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Research Article

Information and Communications Technology Retooling Program: Optimizing Teachers' Competency

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ABSTRACT

The main purpose of this study is to evaluate the ICT retooling program for teachers and its influence on their competency and performance. A research-made questionnaire was distributed to 260 Junior High School teachers in Bulacan District II, including Baliwag, Bustos, and Plaridel. Additionally, School Principals, Master Teachers, Head Teachers, and Education Program Supervisors in Bulacan were evaluated using a modified research questionnaire.

The findings revealed that teachers viewed the ICT Retooling Program positively, noting its encouragement of participation and diverse perspectives rather than a sole focus on technical skills. However, this led to relatively low post-program enthusiasm for educational innovation. Teachers rated themselves competent in ICT, excelling in knowledge creation, deepening, and acquisition dimensions, and demonstrated proficiency in utilizing ICT for teaching and learning, particularly in positive ICT use criteria. The study concluded that a balance between soft skills development (confidence, assertiveness, networking) and technical skills is necessary to foster innovation in education. Continuous professional development in ICT is crucial for translating policy directives into classroom actions and creating inclusive learning environments.

Recommendations include conducting a needs assessment to identify areas for improvement in teachers' ICT skills and aligning ICT retooling programs with broader school improvement goals. These recommendations should be integrated into the school improvement plan for increased effectiveness. A long-term sustainability plan, including continuous professional development and technology integration, is essential. Financial aid for graduate degree programs should be provided to sustain teacher competency. Lastly, the Sobel Test is recommended to measure the significance of the teachers' ICT Competency Framework (CFT) and PPST results in the ICT retooling program.

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Introduction

Schools employ a range of Information and Communication Technology (ICT) tools to communicate, generate, transfer, save, and manage information. To communicate, create, transmit, save, and manage information, schools use a variety of ICT tools with schools employ a range of ICT tools to communicate, generate, transfer, save, and manage information. These methods can promote higher-order thinking skills, offer unique and creative ways for students and teachers to express their understandings, and leave them better equipped to deal with the rapid technological change that is occurring in both society and the workplace when teachers are digitally literate and trained to use ICT.

The successful integration of ICT into the learning environment will depend on the ability of teachers to innovate, strategize learning in new ways, merge technology appropriately with a pedagogy, develop socially active classrooms, and encourage cooperative interaction, collaborative learning, and group work (UNESCO ICT Competency Framework for Teachers, 2022).

According to the article in Knowing Tech, 2019, ICT has become an integral part of education, changing the way educators teach and students learn. The integration of ICT in education has been driven by the need to keep up with the rapidly changing technological landscape and to provide learners with the necessary skills to thrive in the 21st century.

ICT encompasses a wide range of technologies and tools, including computers, the internet, mobile devices, educational software, and digital media. These tools have transformed the traditional classroom into a more dynamic, interactive, and engaging learning environment. Students can access a wealth of educational resources online, collaborate with peers on projects and assignments, and receive personalized instruction that is tailored to their individual learning needs (Tierney, 2019). ICT has also enabled educators to develop new teaching strategies that are more effective and efficient. For example, online learning platforms allow teachers to create and deliver interactive lessons that can be accessed anytime and anywhere, while learning analytics tools help them track student progress and identify areas where additional support may be needed (Arias, 2017).

Teachers who effectively integrate information and communication technology (ICT) into their instruction can positively impact student learning outcomes. The PPST also emphasizes the importance of utilizing teaching and learning resources that include ICT. Using ICT resources such as multimedia presentations, interactive learning materials, and online platforms can enhance student engagement and improve learning experiences. The PPST recognizes the value of integrating ICT in teaching and learning and highlights the importance of using appropriate resources to support student learning (Llego, 2018).

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) stressed in a document from 2018 that the integration of information and communication technologies (ICT) into teaching and learning has become increasingly important in today's digital age. As a result, teachers must have the necessary competencies to use ICT to enhance and transform learning. The UNESCO ICT Competency Framework for Teachers (ICT-CFT) is a comprehensive tool designed to help countries develop policies and standards for teacher ICT competency as well as integrate them into their overall ICT education plans. The ICT-CFT covers six major education focus areas across three phases of knowledge acquisition, including understanding ICT in education, curriculum and assessment, pedagogy, application of digital skills, organization and administration, and teacher professional learning. With the rapid evolution of new technologies and digital services available to educators, UNESCO and its partners are currently developing the third version of the ICT-CFT. This updated

publication emphasized the competencies required for teachers to effectively use these new technologies and services for teaching and learning. UNESCO, through its Education for All program, has developed the UNESCO ICT-Competence Framework for Teachers, which outlines the competencies necessary for teachers to effectively integrate Information and Communication Technologies (ICTs) into their professional practice. The framework defines the required competencies as the intersection of three approaches to teaching and six aspects of a teacher's work. The UNESCO ICT-CFT not only enables surveys to compare teachers' competencies across countries but also allows for the development of educational programs and training courses for teacher professional development at national or regional levels. As teachers and their continuous professional development play a critical role in the achievement of quality education and sustainable development, the UNESCO ICT-CFT has the potential to be a powerful framework for educational reform.

In accordance with an article released by the Department of Education (DepEd) in 2022, through the Information and Communications Technology Service (ICTS), reported the milestones of its Digital Rise Program during the 2022 World Book and Copyright Day Celebration. This program is part of the DepEd's commitment to addressing the challenges in digital learning and education technology.

The Philippine Department of Education has policies regarding the use of ICT. These are as follows: technology must be studied as a separate subject before being applied in other aspects of education as a tool for learning how to learn; the application of computer skills to other learning areas is a curriculum policy that stems from the principle that education should not be textbook-driven and educational processes should take advantage of technological developments, including the use of information and communication technologies in instruction and learning, where suitable; and the application of computer skills to other learning areas is a curriculum policy that stems from the principle that teaching-learning (Julian, 2017).

ICT is being used to support and enhance the teaching and learning process. One way in which ICT is being used is through teacher retooling programs that provide educators with the skills and knowledge necessary to use these technologies effectively in the classroom (Sanjay, 2022). The Philippines is one such country that is implementing ICT-based teacher retooling programs. The Department of Education (DepEd) has launched several initiatives to promote the use of ICT in education, including the ICT in Education Program (IEP) and the ICT-Enhanced Learning (IEL) Program (Bonifacio, 2018). Under the IEP, DepEd is providing teachers with training on how to use ICT in the classroom, as well as access to ICT resources and materials. The IEL Program, on the other hand, is focused on integrating ICT into the curriculum and providing teachers with the skills and knowledge necessary to effectively use ICT in teaching and learning (Suyunov, 2022).

Based on these challenges and opportunities, further research may be needed to explore effective strategies for addressing the challenges and maximizing the benefits of ICT integration in education, as well as the role of teacher competencies in this process.

The objective sought to come up with a set of recommendations on how the program can be improved. The ICT Retooling Program was implemented by the Department of Education to improve the delivery of education services by equipping teachers with the necessary skills and knowledge in using Information and Communication Technology (ICT).

Statement of the Problem

The general problem of the study is: "How may the ICT retooling program for teachers be assessed to determine how the program influences the ICT teachers' competency and performance of the teachers?"

Specifically, the study sought answers to the following questions:

1. How may the ICT retooling program of the respondents be described in terms of:
   1.1 engagement;
   1.2 recruitment and onboarding;
   1.3 training, upskilling and support; and
   1.4 post-programme?
2. How may the level of ICT Competency Framework of teachers be described in terms of:

2.1. knowledge acquisition;
2.2 knowledge deepening; and
2.3 knowledge creation?

3. How may the quality of teachers in ICT competencies of teachers based on Philippine Professional Standards for Teachers (PPST) be described in terms of:
   3.1 positive use of ICT; and
   3.2 teaching and learning resources, including ICT?
4. Does the ICT retooling program significantly intervene in the influence of the ICT competency framework on the ICT competencies of teachers based on PPST?
5. What professional development plan may be proposed to improve the ICT competency of teachers?

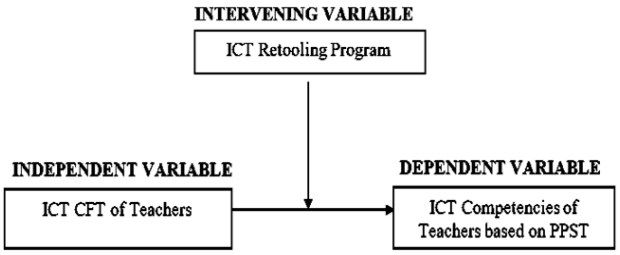

Figure 1. Research Paradigm of the Study

In summary, the conceptual framework for the ICT Competency Framework for Teachers involved three key independent variables: knowledge acquisition, knowledge deepening, and knowledge creation, as well as two additional variables related to the positive use of ICT and the availability of teaching and learning resources, including ICT. By understanding the key components of this framework, educators could work towards developing their own ICT competencies and contribute to the continued growth and innovation in the field of education.

Methods

Methods and Techniques of the Study

The study sought to determine the level of the ICT Retooling Program of the Department, the ICT competencies of teachers based on PPST, and the ICT CFT of the teachers. The study mainly utilized a quantitative research design known as mediation analysis. Mediation analysis was a method used to quantify the causal sequence by which an independent (predictor) variable caused an intervening (mediating) variable that caused a dependent (outcome) variable. In addition, mediation analysis was used to understand a known relationship by exploring the underlying mechanism or process by which one variable (say, X) influenced another variable (say, Y) through a mediator variable (say, M).

Population and Sample of the Study

The population of the study was composed of all the public secondary teachers of the SDO Bulacan, District II (EDDIS II), such as Baliwag City, Bustos, and Plaridel, who were working in the public schools during the school year 2023-2024. The Roasoft.com Sample Size Calculator was used to determine the number of teacher-respondents involved in the study at a 95% level of significance. An actual sample size of 260 was utilized from the total population of 790 and proportionally allocated among target teachers in the Division of Bulacan, District II, who were chosen through purposive sampling.

Research Instrument

This study utilized questionnaires as the basic tool for gathering data. The questionnaires were used to gather data on the respondents' background information, their level of ICT knowledge and skills, and their perceptions of the ICT retooling program.

In this study, the instrument adopted for assessing the ICT Retooling Program for teachers was the ICT competencies based on Philippine Professional Standard for Teachers (PPST). The PPST was adopted by the Department of Education (DepEd) and the school principal, who were the authorized bodies responsible for implementing and overseeing educational standards in the Philippines.

Data Gathering Procedure

Upon approval of the title, which was the Information and Communications Technology Retooling Program: Optimizing Teachers' Competency, the researchers developed a questionnaire using a 4 Likert scale to determine the respondents' level of agreement or disagreement with various statements.

Data Processing and Statistical Treatment

After the collection and gathering of the data was encoded into computer software, which was Microsoft Excel, tallying the data and frequency percentage distribution were utilized in the study. The results determined the statement of the problem. The results were based on the questionnaire, as it measured whether the factors mentioned or the marketing mix had a significant effect, as stated in the issue. The researcher utilized the following statistical treatment to interpret the data of the study effectively.

Weighted Mean. It was used to determine the ICT Retooling Program for Teachers: inputs to School Improvement Plan. Regression. To analyze the mediation, the following steps were considered: conducted a simple regression analysis with the independent variable predicting the dependent variable to test for path c; conducted a simple regression analysis with the independent variable predicting the intervening variable to test for path a; conducted a regression analysis with the intervening variable predicting the dependent variable, controlling for the independent variable to test the significance of path b; and conducted a regression analysis with the independent variable predicting the dependent variable, controlling for the intervening variable to test the significance of path c'. Once the standardized coefficient for the indirect effect was calculated, it needed to be tested for significance (Note: The significance of the indirect effect was considered/calculated shortly via Sobel test and Bootstrapping). The four-step strategy outlined above was common among researchers. Sobel Test and Bootstrapping. Both of these statistical techniques were considered in determining the mediation model's indirect effect's significance. Kolmogorov-Smirnov/ Shapiro-Wilk. These statistical approaches have been applied to determine the normality of the data distribution.

Results and Discussions

Part I. Teacher respondents described the ICT Retooling Program in terms of Engagement, Recruitment and Onboarding, Training, Upskilling, and Support and Post-Programme.

The findings are from a survey conducted among teachers regarding their engagement with an ICT Retooling Program. Overall, the results indicate a strong level of engagement among the respondents in various aspects of the program.

The survey indicates a strong level of engagement (mean = 3.34, standard deviation = 0.73) among teachers with the ICT Retooling Program. This suggests a high level of commitment among teachers to participate in the program and bring diverse perspectives and experiences to the learning community. The program received a strong rating (mean = 3.34, standard deviation = 0.73) in terms of recruitment and onboarding processes. Teachers are committed to ensuring participation in technical skills pre-assessment and attracting a diverse group of educators to enrich the learning community. The program scored strongly (mean = 3.30, standard deviation = 0.73) in terms of training, upskilling, and support. It ensures technical training, coaching, access to resources, and enhances teachers' effectiveness in utilizing ICT tools in teaching. The post-program engagement received a strong rating (mean = 3.31, standard deviation = 0.74) among respondents. Teachers continued to use digital tools in their lessons and felt better equipped to deal with the changing field of education technology, aligning with the program's focus on encouraging active student engagement and knowledge generation.

Overall, the findings suggest that the ICT Retooling Program effectively engages teachers and provides them with the necessary support and resources to integrate ICT tools into their teaching practices, leading to sustained usage and positive outcomes in the classroom.

Part III. The level of ICT Competency Framework of teachers in terms of knowledge acquisition, knowledge deepening and knowledge creation.

The survey results indicate that teacher-respondents demonstrate a competent level of proficiency in the ICT Competency Framework (ICT CF) across various parameters:

The mean score for knowledge acquisition is 3.37, interpreted as competent. This suggests that, on average, teachers possess satisfactory levels of knowledge acquisition according to the criteria outlined in the ICT CF. The standard deviation of 0.76 indicates moderate variability in individual scores around the mean. The mean score for knowledge deepening is 3.30, also interpreted as competent. Teachers effectively communicate advantages of ICT roles in local governments, incorporate sophisticated ideas from the ICT CF into instruction, and experience significant expansion in understanding ICT CF through collaboration. Participation in the ICT program enhances knowledge and skills in ICT, facilitating practical application in classrooms. The mean score for knowledge creation is 3.35, interpreted as competent. Teachers integrate technology into classrooms to enhance student preparation for the future. Utilizing applications, internet resources, and designing rubrics, teachers ensure engaging lessons and effective student learning with technology.

Overall, the results indicate that teacher-respondents possess a competent level of proficiency in knowledge acquisition, deepening, and creation within the ICT CF, highlighting their ability to effectively integrate technology into teaching practices to enhance student learning outcomes and prepare them for the future.

Part II. Teacher-raters described the quality of teachers-respondents in ICT Competencies of Teachers based on PPST in terms of positive use of ICT, and teaching and learning resources, including ICT.

For the parameter *positive use of ICT*, based on the topmost indicators, based on the raters, teacher-respondents show skills in using ICT to facilitate the teaching and learning process [Item 1] (M = 3.45, SD = 0.61). This suggests that the quality of teachers in ICT competencies of teachers based in PPST seems to be consistently characterized by an experienced level when it comes to positive use of ICT and utilizing teaching and learning resources, including ICT tools. The mean scores of 3.43 and 3.45, respectively, fall within this range, indicating that teachers, on average, exhibit a level of competence and familiarity with incorporating ICT into their teaching practices.

The quality of teachers in ICT competencies of teachers based on PPST of the teacher-raters. From the overall mean scores, the parameters *teaching and learning resources including ICT* (*Mean* = 3.45, *Standard Deviation* = 0.57 with the descriptive interpretation of experienced. The relatively low standard deviations (0.59 and 0.57) suggest that there's less variability among teachers in these areas, further supporting the notion that the majority demonstrate a consistent level of experience and proficiency with ICT integration in their teaching.

Part IV. The ICT retooling program significantly intervenes in the influence of the ICT competency framework on the ICT Competencies of Teachers based on PPST.

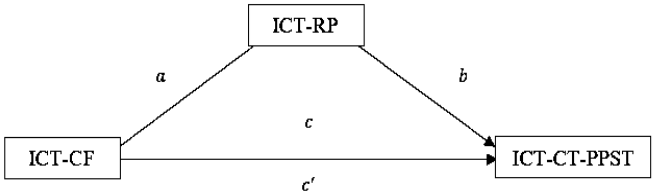

Figure 2. Mediation Model

Note:
ICT Competency Framework (ICT-CF) is the independent variable.
ICT Retooling Program (ICT-RP) is the intervening variable.
ICT Competencies of Teachers based on Philippine Professional Standard for Teachers (ICT-CT-PPST) is the dependent variable.

The path c represents the relationship between ICT-CF and ICT-CT-PPST (total effect).
The path a represents the relationship between ICT-CF and ICT-RP.
The path b represents the relationship between ICT-RP and ICT-CT-PPST when controlling for ICT-CF.
The path c' represents the relationship between ICT-CF and ICT-CT-PPST when controlling for ICT-RP (direct effect).
The indirect effect of ICT-CF on ICT-CT-PPST through ICT-RP is the product of $a \times b$.
The total effect is the sum of the direct and indirect effects ($c = c' + a \times b$)

Mediation Analysis by Baron & Kenny Steps (1986)

To analyze the mediation, the following steps were considered: conducted a simple regression analysis with the independent variable predicting the dependent variable to test for path c; conducted a simple regression analysis with the independent variable predicting the intervening variable to test for path a; conducted a regression analysis with the intervening variable predicting the dependent variable, controlling for the independent variable to test the significance of path b; and conducted a regression analysis with the independent variable predicting the dependent variable, controlling the intervening variable to test the significance of path c'. Once the regression coefficient for the indirect effect was calculated, it needed to be tested for significance (Note: The significance of the indirect effect was considered/calculated shortly via Sobel test). The general method that many researchers employed was the four-step process described above. But there could be an issue with this strategy. One issue is that researchers did not ever really test the significance of the indirect pathway—that the independent variable affects the dependent variable through the compound pathway of a and b.

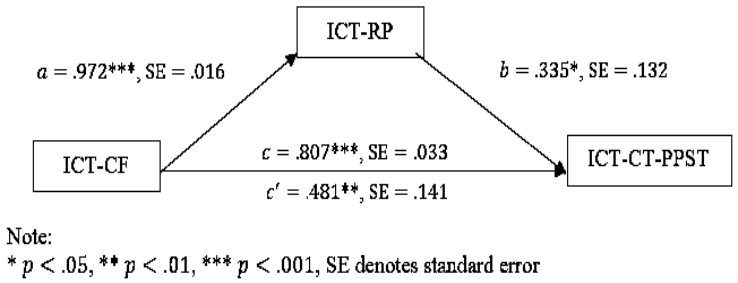

Figure 3. Mediation effect of ICT-RP on ICT-CF and ICT-CT-PPST

From Figure 3, through path c, the total effect of the independent variable ICT-CF on the dependent variable ICT-CT-PPST implies a significant path ($c = .807, p < .001$). Similarly, through path a, the independent variable ICT-CF indicates a significant path on the intervening variable ICT-RP ($a = .972, p < .001$). Through path b, i.e., after controlling for the effect of the independent variable ICT-CF on the consequence of the intervening variable ICT-RP on the dependent variable ICT-CT-PPST, it points toward a significant path ($b = .335, p < .05$). Furthermore, looking on path c', i.e., after controlling for the effect of the intervening variable ICT-RP on the consequence of the independent variable ICT-CF on the dependent variable ICT-CT-PPST, it indicates a significant path ($c' = .481, p < .01$).

Similarly, it can also be observed that $c = c' + a \times b$, i.e., $.807 = .481 + (.972 \times .335)$. That is to say, for the independent variable ICT-CF to the dependent variable ICT-CT-PPST, the total effect is $.807 = .481 + (.972 \times .335)$. In this situation, there is an unanalyzed component (indirect effect), from the independent variable ICT-CF to the intervening variable ICT-RP to the dependent variable ICT-CT-PPST, whose size equals $.972 \times .335 = .326$. ICT-CF *could* indirectly affect ICT-CT-PPST if ICT-CF

causes changes in ICT-RP, which in turn causes changes in ICT-CT-PPST. But then, we do not know the nature of the causal relationship between ICT-CF and ICT-RP, so this component must and essentially remain unanalyzed. Note that making ICT-CF a cause of ICT-RP in our mediation model somewhat increased the direct effect coefficient for ICT-CF on ICT-CT-PPST by .326 to produce a total effect of .807.

To calculate the significance of the indirect effect using Sobel test, note that this test assumes that the sampling distribution for $a \times b$ is a normal distribution at 95% confidence interval (two-tailed).

$$z = \frac{a \times b}{se_{ab}}$$

where

z denotes z-value

$$se_{ab} = \sqrt{a^2 se_b{}^2 + b^2 se_a{}^2 + se_a{}^2 se_b{}^2}$$

a denotes path a

b denotes path b

se_{ab} denotes the standard error of $a \times b$

se_a denotes the standard error of a

se_b denotes the standard error of b

Since $a \times b = .326$ and $se_{ab} = .128$, this gives a z-value of 2.547. Also, using MS Excel for Standard Normal Distribution, a.k.a. z-distribution (i.e., = 2 *Norm.S.Dist (− x, TRUE) where x is the z-value/statistic), the researcher can convert the obtained z-value into p-value (two-tailed). Thus, a z-value $= 2.547$ is convertible into a p-value $= .011$. This represents that the indirect effect $a \times b$ is significant at $\alpha = .05$ (assuming a normal distribution).

However, upon checking the normality of the distributions, all data do not follow a normal distribution via Kolmogorov-Smirnov and Shapiro-Wilk

The results ($p < .001$) show enough evidence to reject null hypothesis that concludes that the data do not follow a normal distribution. This further suggests the researcher to use another test such as Bootstrapping to assess the significance of the indirect effect $a \times b$. Using SPSS Process Macro, the results for Table 12 was obtained.

Table 11. Test of Normality for the Distribution of ICT-CF, ICT-RP and ICT-CT-PPST

Variables	Kolmogorov-Smirnov		Shapiro-Wilk	
	Df	Sig.	Df	Sig.
ICT-CF	260	.000	260	.000
ICT-RP	260	.000	260	.000
ICT-PPST	260	.000	260	.000

Note: *Sig.* denotes Significance level, *df* denotes Degree of Freedom (= N)

From Table 11, the results ($p < .001$) show enough evidence to reject null hypothesis that concludes that the data do not follow a normal distribution. This further suggests the researcher to use another test such as Bootstrapping to assess the significance of the indirect effect $a \times b$. Using SPSS Process Macro, the results for Table 12 was obtained.

Table 12. Completely Standardized Indirect Effect of ICT-CF on ICT-CT-PPST

Mediator	Indirect Effect	BootSE	BootLLCI	BootULCI
ICT-RP	.326	.173	–.016	.661

Note: BootSE denotes bootstrap standard error, BootLLCI denotes bootstrap lower limit confidence interval, BootULCI denotes bootstrap upper limit confidence interval, with 95% confidence interval.

From the Table 12, the confidence interval for the indirect effect $a \times b = .326$, and has a standard error (BootSE $= .173$) appears to include zero (i.e., the interval ranges from $-.016$ to to .661, and so it does include zero). That is to say, even the indirect effect $a \times b = .326$ is 95% likely to range in between the interval $-.016$ to to .661, still, zero (basically, no mediation) does happen between the interval's lowest and upper limits. Thus, the researcher have enough evidence to claim that the indirect effect $a \times b$ is *not* statistically significant at $\alpha = .05$ via bootstrapping method.

The researcher had contrasting results. On $\alpha = .05$, based on Sobel test, a more traditional method of assessing significance of indirect effects which assumes normal distribution, the researcher got statistically significant indirect effect $a \times b$. *However*, upon conducting normality test, the researchers confirmed that the data do not follow a normal distribution. Alternatively, upon using another method, i.e., based on bootstrapping method, the indirect effect $a \times b$ is *not* statistically significant. On the issue of normality, it is quite dependable to use the bootstrapping method.

And since the total effect of the independent variable ICT-CF on the dependent variable ICT-CT-PPST is reported to be significant (see Figure 3), in addition to acknowledging data do not follow a normal distribution, this indicates that ICT-RP is not a significant [partial] mediator on the relationship between ICT-CF and ICT-CT-PPST.

Part V. The proposed professional development plan to improve the ICT competency of Teachers.

The proposed professional development plan to improve the ICT competency of Teachers. Proposed professional development plan to improve the ICT competency of Teachers lay in recognizing the pivotal role of educators in preparing students for the demands of the digital age. The researcher proposed a School Learning Action Plan (SLAP). The school learning action plan outlined key steps, such as implementing regular communication channels, providing professional development opportunities, and enhancing workplace culture. The researchers proposed an action plan to strengthen teachers' ICT competencies continuously. The school learning action plan would help our school, administrators, and most especially teachers to be guided on how to solve the problems based on the results of this study. The activities and programs proposed or suggested are shown in the Table 13. The action plan is based and aligned with the Department of Education format.

Conclusion

The conclusions were drawn based on the findings.

1. The results of the study concluded that the ICT retooling program of the junior high school teachers in Schools Division of Bulacan, District II was strong based on the given verbal interpretation. The described level of the ICT retooling program based on engagement implied that the ICT retooling program of the teachers had a strong level of Engagement. The findings suggested that the ICT Training Program had been successful in fostering a high level of engagement among teachers, motivating them to explore innovative teaching methods, and creating a learning community that values diversity and emphasizes a comprehensive set of skills. The identified strengths and positive outcomes highlighted the program's effectiveness in supporting teacher development in the context of ICT integration into education.
2. The findings suggested that the ICT Retooling Program excelled in attracting a diverse group of educators through its recruitment efforts and personalized the onboarding process through a technical skills pre-assessment. While there was room for improvement in communicating program objectives, the overall strength in recruitment and onboarding positioned the program as effective and committed to providing access to technology and skilled teachers for an enriched learning experience. Based on the result, Recruitment and Onboarding were strong based, as per the given verbal interpretation.
3. The study concluded that the data supported the ICT Retooling Program's suc-

cessful incorporation of instructional features such as PRISM profiling, one-on-one coaching sessions, and a balanced emphasis on hard and soft skills. The program had a positive impact on teacher proficiency and confidence but may face challenges in fully translating these skills into post-program enthusiasm for innovation.

4. The ICT Retooling Program based on post-programme concluded that the findings suggested that the ICT Retooling Program had a lasting and positive impact on teachers, with sustained application of best practices, active integration of digital tools, and alignment with the program's objectives for post-program success. Teachers felt more prepared to adapt to the evolving field of educational technology, reflecting the program's effectiveness in preparing educators for the challenges of modern teaching.
5. The teacher-respondents demonstrated a positive attitude towards professional growth and a competent level in knowledge acquisition related to the ICT CF. There were identified areas for improvement, particularly in enhancing familiarity with core concepts and increasing the application of the ICT CF in teaching practices. This highlighted the importance of continued support and targeted training initiatives to further enhance teachers' proficiency and effective utilization of the ICT CF in their teaching.
6. The teacher-respondents revealed a positive impact on their ICT skills and competencies, and significant knowledge deepening through peer collaboration. Challenges were identified in effectively conveying the benefits of returning to ICT roles using digital assets. The overall competent level in knowledge deepening suggested that the ICT Retooling program had positively influenced teachers' abilities to translate policy directives into practical classroom actions and enhance their understanding of the ICT CF. Ongoing efforts to refine digital communication materials may further improve the effectiveness of conveying specific messages related to returning to ICT roles.
7. This led to the conclusion that teacher-respondents the necessity of positive learning environments and the value of knowledge-deepening activities. There were identified challenges in prioritizing knowledge deepening in ICT for creating innovative and engaging learning environments. The overall conclusion underscored the ongoing efforts of teachers to integrate technology effectively into their classrooms to enhance student learning and prepare them for the demands of the future.
8. The findings indicated that teacher-respondents had demonstrated strong skills in using ICT to facilitate teaching and learning, as well as the ability to mentor colleagues in the implementation of policies to ensure positive ICT use within or beyond the school. These competencies reflected a positive impact on both individual teaching practices and the broader school environment, showcasing the effective integration of ICT for educational enhancement and policy implementation.
9. The findings showed that teacher-respondents demonstrated exceptional skills in generating and evaluating teaching and learning resources, including ICT. They also demonstrated proficiency in selecting, developing, and using various resources to address learning goals. The consistent competence and familiarity with ICT integration among teachers in the ICT competencies of teachers based on PPST program showcased a high-quality standard in the positive use of ICT and effective utilization of teaching and learning resources.

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