Teachers' Perceptions of School-Based In-Service Training (IST) Through Online Platform

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Abstract
In-service training or IST is conducted to improve the efficiency of teachers in helping students achieve excellence in academics. This training also prepares teachers by focusing on the importance of 21st-century teaching skills, which requires teachers to use various approaches and technology-based support activities. In line with the development of technology and teachers' mastery of ICT skills has increased during the COVID-19 crisis, it is very easy for teachers without restrictions to follow the IST online. In line with the National Education Philosophy and the goals of the Malaysian Education Development Plan 2013-2025, in the second wave (2016-2020), MOE set goals to drive system improvement. This includes driving ICT innovation, especially for distance learning and self-learning. This study aims to examine the perception of teachers following internal IST online. The methodology of this study uses survey methods and quantitative design by collecting data using questionnaire instruments among teachers who attend IST online. The questionnaire involved 30 teachers who were randomly selected systematically in Gombak District. The findings show that ICT skills will help teachers in following IST which is held online. Therefore, teachers' perceptions show that they are satisfied when they follow IST which is conducted online.
Keyword: IST, ICT Skills, Professional Improvement.

Introduction
IST is an abbreviation for "In-Service Training," which must be attended by all civil servants, including teachers and support staff in schools. In-Service Training (IST) is also known as personnel training, which refers to any training provided to teachers and staff in schools to enhance skills and knowledge to meet current service needs, as stated in Circular of Service Number 6 of 2005. Teachers can participate in IST through internal or school-based training, which involves attending training conducted by the school, or through external training or agencies. IST is delivered in the form of courses, briefings, workshops, and mentoring programs. Its purpose is to enhance the competence of individual teachers during their service. IST ensures that teachers are exposed to educational issues, technological

developments in education, student-centered teaching approaches, and the latest developments in education, such as 21st-century learning, Industrial Revolution 4.0, school transformation culture TS25, and the versatility of teaching aids that can be diversified using current technology, such as Canva, Google Classroom, and Augmented Reality (Subban et al., 2022). The goals and topics of internal IST are related to the curriculum, co-curricular needs, and teamwork requirements to enhance a teacher's career.

Education transformation is currently in its third wave (2021-2025) with the implementation of the Malaysia Education Development Plan (MEDP), providing greater operational flexibility for groups to introduce ICT programs and innovations towards excellence with the goal of progress. It is carried out through nationwide courses according to the need to continuously elevate the standards of learning. The use of technology by teachers for educational and personal purposes has increased over the past few years (Anekwe & Anekwe, 2023). Consequently, the application of technology and communication also opens opportunities for teachers to effectively participate in online In-Service Training (Salim et al., 2023). The mastery of ICT skills by teachers has improved during the COVID-19 crisis.

To effectively and optimally implement In-Service Training (IST) in schools, it is thus the responsibility of the school's IST committee to organize courses, workshops, briefings, or any activities that enhance skills, knowledge, and personal attributes for conducting engaging and effective Teaching and Learning (PdP). For the purpose of pursuing knowledge through IST, teachers need to attend school on Saturdays or participate in face-to-face IST programs after school hours. Most IST sessions will take place on Saturdays at the school, and teachers are required to attend. This situation is concerning because time constraints are among the factors contributing to work-related stress among teachers (Royo & Woo, 2008; Kamarudin & Taat, 2020). Therefore, the alternative adopted by the researcher is to provide this In-Service Training online. An analysis of the study conducted by Letchamanan and Saad (2021) suggests that online workshops could have a better impact, as teachers are already adept at using ICT technology and can engage in online activities such as webinars, instructional videos on YouTube, and Google Meet, as compared to in-person sessions.

With the rapid advancement of digital technology, the dissemination of information has become easy. The researcher will develop informative sharing videos to assist teachers in professional development and align them with 21st-century learning. According to Voogt et al (2013) teachers need to master 21st-century knowledge and skills and be eligible to support the development of these skills. Teachers can enhance their competency level at any time, anywhere, as learning has become convenient. The failure of teachers to elevate their knowledge and skills in line with technological advancements can be concerning for their achievement levels, as desired in the Malaysia Education Development Plan 2013-2025 (MEDP). The plan emphasizes utilizing ICT to enhance the quality of teaching and learning in Malaysia and aims to position the Ministry of Education (MOE) towards creating globally competitive teachers. Hence, the purpose of this study is to examine teachers' perceptions of participating in internal online In-Service Training (IST). The objectives of this study are to assess teachers' perceptions of engaging in IST conducted online. As a result of these internal IST objectives, teachers can acquire more effective skills and confidence, drawing inspiration from the combination of theoretical and practical approaches to create a conducive teaching style for students.

Literature Review

Educational educators can be defined as those involved in education, including students, teachers, and professionals engaged in continuous teacher development (European Commission, 2013; Czerniawski et al., 2016). IST, as explained by Mahmud et al (2018) serves as a medium or tool to guide and train teachers during their service to implement innovations developed within the education system. Additionally, teacher learning, knowledge, skills, and attitudes can be enhanced through effective professional development, which can transform and improve teacher practices within the classroom (Sailer et al., 2021; DuFour et al., 2005; Darling-Hammond et al., 2017). Furthermore, IST is an effort to broaden teachers' perspectives in order to overcome the challenges and complexities of the ever-evolving educational world (Mohamad, 2019).

Therefore, the Ministry of Education Malaysia (MOE) has planned and developed the Malaysia Education Development Plan (MEDP) to uphold the quality of teachers through the Fourth Shift, which is the Transformation of Teaching as a Preferred Profession. Hence, Circular KPM.100-1/7/2 Vol. 6(24) explains that to achieve these goals and aspirations, MOE strongly emphasizes Continuous Professional Development (CPD) for teachers to enhance competencies and achieve more consistent and robust performance in order to navigate educational transformation. This matter is crucial as teachers need to earn credit points through various CPD activities as a criterion for professional development. According to Gerry Czerniawski et al. (2016), this allows educational educators to enhance their professional practices throughout their careers, with a commitment to improving education for the better. According to Circular KPM.SSM-8/8/1 Vol. 2(12) dated 1 April 2022, each teacher is required to attend a minimum of five in-service training sessions. In-service training includes both internal and external workshops, lectures, briefings, or webinars.

The head of the school department is responsible for ensuring that each teacher possesses the knowledge, skills, and attitudes they require through programs designed based on competency development and continuous learning through internal in-service training. This is reinforced by the explanation given by McKee and Tew (2013), where various forms of assistance and support are provided to teachers, school members, and the community to enhance student development.

The operational guidelines for continuous education assessment in schools refer to the SKPMg2 (Second Wave of Malaysian Education Quality Standards) assessment instrument used by schools to enhance teachers' performance. Referring to Standard Phrase One in the guidance of the Jemaah Nazir dan Jaminan Kualiti (JNJK), Ministry of Education Malaysia SKPMg2 (2016), it emphasizes the principal or headmaster as a guide, motivator, responsible leader, pioneer, and driving force to enhance school excellence while improving the quality of teaching and learning. School leaders must possess and have a moral responsibility to shape the school community to achieve excellence, as stated by (Fullan, 2002). Therefore, it is the responsibility of school leaders to plan professional development programs, including lectures, courses, and workshops for school staff at least five times a year, as well as selecting and inviting speakers for teacher development programs. At the same time, the principal's role is also that of a leader and a technology advocate, directly involved in the structuring of technology use in teaching and learning to develop the organizational structure (Hamzah et.al., 2016).

The study by Czerniawski et al (2016) found that time is one of the primary factors in the need for professional learning among teachers. Therefore, the constraints faced by teachers when attending face-to-face IST, the skills and knowledge gained, as well as the application of that knowledge, require more time, contributing to broader professional educator learning. This includes extensive interdisciplinary reading, discussions with colleagues about teaching practices, values, and philosophies, as well as integrating new programs and pedagogical-related matters. The knowledge and skills acquired during face-to-face IST rely solely on the taken notes and the experience gained during the training. The main barriers preventing participation in professional development activities are time constraints and workload, a finding that also emerged in international surveys on the needs of teacher professional development (Czerniawski et al., 2016). Therefore, according to Czerniawski et al. (2016) participating in online learning courses is an alternative for teachers to further develop their skills according to their own convenience.

Online IST aligns with MOE's goals to produce teachers as envisioned by MOE, which is articulated in the third wave, aimed at fostering a culture of professional excellence and peer-sharing among colleagues such as teachers and school leaders. This includes sharing best practices, mentoring each other, and ensuring colleagues are responsible for upholding professional standards. The quality of teacher education has been recognized as a significant factor influencing teaching quality and student achievement (European Commission, 2013). In line with the goals of the second wave of MOE (2016-2020) to promote system improvements, including fostering innovation in ICT, particularly in distance and self-directed learning, it establishes guidance and support for teachers to enhance the delivery of knowledge, skills, and values across all aspects of the curriculum and co-curriculum.

IST aims to enhance the efficiency of teachers in assisting students to achieve academic excellence. Furthermore, the training received is in line with the transformation of the country's education system that has been taking place since 2013. In line with the views of Valtonen et al (2015); Basantes-Andrade et al (2020), providing teachers with a focus on 21st-century teaching skills, which require them to employ various technology-based approaches and support activities, is crucial. Teachers are also adept at using ICT technology, so there are no constraints for them to participate in online IST. According to Goldie (2016), knowledge and ICT skills, as well as technological knowledge in society, have rapidly advanced. This perspective aligns with the findings of researcher Letchamanan and Saad (2021), who noted that following the spread of the Covid-19 pandemic, teachers have become proficient in using ICT technology, and online training has become a norm. Moreover, technology is a highly dynamic concept Koehler et al (2013), and more recent technologies may lead to higher-quality learning outcomes (Montenegro-Rueda & Fernández-Cerero, 2023).

Methodology
A study on teachers' perceptions of participating in online internal In-Service Training (IST) using an action research approach was conducted. Respondents were selected from a secondary school in the Gombak District. The sampling method used in this study was systematic random sampling. All teacher names were arranged in ascending alphabetical order, and out of 120 teachers, a sample of 30 were chosen. This selection procedure involved every fourth name on the list of teachers. Subsequently, the research instrument used in this study referred to a questionnaire. The study design falls under the quantitative category.

Using data analysis software SPSS version 22.0, the data was analyzed descriptively. The questionnaire form focused on the research question where the researcher explored perceptions of conducting online internal IST in a secondary school in the Gombak District. The questionnaire instrument was adapted from (Hamzah & Sirat, 2018) and the Cronbach's Alpha reliability coefficient value was $\alpha = 0.912$. If the value of Cronbach's Alpha reliability coefficient is greater than 0.6 and approaches 1.0, the instrument used in the study is considered highly reliable. Based on the explanation above, the reliability of the questionnaire instrument provided by the researcher is high.

The questionnaire instrument was developed in a Google Forms application to facilitate the distribution of the questionnaire to respondents and for data collection purposes. The questionnaire instrument consists of two parts: Part A, which gathers demographic data of the selected respondents, including gender, teaching experience, and frequency of attending internal In-Service Training (IST). The second part of this instrument, Part B comprises 15 items and covers two main constructs: (i) the ability to use ICT technology to participate in IST (5 items) and (ii) assessing teachers' perceptions of participating in online internal IST (10 items). The Likert scale was used in Part B whereby this scale measure items based on one (1) representing strongly disagree, two (2) representing disagree, three (3) representing somewhat disagree, four (4) representing agree, and five (5) representing strongly agree. The items for the research instrument were developed by the researcher of this study, with the sources of questionnaire items derived from the literature.

To conduct online school-based IST, the researcher of this study has prepared three sharing materials in the form of videos: the use and management of Google Classroom, the use of MOE email, and how to join the DELIMA Certificate course. Respondents of this study will be provided with a Google Site link (https://sites.google.com/moe-dl.edu.my/ISTictsmkk/home) to participate in the IST. Respondents only need to follow the information sharing through the provided videos from their respective homes. Subsequently, respondents need to answer a few questions provided in a Google Form. The researcher will share the link to the IST page with teachers and allocate a specific time for watching the videos and answering the questions. Finally, the IST secretary will input the names of respondents who participated in the online school-based IST into the SPLKPM system.

Findings of The Study
Analysis of Respondents' Demographics.
Thirty (30) teachers who attended the online IST on Google Workspace for Education completed the questionnaire via Google Form. For the analysis of respondents' demographic information, the researcher analyzed gender and the number of days of IST attended by the respondents until the end of April 2023 only.

Table 1.1
Distribution of Respondents' Gender

Item (Respondent's Gender)	Frequency (n)	Percentage (%)
Female	25	83.3
Male	5	16.7
Total	**30**	**100**

Table 1.1 shows that a total of 30 teachers responded to the provided questionnaire. Among this total, there were 25 female respondents, which constitutes 83.3%, and 5 male respondents, accounting for 16.7%. This indicates that the number of female teacher respondents exceeds that of male teacher respondents.

Table 1.2
Distribution of the Number of Days of Attended IST from January to April 2023 by Respondents

Item (Number of days of attended IST from January to April 2023)	Frequency (n)	Percentage (%)
Less than 1 day	6	20.0
1 to 3 days	12	40.0
4 to 6 days	12	40.0
7 days and above	0	0.00
Total	**30**	**100**

Table 1.2 shows the distribution of the number of days of attended IST during the period of January to April for the year 2023 among the total of 30 respondents. From this total, there were 6 respondents who attended IST for less than 1 day, which is 20.0%, a total of 12 respondents attended IST for 1 to 3 days, which is 40.0%, and a total of 12 respondents also attended IST for 4 to 6 days, which is 40.0%. This indicates that the number of teacher respondents who attended IST for 1 to 3 days and 4 to 6 days is the same.

Part B: Skills in Using ICT Technology to Participate in IST.
Table 1.3
Aspect of Skills in Using ICT Technology to Participate in IST.

Item Part B	Mean	FREQUENCY (PERCENTAGE)				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
B1. I can log in and participate in online IST using devices such as a phone, computer, or laptop.	4.90	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (10%)	27 (90%)
B2. I can access the website through the provided link to participate in the offered online IST without the assistance of peers or others.	4.47	0 (0.0%)	0 (0.0%)	0 (0.0%)	16 (53.3%)	14 (46.7%)
B3. I am accustomed to attending IST conducted online.	4.27	0 (0.0%)	0 (0.0%)	3 (10%)	13 (43.3%)	14 (46.7%)
B4. I can answer the questions provided in the form of a Google Form after participating in online IST.	4.60	0 (0.0%)	0 (0.0%)	3 (10%)	6 (20%)	21 (70%)

B5. Through online IST participation, I can enhance my knowledge and skills in using digital technology.	4.73	0 (0.0%)	0 (0.0%)	0 (0.0%)	8 (26.7%)	22 (73.3%)
Total	**4.59**	**0 (0.0%)**	**0 (0.0%)**	**6 (4%)**	**46 (30.67%)**	**98 (65.33%)**

Table 1.3 displays the results of the analysis of questionnaire data regarding the aspect of teachers' skills in using ICT technology to participate in IST. The analysis indicates that teachers possess a high level of skill in using ICT technology to attend online IST, with a mean score of 4.59. This demonstrates that respondents agree that teachers can participate in online IST and have the ICT skills to manage and engage in online IST. Teachers are also capable of integrating technology into the teaching and learning process (Yusup, 2013).

Part B: Teachers' Perception of Participating in School-Based IST Online.
Table 1.4
Aspect of Teachers' Perception of Participating in School-Based IST Online.

Item Part B	Mean	FREQUENCY (PERCENTAGE)				
		Strongly agree	Disagree	Neutral	Agree	Strongly agree
B6. I enjoy participating in school-based online IST programs.	4.37	0 (0.0%)	0 (0.0%)	3 (10.0%)	13 (43.3%)	14 (46.7%)
B7. I can understand the content shared through recorded videos uploaded to the website.	4.53	0 (0.0%)	0 (0.0%)	2 (6.7%)	10 (33.3%)	18 (60.0%)
B8. I can replay, pause, and resume multiple times to acquire the knowledge and skills shared in the video through the website.	4.57	0 (0.0%)	0 (0.0%)	0 (0.0%)	13 (43.3%)	17 (56.7%)
B9. I am interested in the variety of information shared in this IST.	4.47	0 (0.0%)	0 (0.0%)	0 (0.0%)	16 (53.3%)	14 (46.7%)
B10. The time allocated for participating in IST is sufficient.	4.47	0 (0.0%)	0 (0.0%)	0 (0.0%)	16 (53.3%)	14 (46.7%)
B11. I can access the content of this IST from my place of residence.	4.73	0 (0.0%)	0 (0.0%)	0 (0.0%)	8 (26.7%)	22 (73.3%)

B12. Online IST is my choice for developing my competence as a teacher.	4.57	0 (0.0%)	0 (0.0%)	0 (0.0%)	13 (43.3%)	17 (56.7%)
B13. I feel excited attending online IST.	4.47	0 (0.0%)	0 (0.0%)	0 (0.0%)	16 (53.3%)	14 (46.7%)
B14. I can always refer to the provided website at any time to access information, knowledge, and skills easily.	4.60	0 (0.0%)	0 (0.0%)	0 (0.0%)	12 (40.0%)	18 (60.0%)
B15. Overall, I am able to participate in school-based IST to develop knowledge and skills according to my convenience and enhance motivation to attend such IST.	4.67	0 (0.0%)	0 (0.0%)	0 (0.0%)	10 (33.3%)	20 (66.7%)
Total	**4.54**	**0 (0.0%)**	**0 (0.0%)**	**5 (1.67%)**	**127 (42.33%)**	**168 (56.0%)**

Table 1.4, on the other hand, illustrates the results of the analysis of the questionnaire instrument that encompasses the aspect of teachers' perception of participating in school-based IST online. The analysis results indicate that conducting school-based IST online for teachers is high, with a mean of 4.54. This indicates that respondents also agree that online IST helps them master and develop their competencies effectively and supports the implementation of this IST approach. Yusuf (2013) summarizes that technology has now facilitated humans in various ways, especially influencing how we learn, manage learning, and teach in the field of education seamlessly. The findings of the study by Nuryani and Handayani (2020) suggest that since the beginning of the Fourth Industrial Revolution, teachers have been able to leverage rapidly advancing technology and information to improve teaching processes and enhance the quality of teacher competencies.

Descriptive Statistics
Table 1.5
Descriptive Analysis of ICT and Online IST Skills Aspect

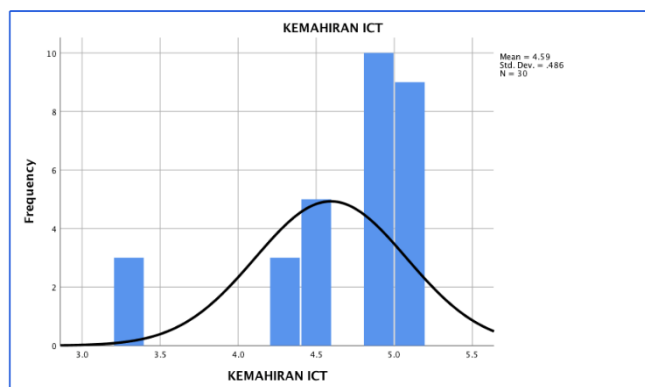|	N	Minimum	Maximum	Mean	Std. Deviation
ICT Skills	30	3	5	4.59	486
Teachers' Perception Towards IST Online	30	4	5	4.54	.426
Valid N (listwise)	30				

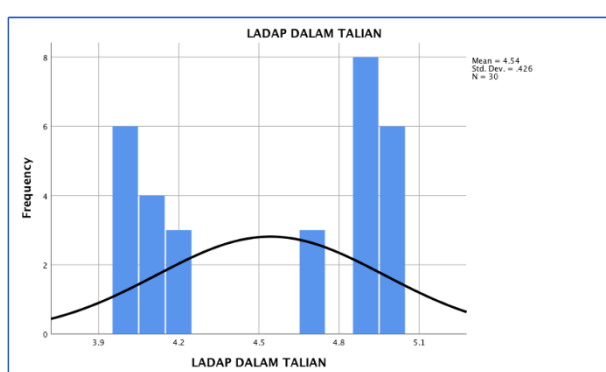Figure 1: Histogram of ICT Skills Aspect for Teachers

Figure 2: Histogram of Teachers' Perception of Participating in Online IST

The findings indicate that the minimum value for the aspect of teachers' ICT skills is 4.59 with a standard deviation of 0.486. The minimum value is 3, while the maximum value is 5. The distribution of values approaches a normal distribution, albeit slightly skewed to the left. The minimum value for the aspect of teachers' perception of participating in online IST (school-based) is 4.54 with a standard deviation of 0.426. The distribution of values approaches a normal distribution. The total number of respondents in this study consists of 30 teachers.

Discussion
Overall, this school-based IST program encompasses several implementation stages. It begins with the appointment and establishment of the school's IST committee. Subsequently, a needs assessment for teachers is conducted, followed by the implementation of training and an evaluation of the effectiveness of the training. Lastly, an impact study is conducted, as mentioned by (Hamzah and Sirat, 2018). According to Maimun (2008), a systematic approach to IST implementation highlights various elements that need emphasis to meet the needs of teachers and the organization. These include the need for research, content refinement, school-based implementation, and an assessment of teachers' perceptions following the conducted training. Therefore, the planning of how to manage IST is a crucial element. The findings of this study indicate that teachers' perceptions of internal online-based IST have a positive impact on them. Teachers also agree because they possess skills in technology and communication. Thus, online-based IST does not present a barrier or constraint for them. The purpose of implementing IST is to enhance the competencies and skills required by teachers in keeping with the changing times. According to the study by Macià & García (2016), the

quality of teachers is an important variable that influences student achievement and school quality. This finding aligns with the results of Alismaiel's study (2022), which emphasizes that mobile-based learning has emerged as a promising solution to the challenge of providing easily accessible, flexible, and development-oriented professional development opportunities for teachers (Teachers' Professional Development, TPD) in Saudi Arabia and Pakistan.

In the present time, learning has become more accessible through various online platform. Participation in blogs, wikis, shared resource, and social networking sites has become a part of the daily lives of many teachers (Sailer et al., 2021). The technological devices now enable teachers to facilitate the creation and sharing of knowledge among educators (Gameil & Al-Abdullatif, 2023). Hence, teachers have the possibility of becoming active and self-directed learners who decide what needs to be learned based on their own needs. In line with this, the Ministry of Education Malaysia (MOE) has designed and developed the Malaysian Education Blueprint (MEB) to enhance the quality of teachers through the Fourth Shift, which is the Transformation of Teaching as a Preferred Profession.

This study showed the benefit for teachers to easily participate in IST and contribute to their professional development. Indirectly, this approach will also help boost teachers' confidence in joining online-based IST sessions. It's not uncommon for teachers to seek new ideas or be ready to experiment with new methodologies in order to find collaboration and support opportunities beyond the school setting. Online networks and communities offer teachers the opportunity to share knowledge and learn from peers who are geographically distant from each other, as noted by (Ravenscroft et al., 2012). Teachers can develop their potential and enhance their competencies through participation in IST. The implications of this study will provide numerous opportunities for the future in terms of designing training materials for IST.

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