# Technology as a Motivational Factor for Using Online Professional Development for Saudi Teachers

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**Summary**
The study examined to what degree technology could enhance teachers and supervisors to use online professional development (OPD) in Saudi Arabia. The quantitative approach was employed, and the sample was 421 teachers and supervisors who are working in Makkah School district. The results show that technology highly motivates participants to use OPD. The results, also, show that gender and teaching experience have no significant difference on participants' responses.

***Keywords:*** *Motivational Factor, Saudi Teachers, online professional development (OPD)*

## Introduction

In 1954, according to the Department of Training and Scholarship [1], the Ministry of Education (MOE) started offering PD programs for teachers. In that year, the number of teachers who attended training programs reached 1,025. The training programs included courses in various subjects, including psychology and teaching methods, and were conducted during summer breaks. Those programs were offered to teachers taking into account their specialty areas and teaching methods (as cited in [2]).

Between 1955 and 1973, all training programs were administered directly by the MOE. Those programs could not be carried out across the country because of the shortage of trainers. Consequently, most teachers did not attend such programs. Moreover, since the majority of teachers had lower levels of training in the teaching profession, the MOE offered long-term scheduling of six months to three years for those training programs (as cited in [2]).

In 1974, the Department of Training and Scholarship was established as the agency responsible for teacher professional development. This department aims to achieve continuous professional development for teachers, to improve teachers' performance in the educational process, to increase teachers' positive attitudes toward the teaching profession, and to encourage teachers to attend training programs [1].

Three years later, the *Guide to Educational Training and Scholarship* issued by the MOE was approved by the Ministry of Civil Service. It consisted of 32 line statements aimed at improving the organization of training programs for teachers. It also asserted the right for all teachers across the country to attend training programs, implying that the Department of Training and Scholarship should offer training programs in every region in Saudi Arabia. Therefore, in 1980, the Department of Training and Scholarship began implementing training programs in the majority of the regions. However, the agency could not provide every region with training programs due to the increase in the number of teachers over the years. As a result of this dilemma, the department decided to establish educational training centers in order to reinforce and continue training teachers in these areas (as cited in [2]).

Later, the Department of Training and Scholarship expanded its centers across the country. As a result, it established about 45 educational training centers, each of which served teachers who were teaching in that geographic area. Otherwise, the role of the Department of Training and Scholarship has become supervisory rather than active in designing and implementing professional development opportunities (as cited in [2]).

Most recently, the MOE adopted King Abdullah's project to develop the educational system in Saudi Arabia [3]. This project aims at developing teachers' knowledge and practice in classrooms, improving curricula, and integrating technology into the educational environment [4].

Technological tools such as Web 2.0 have benefited educators in various fields, who have been encouraged to integrate them into their teaching. As such, technology can play a significant role in motivating learners [5,6]. As Khe Foon [7] wrote, "technology is also considered to be another determinant for success of online communities in supporting members' professional development" (p. 442). However, learners can have negative reactions to such tools if, among other reasons, the infrastructure is weak or the students are unfamiliar with the online tools. Such

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weaknesses can hinder learning [8,9]. Khe Foon [7] stated that there are three elements related to technology: (1) how easy it is to use, (2) how reliable it is, and (3) the ability for learners to access current postings.

Kao, Wu and Tsai [10] indicated that teachers who have higher levels of competence with and positive beliefs about the Internet tend to react positively to OPD. Likewise, Stone-MacDonald and Douglass [11] conducted a study to investigate the trainers and early educators' responses to online and technology-mediated professional development courses. The results show that having the technological skills required to use the OPD courses made some early educators feel more confident with this method of professional development.

In the Saudi context, Albrkhil [12] conducted a study that aimed to investigate the relationship between teachers' perception of computer skills and taking online professional development. The findings indicated that the average of those taking online courses increased when the average of computer skills perception increased. Similarly, Ziyadah [13] carried out a study on Saudi female faculty, administrators, and graduate assistants to determine the aspects that enhanced or hindered them from participating in online environments in five Saudi universities. One of the results was that the participants believed that the motivating component to using online education was in the personal motivation to use technology.

**Population and Sample**

The theoretical population of this study consisted of Saudi teachers and supervisors [5, 14] who possess basic Internet skills [10]. These participants were selected based on their familiarity with the potential difficulties to be encountered while utilizing OPD. Therefore, these respondents could confidently respond to the instrument and provide accurate information concerning their motivations for participating in an OPD program.

The accessible population consisted of teachers and supervisors working in the Makkah Area School District [10]. This region was selected for several reasons. First, budgetary constraints precluded the possibility of conducting a nationwide study. Second, the fact that the researcher is employed at a university located in the targeted region simplified the collection of data from these teachers. Third, the chosen region is large and diverse, made up of both rural and urban areas with varying degrees of access to technology, while being culturally similar to other regions of the country.

The sampling method was a combination of multiple cluster sampling and simple random sampling. According to Gliner et al. [15], cluster sampling is "useful when the population is spread out geographically" (p. 121). Because Saudi Arabia covers such an enormous area, it was divided into western, eastern, northern, southern, and central regions for the purposes of this study. The western region was targeted and subdivided into school districts, which included the Makkah Area School District. According to School Districts in Saudi Arabia [16], the theoretical population number of supervisors and teachers in Makkah School district is 25,773. The sample suggested by previous studies was anywhere between 100 and 500 participants [10, 17, 18, 19, 20]. In addition, to find the exact number of participants, I utilized a website called Sample Size Calculator which indicated that 379 participants are sufficient to conduct the study. For these reasons, 421 participants were selected from the Makkah school district. During the sample selection, the demographics to be examined were taken into account, which are gender, position, teaching experience, and level of degree.

**Instrumentation**

Statements adapted from three instruments were employed [21, 22, 23, 24]. Permission from the authors for utilizing them was obtained. Rattray and Jones [25] stated that questionnaires can be used to measure knowledge, attitudes, emotion, cognition, intention, or behavior, which supports the researcher's decision to choose the questionnaire as the instrument used in this study.

The instrument was divided into three sections. The first section was devoted to gathering information about the participants, such as their gender and experience. Each participant's experience was assessed in terms of the number of years he or she has spent teaching: 0-5 years, 6-10 years, 11-15 years, and more than 15 years.

The second section of the questionnaire dealt with motivation as the independent variable, and OPD as the dependent variable. It consists of 30 statements divided into three subsections labeled convenience, collaboration, and technology. Technology, which includes nine items. These statements were used in previous studies [21,23]. Cronbach's alpha was used to measure internal consistency of the instrument in the two studies and the values were acceptable. The responses were recorded using a five-point Likert scale with possible responses ranging from "Strongly disagree" to "Strongly agree."

**The Results**

**Research Question 1: To what degree does technology motivate Saudi teachers and supervisors to use OPD?**

To answer this research question, the sample responses were analyzed and are depicted in the Table 1.

Table 1 *Participant Responses Regarding the Degree to Which Technology Motivates Saudi Teachers and Supervisors to Use OPD*.

| | | ST. agree | Agree | Neutral | Disagree | ST. disagree | Mean | ST. Deviation |
|---|---|---|---|---|---|---|---|---|
| Honestly, I do not know. I feel I am wasting my time using technology in OPD. (reverse) | F | 89 | 194 | 61 | 43 | 34 | 3.62 | 1.16 |
| | % | 21.1 | 46.1 | 14.5 | 10.2 | 8.1 | | |
| I once had good reasons for learning to use technology. However, I now wonder if I should continue with in OPD. (reverse) | F | 25 | 129 | 98 | 111 | 52 | 2.90 | 1.14 |
| | % | 5.9 | 30.6 | 23.3 | 21.8 | 12.4 | | |
| I would use technology in OPD because I experience enjoyment and satisfaction while using it | F | 135 | 221 | 44 | 12 | 3 | 4.14 | 0.11 |
| | % | 32.1 | 53.9 | 10.5 | 2.9 | 0.1 | | |
| I would use technology in OPD because I think that it will help me better prepare my students for future careers | F | 148 | 216 | 45 | 8 | 4 | 4.18 | 0.11 |
| | % | 35.2 | 51.3 | 10.1 | 1.9 | 1.0 | | |
| I would use technology in OPD because I could communicate my own ideas to others | F | 113 | 205 | 36 | 5 | 2 | 4.29 | 0.11 |
| | % | 41.1 | 48.1 | 8.6 | 1.2 | 0.5 | | |
| I would use technology for the enjoyment I experience while using a new tool in my professional development | F | 144 | 218 | 41 | 14 | 4 | 4.15 | 0.80 |
| | % | 34.2 | 51.8 | 9.1 | 3.3 | 1.0 | | |
| I would use technology in OPD to prove to myself that I am capable of using it | F | 132 | 209 | 55 | 20 | 5 | 4.05 | 0.86 |
| | % | 31.4 | 49.6 | 13.1 | 4.8 | 1.2 | | |
| I would use technology in OPD in order to be promoted | F | 83 | 148 | 106 | 10 | 14 | 3.51 | 1.09 |
| | % | 19.1 | 35.2 | 25.2 | 16.6 | 3.3 | | |
| I would use technology in OPD for the enjoyment I experience when I discover new things and ways of teaching | F | 118 | 208 | 22 | 11 | 2 | 4.30 | 0.13 |
| | % | 42.3 | 49.4 | 5.2 | 2.6 | 0.5 | | |
| I would use technology for OPD for the enjoyment that I experience when I exceed my personal accomplishments | F | 188 | 196 | 26 | 9 | 2 | 4.33 | 0.13 |
| | % | 44.1 | 46.6 | 6.2 | 2.1 | 0.5 | | |
| Total grand mean | | | | | | | 3.95 | 0.50 |

he results in Table 1 illustrate perceptions of the participants regarding the extent technology motivates Saudi teachers and supervisors to use OPD. The overall grand mean value was 3.95. These statistics offer the conclusion that technology has a significant effect on motivating Saudi teachers and supervisors to use OPD.

The statement "I would use technology for OPD for the enjoyment that I experience when I exceed my personal accomplishments" had the highest mean score of all the statements related to technology at 4.33. The participants who were in agreement with this statement made up 91.3% of the sample, while the remaining percentage represents the respondents who held negative views or no clear opinion. On the other hand, "I once had good reasons for learning to use technology, however, I now wonder if I should continue with in OPD." received the lowest mean score at 2.90, which could cause one to conclude that the participants had different opinions about this statement. Table 1 shows that 36.5% of the respondents had negative views, whereas 23.3% of them had no clear opinion. The remaining percentage represents those who were in agreement with the statement. The other technology-related statements will be explained in order based on their mean scores. The second highest mean score correlates to the statement "I would use technology in OPD for the enjoyment I experience when I discover new things and ways of teaching." Its mean score was 4.30. According to Table 1, 91.1% of the participants were in agreement with the statement, whereas 8.3% had no clear opinion or had negative views.

"I would use technology in OPD because I could communicate my own ideas to others" had a mean score of 4.29. The majority of the participants (89.8%) were in agreement with the statement, but the remaining percentage had no clear opinion or had negative views.

Mean scores of the statements "I would use technology in OPD because I think that it will help me better prepare my students for future careers," "I would use technology for the enjoyment I experience while using a new tool in my professional development," and "I would use technology in OPD because it offers me enjoyment and satisfaction" were 4.18, 4.15, and 4.14 respectively. Although the majority of the participants were in agreement with the statements, approximately 86% across the board, there was a difference with respect to the mean scores. These different mean scores might be a result of the different frequencies for each statement. In addition, the remaining 14% of the participants held negative views or specific opinions.

The mean score of the statement "I would use technology in OPD to prove to myself that I am capable of using it" was 4.05. The majority (81%) of the participants strongly agreed or agreed with the statement. However, the remaining percentage of participants either made no clear decision or had negative views.

"Honestly, I do not know. I feel I am wasting my time using technology in OPD" received a mean score of 3.61. In general, this means that most participants (61.2%) were in disagreement with the statement. However, 18.3% were in agreement and he remaining percentage (14.5%) represents those participants who had no clear opinion.

The last statement in this dimension was "I would use technology in OPD in order to be promoted", which received a mean score of 3.51. Even though it appears that this statement is one of the lower in this dimension, the statistics in Table 1 show that more than half of the participants (approximately 54.9%) were in agreement with the statement. However, 19.9% strongly disagreed or disagreed and the remainder represented those subjects who did not make a clear decision.

**Research Question 2: To what degree does gender impact participant responses regarding the use of online professional development?**

To answer this research question, t-test statistics were analyzed.

Table 2 *Results of T-test to Examine the Impact of Gender Regarding the Effect of Technology on Online Professional Development.*

| | Gender | Sample size | Mean | SD | T-test | Degrees of freedom | P-value |
|---|---|---|---|---|---|---|---|
| Technology | Male | 258 | 3.95 | 0.49 | -0.007 | 419 | 0.99 |
| | Female | 163 | 3.95 | 0.51 | | | |

Table 2 shows that the P-values for the t-test statistics are greater than the significance level (0.05), which indicates that there are no statistically significant differences between responses of males and females regarding technology that affects Saudi teachers and supervisors to use OPD. Furthermore, this means gender is not a factor regarding.

**Research Question 3: To what degree do years of teaching experience and level of degree impact participant responses regarding the use of OPD?**

Both ANOVA and Kruskal –Wallis tests were performed in order to determine whether or not there was a significant effect from years of experience or level of degree on participants' responses regarding use of OPD.

**Table 3** Analysis of Variances (ANOVA) Test to Examine the Impact Years of Experience Has Regarding the Convenience, Collaboration and Technology in Online Professional Development.

| Online professional development variables | Source of variation | Sum of squares | Degrees of freedom | Mean square | F-statistics | P-value |
|---|---|---|---|---|---|---|
| Technology | Between groups | 0.542 | 5 | 0.108 | 0.437 | 0.82 |
| | Within groups | 103.007 | 415 | 0.248 | | |
| | Total | 103.549 | 420 | | | |

the results do not show any significant differences between sample responses regarding the impact of technology on OPD. This means that variations in years of experience have no impact on the use of technology variables on OPD.

**Discussion**

The overall mean score for technology is 3.95. This means that Saudi teachers and supervisors believe that issues related to technology significantly affect their motivation to use OPD. This conclusion was confirmed by the participants who responded to the open-ended questions intended to uncover motivational factors not addressed by the other instrument questions. In other words, 67 of them made comments related to the impact of technology in using OPD.

This result is compatible with previous studies in the literature [5, 6, 17, 26, 27, 28]. In addition, it is also in agreement with Khe Foon [7], who states that in online settings, technology is one of the essential successful components that encourages members to develop themselves.

The findings indicate that Saudi teachers and supervisors are willing to use technology in OPD in order to learn and uncover new things related to their fields. It is an indicator that OPD programs can be an appropriate method for Saudi teachers and supervisors when training programs are provided through applications such as Skype. This is consistent with the findings of Kiriakidis and Hasty [29]. They pointed out that Skype has an impact on the participants and helps them to develop themselves in the leadership field. In addition, we can infer that delivering OPD programs through MOOC might enhance their motivation because of its various tools, such as discussion

boards and live chat sessions. This conclusion is supported by other studies [30, 31].

Regarding gender, the results indicate that there is no significant difference among participants' responses. It means that both male and female Saudi teachers and supervisors believed that technology largely motivated them to use OPD. This conclusion is consistent with the previous studies in the literature [20, 32].

Regarding technology, the results indicate no significant differences among participants with respect to their years of teaching experience related in using OPD. This means that all participants, regardless of how long they have been teaching, believed that technology motivates Saudi teachers and supervisors to participate in ODP. This conclusion is consistent with other studies [33, 34, 35, 36].

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