private school teachers	.379**	.000	Significant
**Correlation is significant at the 0.01 level (2-tailed).			
*Correlation is significant at the 0.05 level (2-tailed).			

4.0 Conclusion

The study's findings showed that the private school teachers in Valencia City had positive attitudes toward incorporating technology integration into their classrooms. This result is based from the guidance and support that teachers receive from their school leaders, access to all technology resources, and the opportunities they receive for professional development. The study's theoretical framework helped in understanding the level of acceptance of technology integration. It indicates that teachers are more inclined to embrace technology when they see it as beneficial in developing the job performance of the teachers and in delivering quality education to students. Moreover, this study underscored the impact of management support and teachers' acceptance on the success of technology integration incorporated by teachers in the classroom. These findings underscore that the linkages of teachers and leaders are essential especially since teachers need the support and the school leaders for them to have the confidence to promote the positive effect of technology on learners' outcomes. Additionally, the study also highlights that teachers need to have sufficient knowledge on handling the use of technology in the classroom to maximize its use, especially on the applications and software that are essential in delivering the class discussion.

5.0 Contributions of Authors

The authors affirm that each section received equal input from all contributors, and collectively reviewed and endorsed the final manuscript.

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7.0 Conflict of Interests

The authors have no conflicts of interest regarding the publication of this paper.

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