

Aspiring Malaysian School Leaders' Satisfaction With Online Leadership Training

Aziah Ismail^{1*} Nor Shafrin Ahmad¹ & Adu Ifedayo² Nabia Shah¹

¹School of Educational Studies, Universiti Sains Malaysia, Penang, Malaysia, aziah@usm.my

²Bamidele Olumilua University of Education Science and Technology, Ikere, Nigeria

Citation: Aziah Ismail, et al (2024). Aspiring Malaysian School Leaders' Satisfaction With Online Leadership Training. *Educational Administration: Theory and Practice*, 30(6), 3786-3796

Doi: 10.53555/kuey.v30i6.5786

ARTICLE INFO

ABSTRACT

The study aims to investigate user satisfaction with online leadership training known as the National Professional Qualification for Educational Leaders (e-NPQEL). Furthermore, the e-NPQEL components, such as good criteria, difficulties, and improvement ideas were examined. A total of 107 aspiring school leaders or e-NPQEL users were selected as respondents to answer the study questionnaire. Observably, the users were satisfied with the e-NPQEL, which provides knowledge and new learning experiences on school leadership. Nevertheless, the respondents were less satisfied with the overall experience of using e-NPQEL in acquiring skills to be a school leader. The results also revealed a significant difference in satisfaction using e-NPQEL between male and female respondents on three items closely related to their information and communications technology (ICT) competency. Meanwhile, qualitative responses through open-ended items offered participants' perspectives on the good criteria of e-NPQEL, challenges during training, and suggestions for improving the effectiveness of its implementation.

Keywords: leadership; aspiring school leader; e-learning; online training; e-NPQEL

INTRODUCTION

Professional development is an inseparable human resource management aspect as every employee must constantly aspire to upskill and reskill their work abilities and competencies in response to changing skill demands. One of the mechanisms used in the process is training. Education training typically provides participants with the knowledge and skills regarding the required education field, such as teaching pedagogy, educational law, and teacher responsibilities. Training enables individual participants to behave as expected in performing their responsibilities for effective job performance. Kabilan (2005) and Schols (2012) stated that training and development programmes are essential, which enable teachers to improve their technical and behavioural capabilities while increasing productivity. This contributes to the satisfaction of school leaders because, ultimately, effective training and professional development indirectly increase student achievement (Alvarez, Salas & Garofano, 2004). However, if school leaders are involved as participants in leadership training, the effectiveness of the training they follow increases their leadership satisfaction. This is because the training provides additional value to the leadership process by incorporating aspects of knowledge, skills, attitudes, and others (KSAOs) (Krampitz, Tenschert, Furtner, Simon & Jürgen Glaser, 2022).

Training programmes for school leadership constitute part of professional development to promote school leaders' knowledge and skills acquisition that results in school improvement (Liljenberg, 2021) as leadership is a significant contributor to school effectiveness. Mark and Printy (2003) and Mitchell, Kensler and Tschannen-Moran (2015) mentioned that leadership is a commonly studied variable to observe its impact on student outcomes. Many previous studies on school leadership highlighted that an outstanding school administrator could raise student achievement to 20% (Malaysia, 2013; Harris, Jones & Crick, 2020). Thus, the Ministry of Education of many countries made various efforts to develop school leaders' abilities in effective leadership upon identifying the leadership talent in the individual leader.

This characteristic is also related to the medium and outcomes that can meet the needs of individual leaders, organisations, and leadership tasks, as determined by a needs analysis (Alvarez, et al., 2004). Consequently, school leaders and aspiring school leaders find the leadership training meaningful and satisfying. Previous research demonstrates that aspiring school leaders are dissatisfied with training that does not meet the needs of KSAOs in their leadership (Bysik, Evstigneeva, Isaeva, Kukso, Harris, & Jones, 2015; Oplatka & Lapidot, 2018). Giebel and Kefor (2018) and Ng and Szeto (2016) found that unsatisfactory characteristics of leadership training delivery, such as the training taking too long, training materials being difficult to access, and trainers being less helpful, influence the satisfaction of future school leaders with the leadership training they receive.

Leadership preparation training is frequently conducted formally and informally and incorporated into the talent and succession planning process. Formal training refers to a structured and defined curriculum, while informal training relates to on-the-job training ingrained in the workplace (Evan, 2019). Currently, formal leadership preparation training is compulsory for aspiring school leaders in many countries, such as Russia (Bysik, et al., 2015), Hong Kong (Ng & Szeto, 2016), Malaysia (Lokman Tahir, Mohd Nihra Haruzuan Mohd Said, Khadijah Daud, Shafeeq H Vazhathodi & Aqeel Khan, 2016; Aziah Ismail, Rozniza Zaharuddin, Norhashimah Hashim & Joohari Ariffin, 2020) as an effort to increase the talented group's grasp of knowledge, skills, and abilities in leadership.

Training is also delivered in numerous formats, including face-to-face, online, and hybrid where many organisations are increasingly considering distance learning as a viable option for providing training to staff due to online training advantages and the broad availability of technology and cost savings. Sitzmann, Ely, Bell, & Bauer (2010) stated that technology significantly impacts the modern working environment, specifically the shift towards technology-delivered training. The rapid growth in online learning has become a new normal adopted by training providers as an alternative medium for professional development agendas (Aziah Ismail et al., 2020; Papadakis, Kalogiannakis, Sifaki & Vidakis, 2018; Bo, Minhong, Stephen & Kinshuk, 2002) and transformative learning (King, 2011).

Leadership preparation training in Malaysia is conducted formally and a requirement for aspiring leaders in Malaysia which known as NPQEL. The training must be completed in a hybrid learning model where 30% is online (e-NPQEL) and 60% is in situ (Ng, 2016). The e-NPQEL is crucial as the training provides participants with basic information and abilities in school leadership, such as theory and concepts, management models, and problem-solving. The training requires participants to complete all four primary modules, which cover six main topics: policy and direction, instructional and achievement, change and innovation management, resource and operation, people and relationships, and personal effectiveness. Participants must be tested based on the school leadership introduction knowledge obtained via e-NPQEL after completing the learning process on the online platform and must score 100% to proceed to the face-to-face session (Ministry of Education, 2022).

The e-NPQEL as a learning management system in school leadership training in Malaysia encourages distance and self-paced learning. Aziah et al.'s (2020) study on "The impact of e-NPQEL on continuance intention of Using e-Training" revealed that technical supports, course design, and perceived usefulness significantly affect participants' continuance intention in using online training platforms. Nonetheless, the participants' satisfaction in using e-NPQEL for obtaining school leadership knowledge, skills, and abilities is underexplored. The e-NPQEL system considers self-directed learning, which requires learners to analyse information and knowledge independently, hence the system impact on user satisfaction needs to be investigated. The method depends on the participants' understanding of the portal learning resources, which include PDF articles, videos, and case studies. Moreover, the aspiring school principals are e-NPQEL users who are adult learners with leadership experience, thus their satisfaction with online leadership training will educate training providers on how to improve the learning mode on the platform. Specifically, the study objectives are as follows:

1. Participants' satisfaction level with e-NPQEL.
2. Gender differences in the e-NPQEL impact on participants.
3. The good criteria, challenges, and suggestions for e-NPQEL improvement.

LITERATURE REVIEW

In providing training, it is crucial to place an emphasis on the participants' satisfaction which is based on their experience in attending the training. For school leaders, two types of satisfaction must be considered: satisfaction as a leader and satisfaction as a training participant. In this study, the satisfaction of aspiring school leaders receiving online leadership training will be investigated. Based on previous research, the satisfaction of aspiring school leaders with the leadership training they receive is more focused on face-to-face training (Bysik, et al., 2015; Ng & Szeto, 2016; Lokman Tahir, et al., 2016; Aziah Ismail, et al., 2020). Multiple aspects, including the content, time, reference materials of leadership training, and the trainers, have been found to have a significant impact on the satisfaction of potential school leaders with leadership training, according to previous

research. However, the satisfaction of aspiring school leaders in online leadership training utilising a specific learning management system is less concentrated.

The introduction of Learning Management System (LMS) technology, which is part of an online training platform, has provided ways to create a positive and engaging learning environment with adequate opportunities for essential elements in the learning process (Syed Othman, Atan & Guan, 2005). Many leadership training providers began to use LMS due to its advantages. King (2011) stated that participants experience greater personalisation of their educational experience where they share learning resources, run interactive lessons, and communicate virtually. Syed Othman et al. (2005) discovered that the interactive element in a learning management system formed a positive learning environment through high-level communication exchanges. Communications using the system save time and expenses and enables assessing information and knowledge worldwide. Learners can also learn at their own pace, pursue subjects outside of their school, and learn directly under the best teachers in the country.

Numerous scholars believe that the Internet provides a learning platform for enhancing users' task efficiency, knowledge acquisition, communication, and decision-making quality (Qazi, Hardaker, Ahmad, Darwich, Maitama & Dayani, 2021). Therefore, the Internet plays a critical role in making the learning process flexible, networked, and competitive if users are satisfied with their online learning experience (Alkhalaf, Drewa & Alhussain, 2012; Isaac, Abdullah, Ramayah, Mutahar & Alrajawy, 2018; Hastuti, Lestari & Sumarlinda, 2019). User satisfaction refers to the degree to which the Internet user is satisfied with the decision to use the Internet and if it meets their expectations (Wang, 2008).

Isaac et al.'s (2018) study on "Integrating User Satisfaction and Performance Impact in Yemen" discovered that users' satisfaction in using online learning platforms has positively influenced their performance, while perceived use positively influenced perceived usefulness, actual usage, and user satisfaction. Perceived usefulness predicts actual usage and user satisfaction, which significantly impact individual performance (knowledge acquisition, and decision quality).

The positive impact of e-learning is highlighted in Alkhalaf, Drewa and Alhussain (2012) study on "Assessing the impact of e-learning systems on learners: a survey study in the KSA". The use of e-learning systems positively impacts student learning as learners' ability to accurately interpret information increases. The aspects contributing to users' satisfaction with e-learning are the accuracy level of the system, format, ease of use, and timeliness (Hastuti et al., 2019). Ozturan and Kutlu (2010) in "Employee satisfaction of corporate e-training programmes" noted that respondents were satisfied with the courses textual and visual content, including cases and examples, where the time to complete the course was adequate, the material was relevant to their work and the training fulfilled their expectations.

Gender differences in the use of technology and skills have also attracted the attention of numerous scholars internationally (Luan, Abdul Aziz, Mohd Yunus, Sidek, Abu Bakar, Meseran & Atan, 2005). Multiple studies have reported that males were more positive towards web-based learning than females (Chen & Tsai, 2007; Jackson, Ervin, Gardner & Schmitt, 2001). Houtz and Gupta (2001) reported a significant gender difference in female and male individuals' self-assessment of their ability to master technical skills. Although both genders positively regard their technological skills, males rated themselves higher than females. Ong and Lai (2006) discovered that males were more positive towards e-learning than females. Specifically, significant gender variations were observed where male ratings of computer self-efficacy, perceived usefulness and ease of use, and behavioural intention to use e-learning were higher than those of females. Tsai and Lin's (2004) findings on "Taiwanese adolescents' perceptions and attitudes regarding the Internet: exploring gender differences" revealed that male and female adolescents exhibited different perspectives on the Internet with males viewing it as a 'toy' and females viewing it as a 'technology', 'tool', or 'tour'. Thus, females held more pragmatic views on the Internet, whereas males thought they could get more enjoyment from it. Females tended to possess stronger Internet self-efficacy than males. Gender inequalities online are possibly narrowing as female adolescents acquire more experience with it.

Based on previous studies discussed above, users' usage satisfaction with online training is influenced by many aspects of the training platform. Thus, the study investigated to what extent the e-NPQEL, as an online leadership training platform, satisfies the participants, who are working and adult learners in acquiring leadership knowledge, skills, and abilities.

CONCEPTUAL FRAMEWORK

Numerous studies emphasised that e-learning has significant positive and negative impacts on users and organisations. Thus, organisational success and survival are determined by the chosen technologies for adaptation and transformation purposes. The Information System (IS)- Impact model by Gable, Sedera, and Chan (2008) was adapted to evaluate the impact of the e-learning platform in leadership preparation training among aspiring leaders in Malaysia (e-NPQEL). The model identified the success and impediments of IS

employed by the organisation. AlKhalaf et al. (2012) and Davidson, Dewan, Kumar, Chang and Liggett (2020) stated that the model evolved from DeLeon and McLean's (1992) original version to several new versions including Davidson et al. (2020) (see Figure 1).

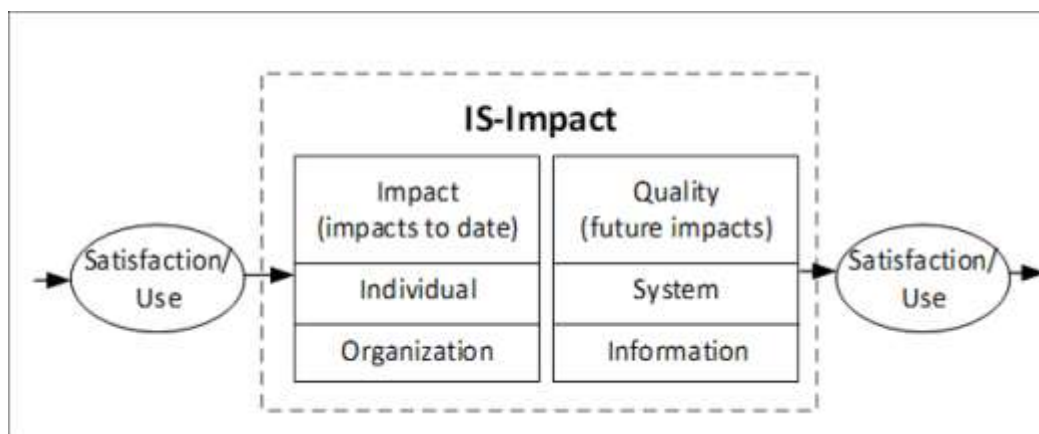


Figure 1: The IS-Impact Model

Figure 1 illustrates that a user is heavily featured in the model, thus implying that individuals who utilise the e-learning platform (eLP) will determine whether benefits or 'dis-benefits' are achieved (Gable et al., 2003, 2008). User satisfaction and IS use result from success (before and after) rather than a contributing factor to success. Furthermore, system and information quality impact user satisfaction and utilisation (Wang & Liao, 2007). Gable et al. (2008) explained that 'the individual impact' is a measure of the extent to which the IS influence the capabilities and effectiveness on behalf of the organisation of key users (p. 289).

The IS evaluated in the study is e-NPQEL and the users who rated the online training platform based on their user satisfaction experience are aspiring leaders enrolled in the leadership development training. User satisfaction was measured through several aspects, including the experience of learning school leadership and the e-NPQEL role in providing the knowledge.

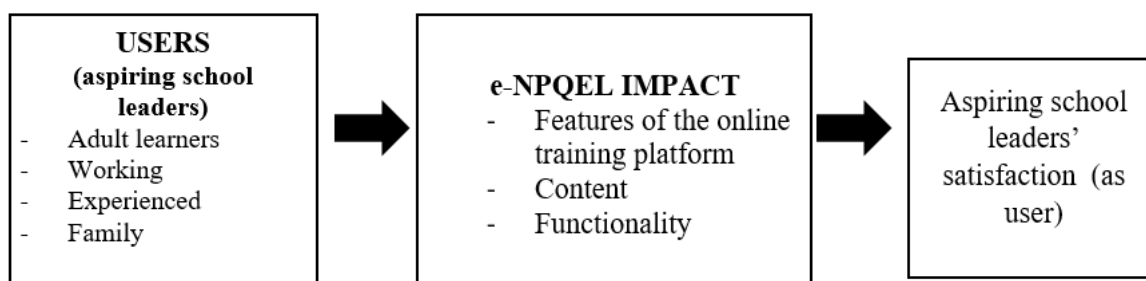


Figure 2: Conceptual Framework

METHODS

The study applied a survey research design involving questionnaires as the research instrument. The questionnaire contained closed-ended and open-ended items to answer the research objectives. The respondents were 107 aspiring principals attending e-NPQEL in the same cohort. Aspiring leaders are the middle leaders who made remarkable contributions to their organisations and were nominated by their respective leaders and approved by the State Department of Education to enrol in the leadership preparation training (NPQEL). Recruiting and selecting the respondents from the same cohort of e-NPQEL sessions is vital to acquire the same perspective on the same features of the online training platform provided as the contents and features might be updated periodically.

The study utilised the questionnaire in AlKhalaf et al. (2012) for data collection. Furthermore, only five items were used to measure the individual impact of online training. The items were validated by three educational management and technology and multimedia experts in the education fields. Expert recommendations provided that some modifications were made to the items to suit the study purpose as displayed in Table 1.

Table 1: The Original and Amended Version of the Items

Bil	Original items [23]	Amended version
1.	I have learnt a lot through the experience of using the e-learning system.	I have learned a lot about school leadership through the e-NPQEL.
2.	The e-learning system enhances my awareness of the requirements of educational processes.	The e-NPQEL enhances my awareness of the requirements of school leadership processes.
3.	Using the e-learning system will increase my productivity.	Using the e-NPQEL has increased my leadership skills.
4.	I am satisfied with the experience of using the e-learning system.	I am satisfied with the experience of using the e-NPQEL.
5.	Most users have a positive attitude towards the evaluation of e-learning system functionality.	I have a positive attitude towards the e-NPQEL system functionality.

Two open-ended questions were addressed to the respondents to obtain their opinion on e-NPQEL and better understand their perspective on the platform. The questions are presented as follows:

1. Please list the benefits and disadvantages of using e-NPQEL.
2. Please share your ideas for improving e-NPQEL.

Several criteria were considered in analysing the open-ended question results by using thematic analysis based on Braun and Clarke (2006) who mentioned the importance of the thematic analysis process, The first criteria refer to the transcription process. The next process is the coding process followed by the analysis and the last stage involves the overall process.

3.1 Pilot study

A pilot study was administered to 35 aspiring principals (from different e-NPQEL cohorts) with a reliability test. The Cronbach’s alpha value = .92 indicated item reliability of the study. The data normality test using skewness and kurtosis was employed to assess the actual data. The values for asymmetry (using skewness values) and kurtosis between -2 and +2 are considered acceptable to prove normal univariate distribution (George & Mallery, 2010). Table 2 presents that the skewness and kurtosis values were within the acceptable range, thus suggesting that the items were acceptable to use in the study.

Table 2: Skewness and Kurtosis Values for the Items

	B1	B2	B3	B4	B5
Skewness	-.80	-.76	-.54	-.52	-.93
Std. Error of Skewness	.23	.23	.23	.23	.23
Kurtosis	-.83	-.49	-.95	-.80	-.31
Std. Error of Kurtosis	.46	.46	.46	.46	.46

RESULTS, DISCUSSION AND IMPLICATION

The results discussed in this section were based on three study objectives.

Result 1: The level of agreement on user satisfaction in using e-NPQEL

The descriptive analysis using mean and standard deviation demonstrated the range of mean values M = 4.50-4.64 (SD = .56-.50) regarding the responses to the items. The mean value of item 1 (M = 4.64, SD = .50) indicated that respondents’ agreement that they had learned significantly through e-NPQEL training. Meanwhile, the positive attitude towards the e-NPQEL system functionality (M = 4.63, SD = .52), the enhancement of awareness of the requirement of the school leadership process (M = 4.56, SD = .55), and leadership skills improvement (M = 4.54, SD = .54). Out of the five items, respondents have less agreement on the item relating to their satisfaction with the experience of using the online leadership training (M = 4.50, SD = .56). Nonetheless, the mean values were still at a high level of satisfaction.

Table 3: Individual Impact of Online Leadership Training

No.	Items	Mean	Standard Deviation	Rank
1.	I have learned significantly about school leadership through the experience of using e-NPQEL.	4.64	.50	1
2.	The e-NPQEL enhances my awareness of the requirements of school leadership processes.	4.56	.55	3
3.	Using e-NPQEL has increased my leadership skills.	4.54	.54	4

4.	I am satisfied with the experience of using e-NPQEL.	4.50	.56	5
5.	I have a positive attitude towards the e-NPQEL system functionality.	4.63	.52	2

Result 2: The difference in users’ satisfaction with e-NPQEL between male and female aspiring leaders

An independent t-test was conducted to compare the impact of e-NPQEL on male and female aspiring school leaders. Based on the p-values, three items indicated significant differences as follows:

- “Using the e-NPQEL has increased my leadership skills”, $t(105) = 2.57, p < .05$, males ($M = 4.65, SD = .48$) attained higher scores than females ($M = 4.39, SD = .58$).
- “I am satisfied with the experience of using e-NPQEL”, $t(105) = 2.62, p < .05$, males ($M = 4.62, SD = .49$) attained higher scores than females ($M = 4.34, SD = .61$).
- “I have a positive attitude towards the e-NPQEL system functionality”, $t(105) = 2.52, p < .05$, males ($M = 4.73, SD = .48$) attained higher scores than females ($M = 4.48, SD = .55$).

The t-test results indicated the insignificant values of the other two items, specifically,

- “I have learned significantly about school leadership through the experience of using e-NPQEL”, $t(105) = 1.56, p > .05$;
- “The e-NPQEL enhances my awareness of the requirements of school leadership processes”, $t(105) = 1.30, p > .05$.

Table 4: The comparison of the individual impact of e-NPQEL between male and female aspiring leaders

No.	Items	Gender	Mean	SD	t-value	df	Sig. (2-tailed)
1.	I have learnt a lot about school leadership through the experience of using the e-NPQEL.	M	4.70	.46	1.56	105	.12
		F	4.55	.55			
2.	The e-NPQEL enhances my awareness of the requirements of school leadership processes.	M	4.62	.52	1.31	105	.19
		F	4.48	.59			
3.	Using the e-NPQEL has increased my leadership skills.	M	4.65	.48	2.57	105	.01*
		F	4.39	.58			
4.	I am satisfied with the experience of using the e-NPQEL.	M	4.62	.49	2.62	105	.01*
		F	4.34	.61			
5.	I have a positive attitude towards the e-NPQEL system functionality.	M	4.73	.48	2.52	105	.01*
		F	4.48	.55			

* Significant at the level of $p < .05$

Result 2: The good criteria, challenges, and suggestions for improvement of e-NPQEL

i. The good criteria of e-NPQEL

The respondents listed several good criteria of e-NPQEL that assist them in acquiring school leadership knowledge and skills as stated in Table 5 below.

Table 5: Good Criteria of e-NPQEL

Criteria	Explanation	Examples:
Informative	e-NPQEL provides access to material about school leadership that they can use as future school leaders.	<ul style="list-style-type: none"> • “Very efficient. Aspiring principals will instantly receive information that is simple to comprehend. It’s simple to find”. • “The online materials are quite useful and can assist participants in making better preparations for accomplishing the assigned tasks”. • “Very effective in terms of obtaining a lot of relevant information in an indirect manner, which can assist me in further improving my level of professionalism in the field of education”.
Leadership preparation	e-NPQEL has become a useful resource for respondents as they prepare to become leaders.	<ul style="list-style-type: none"> • “... assisted me in determining the most effective leadership and management approaches for myself”.

		<ul style="list-style-type: none"> • <i>"...The assignment takes the form of a real-life situation that occurs in the original context. As a result, it may motivate me to apply to my school too in the future"</i>.
Flexible	Respondents can use the feature of e-NPQEL to search for information and repeat a topic if they have not grasp it.	<ul style="list-style-type: none"> • <i>"...freedom to search for information"</i>. • <i>"I think online courses are advantageous because I can go over a topic as many times as I want if I don't understand it"</i>. • <i>"Online video or clip content can enhance my understanding and can be repeated"</i>.
Easy to access	Many respondents agreed that e-NPQEL is easy to access and use regardless of location or time.	<ul style="list-style-type: none"> • <i>"The online leadership course provided me with immediate access to the material. References can be obtained at any time and from any location"</i>. • <i>"... everything is simply available when you know how to use ICT. Obtaining a great deal of data"</i>.

ii. Challenges

The respondents stated several challenges encountered during the e-NPQEL training. Considering that the respondents were senior teachers (50 years or older), they frequently encountered issues related to technophobia and hectic work, stating as follows:

- *"There are disadvantages for the elderly"*.
- *"It was quite helpful. However, time restrictions and critical tasks must be resolved, which necessitates a high level of commitment"*.

Several respondents claimed that e-NPQEL was ineffective in transmitting leadership knowledge and abilities as the training mainly focused on theory rather than real-world context, provided one-way learning, and required focus while respondents were busy with heavy workloads.

- *"Because of the high volume of work, it is ineffective. You can either concentrate on your training or take time off. Interest fades due to a lack of time and a large amount of stuff to learn"*.
- *"Less useful because the online content focuses more on theory than on actual experience as a school leader"*.

iii. Improvement suggestion

Although the respondents acknowledged that e-NPQEL significantly contributes to the enhancement of knowledge in school leadership, they suggested face-to-face leadership training sessions to complement the online e-NPQEL training. Face-to-face leadership training could reinforce the information and leadership abilities obtained online, stating that:

- *"Effective but should be followed by lectures with lecturers to ensure more accurate and clear understanding"*.
- *"This online leadership course is effective but there must also be a face-to-face phase to further strengthen the effectiveness of this leadership course"*.

Discussion and implication

The use of online training to improve individual employees' professionalism in an organisation is becoming increasingly common. Earlier studies demonstrated that online training participants have a range of opinions, which significantly affects online training. Past studies inspired the researchers to investigate user satisfaction with e-NPQEL, a Malaysian compulsory leadership online training for aspiring school leaders. The results indicated that the respondents were satisfied with the knowledge of school leadership they obtained and reflected positive views of the leadership training provided in e-NPQEL. Isaac et al. (2018) mentioned that users' satisfaction is based on their perceived usefulness of the e-learning platform. The respondents were satisfied with several good features of e-NPQEL, including being informative, contributing to respondents' leadership preparation, flexibility, and easiness to access. The results aligned with previous studies where the users' satisfaction may result from the e-learning platform features, such as textual and visual content (Ozturan & Kutlu, 2010), the flexibility of the system to manoeuvre (Isaac et al., 2018; Syed Othman et al., 2005a), and the positive learning environment created by interactive elements in the LMS (Syed Othman et al., 2005b). As adult learners and aspiring experienced leaders, the respondents require a training programme that suits their time.

Despite the positive response to e-NPQEL in terms of knowledge of leadership and system function, less satisfaction was observed with the online training, specifically e-NPQEL usage experience and leadership skills acquisition indicated by items 3 and 4. Previous researchers stated that many factors might deter users from holding positive views of their online learning experience, such as self-efficacy (Al-Gahtani, 2016; Abdullah & Ward, 2016), subjective norms, enjoyment, anxiety, experience using computers (Abdullah & Ward, 2016), instructors' knowledge of learning technologies, and learner knowledge of computer systems and technical infrastructure (Alhabeeb & Rowley, 2017; Almaiah, Jalil & Man, 2016). The respondents also mentioned that online learning is a disadvantage for the elderly and those with heavy workloads.

The results demonstrated that male and female aspiring school leaders agreed on the impact of the two items related to the content of school leadership conveyed via e-NPQEL compared to the other three closely related to technical skills in exploring the contents of e-NPQEL. The online platform encourages self-directed learning, thus highlighting the importance of users' competence to acquire technological abilities for their satisfaction in using the e-learning platform (Chen & Tsai, 2007; Jackson et al., 2001; Houtz & Gupta, 2001). Males rated themselves higher than females regarding their ability to master technology skills (Houtz & Gupta, 2001; Ong & Lai, 2006). Many studies reported that males exhibited more favourable and positive attitudes towards online learning than females (Chen & Tsai, 2007; Jackson et al., 2001; Ong & Lai, 2006; AlRasheedi, 2009).

The findings revealed that online leadership training should be supplemented with face-to-face training. The respondents stated that supplementing could prevent misunderstanding regarding the online content as the training participants are aspiring leaders with various leadership perspectives. Ebner and Gegenfurtner (2019) added that online learning is less effective than face-to-face learning due to changes in the learning environment, which is one of the most critical elements in learners' motivation to learn, specifically for adult learners accustomed to learning face-to-face.

The implications that can be drawn from the results are as follows:

1. Leadership preparation is a process that requires a meticulous process in preparing aspiring leaders to possess effective leadership knowledge and skills. Thus, training providers should complement online leadership training with face-to-face training to strengthen training effectiveness.
2. The online training platform feature should be easy to use and access as users may come from different genders, levels of ICT competency, and workloads.
3. In order to provide the real-world context of leadership in the training experience, immersive online training should be considered to deliver user satisfaction with meaningful learning provided in the online training platform.
4. This study demonstrates that the IS impact model, which is commonly used for online learning, can also serve as a foundation for online leadership training, which is increasingly being offered to aspiring leaders.

CONCLUSION

The advent of the Internet has transformed the learning landscape in educational institutions, such as schools and colleges and training on professional development for career advancement. The situation produced various e-learning platforms, including e-NPQEL introduced by the Malaysian Ministry of Education to provide aspiring school leaders with school leadership knowledge and skills. The results suggested that the recommendations of IS Impact on the role of user satisfaction in measuring the effectiveness of the e-learning platform were relevant. The ultimate aim of creating an e-learning platform is to provide users with the knowledge and skills they want to acquire through e-learning. The e-learning platform feature, namely e-NPQEL, which provides an informative, flexible, and easy-to-access learning platform, has attracted users' interest, specifically in terms of acquiring knowledge on school leadership and the function of e-NPQEL as an e-learning platform. Nevertheless, caution is needed to ensure that participants undergo meaningful learning experiences to improve their leadership knowledge and skills as school leaders. The considerations can be used as input for the e-NPQEL improvement process to be more effective in the future.

ACKNOWLEDGEMENT

This work is part of the Fundamental Research Grant Scheme (FRGS) project [ID: 16021; reference code: FRGS/1/2018/SSI09/USM/02/9 and 203.PGURU.6711712] and supported by the Ministry of Education Malaysia.

REFERENCES

1. Aas, M. & Blom, T. (2018). Benchlearning as professional development of school leaders in Norway and Sweden. *Professional Development in Education*, 44(1), 62-75. <https://doi.org/10.1080/19415257.2017.1355840>

2. Abdullah, F. & Ward, R. (2016). Developing a general extended technology acceptance model for E-learning (GETAMEL) by analysing commonly used external factors. *Computers in Human Behavior*, 56, 238-256. <https://doi.org/10.1016/j.chb.2015.11.036>
3. Al-Gahtani, S. S. (2016). Empirical investigation of e-learning acceptance and assimilation: A structural equation model. *Applied Computing and Informatics*, 12(1), 27-50. <https://doi.org/10.1016/j.aci.2014.09.001>
4. Alhabeeb, A. & Rowley, J. (2017). Critical success factors for eLearning in Saudi Arabian universities. *International Journal of Educational Management*, 31(2), 131-147. <https://doi.org/10.1108/IJEM-01-2016-0006>
5. Alkhalaf, S., Drewa, S., Alhussain, T. (2012). Assessing the impact of e-learning systems on learners: a survey study in the KSA. *Procedia - Social and Behavioral Sciences*, 47, 94 - 104. <https://doi.org/10.1016/j.sbspro.2012.06.620>
6. Almaiah, M. A., Jalil, M. A. & Man, M. (2016). Extending the TAM to examine the effects of quality features on mobile learning acceptance. *Journal of Computers in Education*, 3(4), 453-485. <https://doi.org/10.1007/s40692-016-0074-1>
7. AlRasheedi, H. (2009). *Information and Communication Technology (ICT): Effects of Gender and Training among Kuwait Teachers*. Unpublished Dissertation, College of Education of Ohio University. Retrieved on January 1, 2022 from https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=ohiou1251445284&disposition=inline
8. Alvarez, K., Salas, E., & Garofano, G.M. (2004). An Integrated Model of Training Evaluation and Effectiveness. *Human Resource Development Review*, 3, 385-416. DOI: 10.1177/1534484304270820
9. Aminuddin Baki Institute. (2022). *e-NPQEL: NPQEL 2.0 E-learning Portal*. Retrieved on December 17, 2021 from <http://npqel.iab.edu.my/>
10. Aziah Ismail, Rozniza Zaharuddin, Norhashimah Hashim & Joohari Ariffin. (2020). The Impact of e-NPQEL on the Continuance Intention of Using e-Training among Aspired School Leaders in Malaysia. *International Journal of Mobile Technology (IJiM)*, 14(19), 109-123. <https://doi.org/10.3991/ijim.v14i19.15965>
11. Bo, C., Minhong, W., Stephen, J.H.Y., & Kinshuk, J.P. (2002). Acceptance of competency-based workplace e-learning systems: Effects of individual and peer learning support. *Computers & Education*, 52(1), 1317-1333. <https://doi.org/10.1016/j.compedu.2011.01.018>
12. Braun, V & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*. 11(4), 589-597. <https://doi.org/10.1080/2159676X.2019.1628806>
13. Bush, T. (2018). Preparation and induction for school principals: Global perspectives. *Management in Education*, 32(2), 66-71. <https://doi.org/10.1177/0892020618761805>
14. Bysik, N., Evstigneeva, N., Isaeva, N., Kukso, K., Harris, A., & Jones, M. (2015). A missing link? Contemporary insights into principal preparation and training in Russia. *Asia Pacific Journal of Education*, 35(3), 331-341. <https://doi.org/10.1080/02188791.2015.1056588>
15. Chen, R. S., & Tsai, C. C. (2007). Gender Differences in Taiwan University Students' Attitudes toward Web-Based Learning. *CyberPsychology & Behavior*, 10(5), 645-654. <https://doi.org/10.1089/cpb.2007.9974>
16. Davidson, M. B., Dewan, A. A., Kumar, V. S., Chang, M. & Liggett, B. (2020). Visualizing Benefits: Evaluating Healthcare Information System Using Is-Impact Model. *IEEE Access*, 8, 148052- 148065. <https://doi.org/10.1109/access.2020.3015467>
17. DeLone, W., & McLean, E. (1992). Information systems success: The quest for the dependent variable. *Information systems research*, 3(1), 60-95. DOI: 10.1287/isre.3.1.60
18. Ebner, C. & Gegenfurtner, A. (2019) Learning and Satisfaction in Webinar, Online, and Face-to-Face Instruction: A Meta-Analysis. *Frontier Education*, 4(92), 1-11. <https://doi.org/10.3389/feduc.2019.00092>
19. Gable, G., Sedera, D. & Chan, T. (2008). Re-conceptualizing Information System Success: The IS Impact Measurement Model. *Journal of the Association for Information Systems*, 9(7), 377-409. <https://doi.org/10.17705/1jais.00164>
20. Gable, G., Sedera, D. & Chan, T. (2003). Enterprise systems success: a measurement model. In March, Salvatore T. and Massey, Anne and DeGross, Janice I. (Eds.) *Proceedings Twenty-Fourth International Conference on Information Systems* (pp. 576-591). USA: Seattle. <https://aisel.aisnet.org/icis2003/48>
21. George, D. & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 17.0 update (10 ed.). Washington DC: Pearson.
22. Harris, A., Jones, M., & Crick, T. (2020) Curriculum leadership: a critical contributor to school and system improvement. *School Leadership & Management*, 40(1), 1-4. <https://doi.org/10.1080/13632434.2020.1704470>
23. Hastuti, I., Lestari, W. W., & Sumarlinda, S. (2019). The User Satisfaction Level Of E-Learning for Business and Management Subjects Based on Technology Acceptance Model. *International Journal of Economics, Business and Accounting*, 3(3), 185-195. <https://doi.org/10.29040/ijebar.v3i03.491>

24. Houtz, L.E. & Gupta, U.G. (2001). Nebraska High School students' computer skills and attitudes. *Journal of Research on Computing in Education*, 33(3), 316-328. <https://doi.org/10.1080/08886504.2001.10782317>
25. Isaac, O., Abdullah, Z., Ramayah, T., Mutahar, A. M., Alrajawy, I. (2018). Integrating User Satisfaction and Performance Impact with Technology Acceptance Model (TAM) to Examine the Internet Usage Within Organizations in Yemen. *Asia Journal of Information Technology*, 17(1), 60-78. <https://doi.org/10.3923/ajit.2018.60.78>
26. Jackson, L., Ervin, K., Gardner, P. & Schmitt, N. (2001). Gender and the Internet: women communicating and men searching. *Sex Roles*, 44(5), 363- 379. <https://doi.org/10.1023/A:1010937901821>
27. Kabilan, M. K. (2005). Online professional development: A literature analysis. *Journal of Computing in Teacher Education*, 21(2), 51-59. <https://files.eric.ed.gov/fulltext/EJ876878.pdf>
28. King, K.P. (2011). Professional Learning in Unlikely Spaces: Social Media and Virtual Communities as Professional Development. *International Journal of Emerging Technologies in Learning (iJET)*, 6(4), 40-46. <https://doi.org/10.3991/ijet.v6i4.1765>
29. Krampitz, J., Tenschert, J., Furtner, M., Simon, J., and Glaser, J. (2022). Effectiveness of online self-leadership training on leaders' self-leadership skills and recovery experiences. *Journal of Workplace Learning*, 35 (9), 66-85. DOI 10.1108/JWL-10-2022-0125
30. Liljenberg, M. (2021). A professional development practice to enhance principals' instructional leadership – enabling and constraining arrangements. *Journal of Professional Capital and Community*, 6(4), 354-366. <https://www.emerald.com/insight/2056-9548.htm>
31. Lokman Tahir, Mohd Nihra Haruzuan Mohd Said, Khadijah Daud, Shafeeq H Vazhathodi & Aqeel Khan. (2016). The benefits of headship mentoring: An analysis of Malaysian novice headteachers' perceptions. *Educational Management Administration & Leadership*, 44(3), 420-450. <https://doi.org/10.1177/1741143214549973>
32. Luan, W. S., Abdul Aziz, S., Mohd Yunus, A. S., Sidek, Z., Abu Bakar, K., Meseran, H. & Atan, H. (2005). Gender Differences in ICT Competencies among Academicians at Universiti Putra Malaysia. *Malaysian Online Journal of Instructional Technology (MOJIT)*, 2(3), 62-69. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.95.4120&rep=rep1&type=pdf>
33. Malaysia (2013). *Malaysian Education Blueprint 2013-2025*. Putrajaya: Ministry of Education Malaysia.
34. Mark, H.M & Printy, S.M. (2003). Principal Leadership and School Performance: An Integration of Transformational and Instructional Leadership. *Educational Administration Quarterly*, 39(3), 370-397. <https://doi.org/10.1177/0013161X03253412>
35. Ministry of Education Malaysia (2022). *Requirement for NPQEL Candidates*. Retrieved on July 24, 2021 from <https://www.moe.gov.my/en/pemberitahuan/announcement/permohonan-mengikuti-program-kelayakan-profesional-pemimpin-pendidikan-kebangsaan-atau-national-professional-qualification-for-educational-leaders-npqel-bagi-calon-tambahan-ambilan-2-tahun-2020>.
36. Mitchell, R.M., Kensler, L.A.W & Tschannen-Moran, M. (2015). Examining the Effects of Instructional Leadership on School Academic Press and Student Achievement. *Journal of School Leadership*, 25(2), 223-251. <https://doi.org/10.1177/105268461502500202>
37. Ng, A.Y.M. (2017). School leadership preparation in Malaysia: Aims, content and impact. *Educational Management Administration & Leadership*, 45(6), 1002-1019. <https://doi.org/10.1177/1741143216662922>
38. Ng, S. & Szeto, S.E. (2016). Preparing school leaders: The professional development needs of newly appointed principals. *Educational Management Administration & Leadership*, 44(4), 540-557. <https://doi.org/10.1177/1741143214564766>
39. Ong, C.S. & Lai, J.Y. (2006). Gender differences in perceptions and relationships among dominants of e-learning acceptance. *Computers in Human Behavior*, 22(5), 816-829. <https://doi.org/10.1016/j.chb.2004.03.006>
40. Oplatka, I. & A. Lapidot, A. (2018). Novice principals' perceptions of their mentoring process in early career stage: the key role of mentor-protégé relations. *Journal of Educational Administration and History*, 50(3), 204-222. <https://doi.org/10.1080/00220620.2017.1420044>
41. Papadakis, S., Kalogiannakis, M., Sifaki, E. & Vidakis, N. (2018). Evaluating Moodle use via Smart Mobile Phones. A case study in a Greek University. *EAI Endorsed Transactions on Creative Technologies*, 5(16), 1-9. <https://doi.org/10.4108/eai.10-4-2018.156382>
42. Peter-Hawkins, A. L., Reed, L. C., & Kingsberry, F. (2018). Dynamic Leadership Succession: Strengthening Urban Principal Succession Planning. *Urban Education*, 53, 26-54. <https://doi.org/10.1177/0042085916682575>
43. Qazi, A., Hardaker, G., Ahmad, I. S., Darwich, M., Maitama, J. Z. & Dayani, A. (2021). The Role of Information & Communication Technology In E-learning Environments: A Systematic Review. *IEEE Access*, 9, 45539-45551. <https://doi.org/10.1109/ACCESS.2021.3067042>
44. Ryan, S., Scott, B., Freeman, H., & Patel, D. (2000). *The Virtual University: The Internet and Resource-Based Learning*. London: Routledge Publishing Inc.

45. Schols, M. (2012). Examining and Understanding Transformative Learning to Foster Technology Professional Development in Higher Education. *International Journal of Emerging Technologies in Learning (IJET)*, 7(1): 42–49. <https://doi.org/10.3991/ijet.v7i1.1764>
46. Sitzmann, T., Ely, K., Bell, B.S. & Bauer, K.N. (2010). The Effects of Technical Difficulties on Learning and Attrition During Online Training. *Journal of Experimental Psychology Applied*, 16(3), 281–292. <https://doi.org/10.1037/a0019968>
47. Spillane, J.P. & Lee, L.C. (2014). Novice School Principals' Sense of Ultimate Responsibility: Problems of Practice in Transitioning to the Principal's Office. *Educational Administration Quarterly*, 50(3), 431-465. <https://doi.org/10.1177/0013161X13505290>
48. Syed Othman, S. A., Atan, H., Guan, C.K. (2005). The Open University Malaysia learning management system: A study of interaction in the asynchronous forum board. *International Journal Instructional Technology Distance Learning*, 2(1):3–10. https://www.academia.edu/913046/The_Open_University_Malaysia_learning_management_system_a_study_of_interaction_in_the_asynchronous_forum_board
49. Tsai, C., & Lin, C. (2004). Taiwanese adolescents' perceptions and attitudes regarding the internet: exploring gender differences. *Adolescence*, 39 (156), 725-34. <https://ir.nctu.edu.tw/handle/11536/14421>
50. Walker, A. & Qian, H. (2006). Beginning principals: balancing at the top of the greasy pole. *Journal of Educational Administration*, 44(4), 297-309. <https://doi.org/10.1108/09578230610674921>
51. Wang, Y.& Liao, Y. (2007). The conceptualization and measurement of m-commerce user satisfaction. *Computers in Human Behavior*, 23(1), 381-398. <https://doi.org/10.1016/j.chb.2004.10.017>
52. Wang, Y.S. (2008). Assessing E-commerce systems success: A respecification and validation of the DeLone and McLean model of IS success. *Information System Journal*, 18, 529-557. <https://doi.org/10.1111/j.1365-2575.2007.00268.x>