



Research Article

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Accelerated Learning and Exploring the Future of Professional Development

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Abstract

This study aimed to reveal faculty members' impressions of the effectiveness of a sustainable professional development model derived from accelerated learning principles. The semi-experimental approach and its approved descriptive and analytical approaches collect data through a questionnaire directed at a study sample of 55 members from the Faculty of Education at Prince Sattam Bin Abdulaziz University in Saudi Arabia. The study used descriptive statistics to describe frequencies, ratios, means, and standard deviations, and Cronbach's alpha coefficient, Pearson correlation coefficient, independent-samples t-test, and one-way analysis of variance (ANOVA). The study results indicate a consensus about the model's effectiveness as applied at the institutional and individual levels, and there are no statistically significant differences in impressions due to gender, age, work experience, or academic degree. The study reached the conclusion that examining the applied model for professional development based on accelerated learning principles showed that investing in information and communication technology was effective within the study's limits. However, to evaluate the effectiveness of the application, the study recommended that the researchers should evaluate all dimensions of the professional development model in different contexts and enrich the educational research library with more professional development studies and models for applying the accelerated learning principles.

Keywords: Accelerated learning, adult education, sustainable professional development, brain-based learning, faculty development

1. Introduction

1.1 Professional development

Professional development in universities is a fundamental guarantee for high-quality educational practices. The most important area for this is teaching, which is vital for achieving professional standards and accreditation (Friedman & Phillips, 2004).

On top of planning for the future of education, university faculty members' professional development provides support with the expertise and skills necessary to fulfil the responsibilities and

roles needed to face these transformations (Abdelazim & Abdel Fattah, 2017; Celuch, Bourdeau, Khayum, & Townsend, 2017). Within this framework, many international organizations such as the Regional Centre of Quality and Excellence in Education (RCQE), UNESCO, and planners have created professional development plans in education and established global centres and associations to create models for professional development directed at future problems.

The concept of professional development has evolved according to the evolution of its use and the development of the visions from which the use emerged, which related to the development of the conditions and the need to maintain harmony. Its earliest use appeared as an indirect reference to professional development as a process related to the educational institution's needs, not the teacher's, in terms of training its members to carry out their roles to achieve the institution's goals through the design of specific programmes and activities (Bolam et al., 2005; Guskey, 2000).

Shulman (2004) investigated the professional development of science and mathematics teachers. He found that faculty members and teachers should gain knowledge, become skilled in their performance, and be active members in their professional communities as they develop their practices in their professional communities through observation, professional discussion, experimentation, and research. Evans (2014, p. 180) added a new dimension to professional development, that enhances the individuals' professionalism to a degree of sustainability. The current study paid attention to Schulman and Evans's concept of sustainable professional development in choosing a model that investigates the sustainable professional development model's effectiveness.

1.2 Features of the desired professional development models:

Many studies have called for professional development models and practices and an examination of their effectiveness (Gallego, Rueda, & Moll, 2005; Gravani, 2007; Hodkinson & Hodkinson, 2005; Mazmanian, 2005; McRae, Ainsworth, Groves, Rowland, & Zbar, 2001; McWilliam, 2002). Some studies have also discussed ideas and conditions for developing these models (Abdelazim & Abdel Fattah, 2017; Fuller, 2001; Lee & Horsfall, 2010; Nicholson, 2018; RCQE, 2019; Schornack, 2016; UNESCO, 2020; Webster-Wright, 2009). Table (1) clarifies the most important criticisms and features to consider for desired professional development models.

Table 1: Features of the desired professional development programmes versus traditional programmes

| Point of comparison | Traditional professional development models (TPD) | Desired professional development models (DPD) |
|--|--|---|
| Methodology and identity | Lack clarification of the methodology and the theoretical identity | Rely on educational theories Promote adult learning, and accelerated learning theories |
| Continuing and sustainability | Institute unsustainable training programmes | Effective professional development is based on continuing professional learning Aim to keep up with the sustainability of the cognitive acceleration of the era. |
| Flexibility and compatibility with context | Include the departure in all details (goals, means, and methods) from sufficient flexibility to keep pace with global, regional, and local developments and to face the repercussions of disasters and crises on education Do not offer solutions to the challenges arise from the divergence of the places of the target audience's places for training or increase their numbers. | Have a flexible and efficient design to suit the surrounding conditions on all levels (global, regional, local, institutional, and individual) Can work under any circumstances, such as crises, disasters, and epidemics |
| Participation and Interaction | Many traditional professional development practices still focus on delivering content rather than enhancing learning Include indoctrinating, restrictive, non-interactive methods that lack diversity, opportunities for self-experimentation, and free opportunities for creativity | Focus on participation, interaction, and respect for the privacy of the individual's developmental needs and different learning styles. Provide alternatives to offer opportunities for self-selection and create a special experience and path of private development |

| Point of comparison | Traditional professional development models (TPD) | Desired professional development models (DPD) |
|---------------------|---|--|
| Costs | Have high costs compared to the return | Are economic while maintaining effectiveness |
| Evaluation | Have weak training evaluation methods. | Offer a multiplicity of forms, sources, and levels of evaluation for all stages of professional development and pay attention to measuring impact to develop models that ensure the sustainability of professional development |
| Technology use | Limit technology use | Invest in information and communication technologies in a way that transforms professional development into an intelligent pattern consistent with the requirements of the knowledge revolution |

1.3 Accelerated learning

A global trend of applying an Accelerated Learning Model in Education and Training in educational and training institutions has emerged; this model depends on time', adult education, and brain-based learning principles (Yaniawati & Kartasasmita, 2017). (Petersen, 2019) focused on speed and efficiency in professional development by presenting it as a faster acquisition of skills and knowledge. (Meier, 2008, p. 49) presented it as a "creation process" and described it as "the latest modern research findings'. Based on the brain study results and how learning occurs through exploiting the senses, employing simple technological means ensures the flexibility to adapt to the changing learning context and the effective participation of the learner in a practical and enjoyable experience that delivers the best results. Centres for learning and teacher training have applied this model, such as the Dave Meyer Centre for Accelerated Learning, the International Alliance for Learning in the United States of America, and the Dubai Accelerated Centre for Accelerated Learning (Al-Mallah, 2015; Learning Centre, 2012). The model's ideas support remote, accelerated solutions to confront disasters such as the coronavirus (COVID-19) in education and professional development for teachers (UNESCO Office in Beirut and Regional Centre for Educational Planning, 2020).

Mayer (2008) explained the accelerated learning principles within the contexts of a positive environment, active participation, cooperation, and diversity, as "Figure 1" summarizes, so that we do not need to reduce the principles to a philosophy of learning. Analyzing and studying these principles shows that they are consistent with the desired characteristics of professional development: theory-based, flexible, sustainable, quick, promoting economic and technological investment) as defined by the literature. Table 1 offers further explanations of these characteristics.

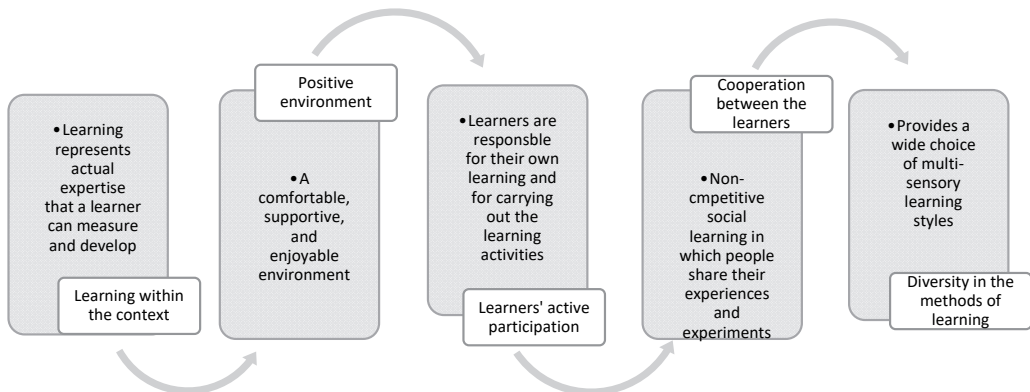


Figure 1: Meyer (2008) principles for accelerated learning

1.4 Criticisms level against the accelerated learning model

Some criticisms directed at the accelerated learning model include a preoccupation with the model's principles and the meaningful learning in its formalities and techniques, the use of modern technological methods that are empty of content, and an exaggerated expectation of the model's effectiveness. These cautious criticisms ensure the current study methodology and objectives.

The new model requirements are based on the fear that doing so would jeopardise their status, career, and academic stability. They justified their argument by arguing that the quality of the content application was related to increasing the communication time between the teacher, the learner, and the content, which is a characteristic not found in the accelerated learning model, and the speed of the preparation time leads to inconsistent and shallow learning content (Lee & Horsfall, 2010; Wlodkowski, 2003).

Some cognitive researchers emphasized the relationship between learning and application levels and supported the social relationships provided by an accelerated learning environment. Rather than emphasizing the model's relation to the duration of contact with the teacher, as in the traditional programme, the cognitive researchers emphasized influencing factors of the learner's abilities and motivations (Ratey, 2001; Wlodkowski, 2003).

1.5 Research problem

Previous studies criticized traditional professional development programmes (Cevero, 2001; Gallego et al., 2005; Gravani, 2007; Hodkinson & Hodkinson, 2005; Mazmanian, 2005; McRae et al., 2001; McWilliam, 2002). Some other studies have confirmed that the institutions' role in setting up modern models for professional development (Abdelazim & Abdel Fattah, 2017; Fuller, 2001; Lee & Horsfall, 2010; Nicholson et al., 2018; RCQE, 2019; Schornack, 2016; UNESCO, 2020). They also indicated the possibility of achieving accelerated learning with flexibility, sustainability, speed, and economic and technological investment (Al-Mallah, 2015; Meier, 2008; Nicholson et al., 2018; Servoss et al., 2017; Wlodkowski, 2003). This study investigated the effectiveness of a model for a professional development programme based on accelerated learning principles from the viewpoint of educational faculty members at Prince Sattam bin Abdulaziz University. The following questions identify the study problem:

RQ1: Is the professional development model based on accelerated learning principles effective at the institutional or faculty member level from their viewpoint?

RQ2: Are there statistically significant differences among the study sample opinions due to age, gender, job experience, and academic rank variables?

2. Method and Procedure

The study used a quasi-experimental, descriptive, and analytical method, whereby a model for professional development based on accelerated learning principles was prepared and applied to develop the teaching skills of the Education Faculty staff. After the approval of the study's design and reviewing the literature related to accelerated learning, which heavily relies on Meyer (Meyer, 2008), the researchers identified the model objectives, set an implementation plan (Table 2), and prepared focused learning materials for professional development in multiple forms (Table 2). Finally, the researchers presented the model to some educational expert referees to express their views on the model's alignment with accelerated learning principles, the appropriateness of the learning materials to the training themes and objectives, and the content accuracy. The researchers modified some components of the program due to the experts' recommendations.

Table 2: Designing a professional development model in the study according to the principles of accelerated learning

| | |
|---|--|
| Programme's Aims: (General Objective): Provide a model for developing professionals that avoid the deficiencies of traditional programmes | Programme' axes: Teaching design and planning Teaching strategies Teaching evaluation |
| (Interim Objectives): Provide faculty members with the knowledge and skills needed to design and plan to teach Acquire faculty knowledge, experiments, and application models necessary to develop faculty members' implementation of teaching Expose faculty members to recent evaluation practices | |
| Procedures for implementing models (technical and administrative): Preparation (timed plan-learning materials design-adjudication) Applying the materials, which includes: Initiation and show stage Training Performance Evaluation | Learning Alternatives in the Programme Focused learning materials Infographics Video library Online books Online platform links supporting the expansions |
| Implementation means, Text Messages WhatsApp Messages Twitter Account E-mail Website | |

The researchers designed a questionnaire to survey faculty members' opinions, reveal their impressions of the model's effectiveness at the individual and institutional levels, and calculate its validity and reliability. After applying for the professional development programme, the researchers distributed the questionnaire informally via e-mail to the study population and received the responses in two weeks.

2.1 Study population

The study population included all the Education faculties' members at Prince Sattam bin Abdulaziz University, consisting of 166 faculty members, but only 55 faculty members of various ranks and academic experience levels (professor, associate professor, assistant professor, and lecturer) responded. As Table 3 shows, the respondents varied in work experience, gender, and age.

Table 3: Frequencies and percentages of demographic variables

| Variable | Response | Repetition | Percentage |
|----------------|---------------------|------------|------------|
| Gender | Male | 8 | 14.5% |
| | Female | 47 | 85.5% |
| | Total | 55 | 100.0% |
| Age | Under 35 years old | 4 | 7.3% |
| | 35-44 years old | 34 | 61.8% |
| | 45-54 years old | 17 | 30.9% |
| | Total | 55 | 100.0% |
| Job experience | Less than 5 years | 4 | 7.3% |
| | 5-10 years | 31 | 56.4% |
| | 11-15 years old | 12 | 21.8% |
| | 16 years and over | 8 | 14.5% |
| Total | 55 | 100.0% | |
| Academic rank | Lecturer | 11 | 20.0% |
| | Assistant Professor | 36 | 65.5% |
| | Co-Professor | 8 | 14.5% |
| | Total | 55 | 100.0% |

2.2 Application

Mayer (2008) emphasized: "Applying the accelerated learning model means creating structural, not cosmetic, changes so that the trainees transform from a container that the trainer fills into a fire

waiting to be ignited. The present study applied the following stages to realise this philosophy:

2.3 Initiation and show stage

The researchers presented the importance of the programme, its objectives, the expected benefit to arouse the trainees' curiosity and create a positive environment, and the alternatives for each topic in the learning materials to the faculty members through different means of communication.

2.4 Training

Training is the beginning of the actual learning process; the researchers asked the participants to experiment with what they learned and integrate the theoretical knowledge with actual experience and personal practice, whereby each group (department) set two sessions for each learning topic: The first session was designed to debate and exchange points of view about the proposed opinions in the learning materials and to enrich the scope of available alternatives by summarising and exchanging learning materials through a special icon on the university's webpage dedicated to a programme titled "Share Knowledge."

In the second session, some faculty members apply the learning materials with their peers and researchers as a simulation process. Peers discussed the trainees' performances and gave them feedback. Then, each trainee prepared a report that reflects his impressions (self-reflection) according to the special form shown in "Figure 1"

At this stage, the researchers provide multiple opportunities for communication to facilitate engagement in deeper learning, activate critical thinking, promote self-directed learning, and encourage an academic mind-set.

Kingdom of Saudi Arabia
Ministry of Education
Prince Sultan Bin Abdulaziz University
College of Education
Knowledge Management Unit

Application Report of one of the learning materials published
by the Knowledge Management Unit

1- Main Information

| Element | Element |
|---------------------|---------------------|
| Full Name | Academic Degree |
| Academic Department | Specialization |
| Phone Number | University Email |
| Application Date | University Semester |
| Subject | Section |

2- Information about the application and the applied learning subject

| | |
|--|--|
| Applied Learning Subject | |
| The subject in which the learning material was applied | |
| Intended Learning Outcomes | |
| References and sources cited in planning the application | |
| Description of the application experience you have performed | |
| The impact that you have felt to apply the learning material | |
| Application Function Images (or documents) | |

Figure 2: Application Report Form

2.5 Performance

The faculty members circulated their experiences and adopted their application more broadly during their actual teaching practices, consolidating strengths and overcoming obstacles that appeared during the experimentation process, whether by reading further on the subject of learning or referring to researchers.

At this stage, the faculty members took what they learned in one situation (training stage) and applied it to another.

2.6 Evaluation

Researchers determined performance evaluation through the questionnaire to survey the participating faculty members' opinions and reveal their impressions about the model's effectiveness.

2.7 Statistical methods

The study used descriptive statistics to describe frequencies, ratios, mean, and standard deviation.

- The study used Cronbach's alpha coefficient to measure the questionnaire's statistical stability.
- The study used the Pearson correlation coefficient to confirm the questionnaire's validity and internal consistency.
- The study used the Independent-Samples T-Test to indicate the differences between the study sample's opinions due to such variables as gender.
- The study used one-way analysis of variance (ANOVA) to indicate the differences between the study sample's opinions due to variables such as age, job experience, and academic rank.

3. Data Analyses

3.1 The questionnaire Validity and reliability

Some specialists in the Curriculum and Instruction and Psychology Departments reviewed the questionnaire's validity. If they did not reach 75% of agreement on an item, the researchers would delete the item.

The final questionnaire contained 21 items.

After confirming the study tool validity, the researchers calculated the Pearson correlation coefficient to discover its internal validity and the correlation coefficient between the degrees of each statement with the axis's total score. Table 4 presents the resulting data.

Table 4: Correlation coefficients between the degrees of each phase with the total degree of the axis to which the phase belongs

| Axis Sub axis | The extent to which the model is effective in developing the capabilities of faculty members | | | | |
|------------------|--|-------------------|----------------|--------------------------------|-------------------|
| | Institution | | Faculty member | | |
| Phrase No. | Phrase relates to the sub-axis | Probability value | phrase No. | phrase relates to the sub-axis | probability value |
| 1 | .604** | .000 | 11 | .634** | .000 |
| 2 | .601** | .000 | 12 | .720** | .000 |
| 3 | .417* | .014 | 13 | .731** | .000 |
| 4 | .619** | .000 | 14 | .772** | .000 |
| 5 | .720** | .000 | 15 | .773** | .000 |
| 6 | .752** | .000 | 16 | .708** | .000 |
| 7 | .776** | .000 | 17 | .671** | .000 |

| Axis | The extent to which the model is effective in developing the capabilities of faculty members | | | | |
|--|--|-------------------|----------------|--------------------------------|-------------------|
| Sub axis | Institution | | Faculty member | | |
| Phrase No. | Phrase relates to the sub-axis | Probability value | phrase No. | phrase relates to the sub-axis | probability value |
| 8 | .761** | .000 | 18 | .723** | .000 |
| 9 | .732** | .000 | 19 | .714** | .000 |
| 10 | .743** | .000 | 20 | .767** | .000 |
| | - | - | 21 | .576** | .001 |
| The sub-axis relates to the axis as a whole | .926** | .000 | .946** | | .000 |
| Correlation of the axis with the whole questionnaire | | | | .917** | .000 |

(**) The correlation is statistically significant at 0.01 or less.

(*) The correlation is statistically significant at 0.05 or less.

Table 4 shows that all the correlation coefficients are statistically significant, meaning that all items related to the sub-axis to which they belong, that the sub-axis related to the axis, and that the axis related to the questionnaire; none of these were omitted.

3.2 Statistical stability of the questionnaire

According to Cronbach's alpha method, table 5 shows the statistical stability coefficients.

Table 5: Statistical stability coefficients according to the Cronbach's alpha method

| Axes | Item No. | Cronbach's Alpha |
|--|----------|------------------|
| The questionnaire as a whole (the model's effectiveness) | 21 | 0.930 |
| First sub-axis: Institutional | 10 | 0.862 |
| Second sub-axis: Faculty member | 11 | 0.899 |

Table 5 clearly illustrates that the stability coefficients for the axis and the complete questionnaire range between 0.930 and 0.899, which indicates that the questionnaire is of great stability for achieving this study's aims. The statistical analysis is acceptable.

To determine the length of the five scale cells (the lower and upper limits), the researchers calculated the range ($5 - 1 = 4$) and then divided by the number of scale cells to obtain the correct cell length ($4 / 5 = 0.80$). Next, they added this value to the lowest value in the scale or the beginning of the scale (which each equals one) to determine the upper limit of the cell. Table (6) displays the lengths of the cells.

Table 6: Cell length to interpret phase averages

| Coding | Cell length | Approval score |
|--------|-------------|----------------|
| 1 | 1.00-1.79 | Very weak |
| 2 | 1.80-2.59 | Weak |
| 3 | 2.60-3.39 | Medium |
| 4 | 3.40-4.19 | High |
| 5 | 4.20-5.00 | Very high |

4. Results

To answer RQ1, the researchers calculated the arithmetic mean and standard deviation of the questionnaire axis and their expressions, as Tables (7, 8, and 9) show.

Table 7: Arithmetic mean and standard deviation for each of the sub-axes and the axis as a whole

| S | Sub-axes | Arithmetic mean | Standard deviation | Order | Interpretation |
|---|--|-----------------|--------------------|-------|----------------|
| 1 | First sub-axis: Effectiveness of the programme at the level of institution | 4.23 | 0.48 | 2 | Very High |
| 2 | Second sub-axis: Effectiveness of the programme at the faculty level | 4.24 | 0.54 | 1 | Very High |
| | Axis as a whole (all sub-axes) | 4.23 | 0.49 | - | Very High |

Table 8: Arithmetic mean, standard deviation, and order for each of the sub-axes items (institution)

| No | Item | Mean | Standard Deviation | Order | Interpretation |
|----|--|------|--------------------|-------|----------------|
| 3 | Saves money and time | 4.38 | 0.73 | 1 | Very High |
| 9 | Consistent with the developments of the time | 4.33 | 0.64 | 2 | Very High |
| 10 | Helps overcome the problem of the continuity of traditional training | 4.33 | 0.75 | 3 | Very High |
| 2 | Creates a more flexible learning climate | 4.31 | 0.63 | 4 | Very High |
| 5 | Speeds up the training process | 4.31 | 0.63 | 5 | Very High |
| 6 | Helps overcome the lack of qualified trainers | 4.27 | 0.71 | 6 | Very High |
| 4 | Increases the chances of practical application within the organisation | 4.18 | 0.70 | 7 | High |
| 7 | Establishes effective learning communities | 4.15 | 0.70 | 8 | High |
| 1 | Creates opportunities for transformation into a digital society | 4.04 | 0.67 | 9 | High |
| 21 | Raises trainees' motivation to seek knowledge | 4.02 | 0.65 | 10 | High |

Table 9: Arithmetic mean, standard deviation, and order for each of the sub-axes items (Faculty Members)

| No | Item | Mean | Standard Deviation | Order | Interpretation |
|----|--|------|--------------------|-------|----------------|
| 19 | Supports the faculty members' self-satisfaction | 4.44 | 0.60 | 1 | Very High |
| 13 | Encourages faculty members to reflect on knowledge | 4.31 | 0.69 | 2 | Very High |
| 21 | Raises the motivation of the trainee to search for knowledge | 4.31 | 0.72 | 3 | Very High |
| 11 | choose the best example of personal experience | 4.31 | 0.72 | 3 | Very High |
| 20 | Increases the trainee's sense of pleasure during the learning process | 4.29 | 0.71 | 5 | Very High |
| 18 | Achieves effective faculty member participation in the training process | 4.27 | 0.65 | 6 | Very High |
| 17 | Increases the chances of retaining the educational material | 4.29 | 0.69 | 7 | Very High |
| 14 | Provide the opportunity to refresh information and skills. | 4.13 | 0.75 | 8 | High |
| 16 | Increases the chances of choosing the most appropriate style from the available techniques | 4.13 | 0.77 | 9 | High |
| 12 | Sparks faculty members' creative imaginations | 4.11 | 0.88 | 10 | High |
| 15 | Increases performance level | 4.07 | 0.88 | 11 | High |

It is clear from the above tables that:

- The general arithmetic means of the axis reached 4.23 with a standard deviation of 0.49. This average means that the study sample showed a high approval degree for the second axis. Thus, the model's effectiveness ranks very high at the institutional and individual levels.
- The general arithmetic mean of all the expressions of the first sub-axis (institution) reached 4.23 with a standard deviation of 0.48. This average means that the study sample's approval degree for this axis is very high. Therefore, the model shows a very high degree of effectiveness at the institutional and individual levels.
- The general arithmetic mean of all the expressions of the second sub-axis (faculty members) reached 4.24 with a standard deviation of 0.54. This average means that the degree of the

study sample's approval for this axis is very high. This suggests that the model has a very high degree of effectiveness regarding the faculty members' development of abilities at the individual level.

- The study used the Independent Samples T-Test and One-Way ANOVA to answer RQ2, as Tables (10 and 11) show.

Table 10: T-test of the two independent samples to find the significance of the differences between the opinions of the study sample attributable to gender

| Axis | Category | Number | Average | Standard deviation | T value | Degree of freedom | P-value |
|--|----------|--------|---------|--------------------|---------|-------------------|---------|
| Effectiveness of the model in developing the capacity of faculty members | Male | 8 | 3.99 | 0.38 | -1.56 | 53 | 0.12 |
| | Female | 47 | 4.28 | 0.49 | | | |

(*) Statistically significant differences at the level of 0.05 or less.

Table 11: Results of the One-Way ANOVA for the significance of the differences between the opinions of the study sample due to age, job experience, and academic rank

| Variable | Hub | Source of contrast | Sum of squares | Degrees of freedom | Average of squares | F-Value | P-Value |
|----------------|---|--------------------|----------------|--------------------|--------------------|---------|---------|
| Age | How effective is the model in developing the capabilities of faculty members? | Between groups | 0.11 | 2 | 0.06 | 0.23 | 0.80 |
| | | Within groups | 12.69 | 52 | 0.24 | | |
| | | Total | 12.80 | 54 | | | |
| Job experience | How effective is the model in developing the capabilities of faculty members? | Between groups | 0.50 | 3 | 0.17 | 0.68 | 0.57 |
| | | Within groups | 12.30 | 51 | 0.24 | | |
| | | Total | 12.80 | 54 | | | |
| Academic rank | How effective is the model in developing the capabilities of faculty members? | Between groups | 0.85 | 2 | 0.43 | 1.85 | 0.17 |
| | | Within groups | 11.95 | 52 | 0.23 | | |
| | | Total | 12.80 | 54 | | | |

(*) Statistically significant differences at a level of 0.05 or less

- Table (10) illustrates that there are no statistically significant differences at (0.05) or less between the study sample opinions on the model's effectiveness in developing the faculty members' capabilities due to gender. While Table (11) shows that there are no statistically significant differences at (0.05) or less between the sample members' opinions on the effectiveness of the model in developing the faculty members' capabilities due to age, job experience, or academic rank,

5. Discussion

The results show a consensus in the study sample regarding the program's effectiveness as a model for professional development at the institutional and individual levels, as Table 7 shows.

Table (8) illustrates several reasons for the model's effectiveness from the faculty members' viewpoint. The study found that the model can save time and money, increase effort and consistency, overcome the problem of continuity in traditional training, and achieve a flexible climate. The model can also accelerate the training process, overcome the lack of qualified trainers, provide practical application opportunities, create effective learning societies, support the transition to a digital society, and increase the effectiveness of the trainee in the research of knowledge.

Intensification, multiple learning sources, and investment in available electronic learning resources saved effort, time, and cost, given the opportunity to choose the best educational resources, and contributed to preparing members to keep pace with modern developments and the transition to

a digital society. They also overcome many of the problems of traditional training, such as the weakness of some trainers and the lack of continuous and required training.

The results (see Table 9) show the most important factors the sample individuals saw as the reason for the model effectiveness at the individual level. These factors include how the model encourages self-reflection, motivates faculty members to search for knowledge, offers the diversity and freedom needed to choose the best learning martial alternative, creates feelings of pleasure during the learning process, elicits the active participation of faculty members, and provides the opportunity to refresh information and skills.

These results occurred for many reasons: The applied model for professional development, which contains the principles of accelerated learning (diversity, positivity, freedom, and active participation), awakens the learner's senses, feelings, and experiences. They activate the brain hemispheres (conscious and unconscious focus) so that the learner becomes active, achieves better learning, and learns more quickly.

The training phase in this model was an important step that provided affective learning societies, allowed experimentation in the real world that ended with feedback and discussion between peers, and supported deep learning.

The model considers the faculty members to be adult learners with personal goals who prefer learning in a social environment with peers (Tatum, 2010). Addressing them as leading to fulfilment, satisfaction, and enjoyment creates desire and motivation for the learning process and enables the learners' positive participation (Baxter & Bethke, 2009; Schornack et al., 2016).

These results follow previous literature results from Boisvert, Flemming, and Shah (2017) and Servoss et al. (2017) that demonstrated that accelerated learning programmes could ensure the development of good-quality programmes that are flexible, comprehensive, and integrated. Further, it meets the special needs of different adults and overcomes some challenges, such as lack of time. The results are consistent with (Lee and Horsfall, 2010) indication that accelerated learning programmes have motivational and social effects from the students' and faculty's points of view. They also follow (Schornack, 1996), who emphasised that including a large variety of strategies and tactics in the learning environment makes learning an enjoyable experience and that doing so supports the involvement of all the components of the learner, conscious and subconscious.

We noted that the sample members agreed on the effectiveness of this model for faculty members, despite their differences in experience, academic degree, age, and gender, as Tables (10 and 11) show. This is because accelerated learning is learning centred on the learner's needs. It provides various learning opportunities suitable for all experience and knowledge levels. Sources of information and choices allow the learners to discover their style and characteristics. The study results showed that different students who studied with accelerated learning performed better than students who studied using traditional methods (Boisvert et al., 2017; Garet et al., 2001).

6. Conclusion

Designing training programmes and professional development according to the principles of accelerated learning helps to provide many of the desired features and characteristics of professional development, such as: Reliance on scientific theories - positive diversity, flexibility, and effective practice; providing continuous learning opportunities; consideration of learning patterns; Motivation; reinforcement; self-meditation; Economy and cost-effectiveness: investing in information technology resources and media (sustainability) that provide sustainable development opportunities by overcoming the problems and challenges of adult education, the most important of which are time constraints and workload commitment, to provide trainees with the skills and competencies needed to keep pace with developments and the needs of the rapidly changing labour market in various disciplines and professions. However, this requires good planning where leaders are aware of the characteristics of these types of programmes and aim to achieve them through clear initiatives and implementation procedures that are continuously evaluated for the purpose of development and improvement.

7. Recommendations

The current study results indicate that the professional development model based on accelerated learning principles showed foreseeing the future of professional development. Therefore, we invite universities to employ the model this study applied according to its main principles, so that it suits each individual's circumstances while bearing in mind that investment in information and communication technology can support application flexibility.

The researchers applied the model for future professional development before the pandemic; however, the college officials later adopted it as one of the most important solutions used to overcome the pandemic's repercussions and provide continuous professional development opportunities in the College of Education. This result enhances the recommendation that we have to employ the model in the event of crises and disasters

May (2008) recommended that the administrative support the administrative unit and structure to support its implementation. The researchers' observation of the administrative support's impact on the model's effectiveness and success, adopting institutions should emphasize the importance of providing administrative support and the necessary facilities to ensure the achievement and continuity of professional development objectives.

The results of this study confirm the attention given to the dimension of providing opportunities for professional discussions and the exchange of experiences in any adopted professional development model due to the emergence of its affective impact on professional development and its promotion of deep continuous learning.

Examining the applied model for professional development based on accelerated learning principles showed that investing in information and communication technology was effective within the study's limits. However, researchers should conduct more studies to evaluate the professional development model dimensions according to different contexts. They should apply the principles of accelerated learning.

References

- Abdelazim, S. A., & Tewfik, A. F. R. (2017). *Preparation of the teacher in light of the experiences of some countries* (1st ed.). Cairo: Arab Group for Training and Publishing.
- Al-Mallah, T. (2015). Accelerated learning (philosophy, pillars, mechanisms, stages, roles). *The electronic journal of the Centre for Excellence and E-Learning—Periodical journal*. Retrieved 11-6-2020, from <https://portal.arid.my/ar-LY/Publications/Details/16605>. Islamic University of Gaza (pp. 6–28).
- Boisvert, K., Flemming, J., & Shah, R. (2017). AEWG Guide to the accelerated education principles. *Education in crisis and conflict network*. Retrieved 19-5-2020, from https://scholarworks.umass.edu/cie_eccn/4.
- Bolam, R., McMahon, A., Stoll, L., Thomas, S., Wallace, M., Greenwood, A., & Smith, M. (2005). *Creating and sustaining effective professional learning communities* [Research report]. (Vol. 637). Retrieved 19-5-2020, from <https://dera.ioe.ac.uk/5622/1/RR637.pdf>.
- Celuch, K., Bourdeau, B., Khayum, M., & Townsend, L. (2017). The role of the university in accelerated learning and innovation as a regional ecosystem integrator. *Journal of Research in Innovative Teaching and Learning*, 10(1), 34–47. doi:10.1108/JRIT-10-2016-0009
- Cevero, R. M. (2001). Continuing professional education in transition, 1981–2000. *International Journal of Lifelong Education*, 20(1–2), 16–30.
- D'Elia, F., Mazzeo, F., & Raiola, G. (2018). *The core curriculum in the university training of the teacher of physical education in Italy*. doi:10.14198/jhse.2018.13.Proc2.25
- Dubai Center for Accelerated Learning. (2012). What is accelerated learning? Retrieved from What is Accelerated Learning (dalcenter.com).
- Friedman, A., & Phillips, M. (2004). Continuing professional development: Developing a vision. *Journal of Education and Work*, 17(3), 361–376. doi:10.1080/1363908042000267432
- Fuller, J. L. (2001). An integrated hands-on inquiry based cooperative learning approach: The impact of the PALMS approach on <https://eric.ed.gov/?id=ED453176> student growth. Retrieved 1-1-2020, from <http://files.eric.ed.gov/fulltext/ED453176.pdf>
- Gallego, M. A., Rueda, R., & Moll, L. C. (2005). Multilevel approaches to documenting change: Challenges in community-based educational research. *Teachers College Record*, 107(10), 2299–2325. doi:10.1111/j.1467-9620.2005.00593.x

- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945. doi:10.3102/00028312038004915
- Gravani, M. N. (2007). Unveiling professional learning: Shifting from the delivery of courses to an understanding of the processes. *Teaching and Teacher Education*, 23(5), 688-704. doi:10.1016/j.tate.2006.03.011
- Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.
- Hodkinson, H., & Hodkinson, P. (2005). Improving schoolteachers' Workplace Learning. *Research Papers in Education*, 20(2), 109-131. doi:10.1080/02671520500077921
- Lee, N., & Horsfall, B. (2010). Accelerated learning: A study of faculty and student experiences. *Innovative Higher Education*, 35(3), 191-202. doi:10.1007/s10755-010-9141-0
- Mazmanian, P. E. (2005). Reform of continuing medical education in the United States. *Journal of Continuing Education in the Health Professions*, 25(3), 132-133. doi:10.1002/chp.19
- McRae, D., Ainsworth, G., Groves, R., Rowland, M., & Zbar, V. (2001). *PD 2000: A national mapping of school teacher professional development*. Canberra: Commonwealth Department of Education, Training and Youth Affairs.
- McWilliam, E. (2002). Against professional development. *Educational Philosophy and Theory*, 34(3), 289-299. doi:10.1080/00131850220150246
- Meier, D. (2008). *Accelerated learning: Your creative Guide to designing and implementing faster and more effective training programmes* (A. Muhammad, trans.). Dubai, United Arab Emirates: Illaf Train.
- Nicholson, S. (2018). Evaluation of Oxfam's Accelerated Education Programme in Greater Ganyiel, South Sudan 2014-2018 against global best practice. Oxfam/BIS-ALP-SouthSudan-2018. Retrieved 11-6-2020, from https://oxfamibis.dk/sites/default/files/media/pdf_global/evaluation_report_oxfam_alp_ganyiel_south_sudan_2018.pdf.
- Ratey, J. J. (2001). *A user's guide to the brain: Perception, attention, and the four theatres of the brain*. New York: Pantheon.
- Reimers, F. M., & Chung, C. K. (2018). *Preparing teachers to educate whole students: An international comparative study*. Boston: Harvard Education Press.
- Regional Centre of Quality and Excellence in Education (RCQE). (2019). Developmental review for two-stage and secondary teacher preparation programmes (Grades 7-12) in some Arab countries (2018-2019). Retrieved 4-1-2021, from <http://rcqe.org/studies-reports>.
- RCQE. (2019). Professional development policies and programmes in-service teacher training in Arab countries (2018-2019). Retrieved 4-1-2021, from <http://rcqe.org/studies-reports>
- Schorneck, G. R. (2016). Accelerated learning techniques for adults: An instructional design concept for the next decade. Retrieved 11-6-2020, from <https://www.semanticscholar.org/paper/Accelerated-Learning-Techniques-for-Adults%3A-An-for-Schorneck/e1b92fedcb96e849df89f06f104ae5dad45e83>
- Serdyukov, P. (2008). Accelerated learning: What is it? *Journal of Research in Innovative Teaching*, 1(1), 35-59.
- Servoss, J., Chang, C., Fay, J., Lota, K. S., Mashour, G. A., & Ward, K. R. (2017). Fast pace train-the-trainer: A scalable new educational programme to accelerate training in biomedical innovation, entrepreneurship, and commercialization. *Journal of Clinical and Translational Science*, 1(5), 271-277. doi:10.1017/cts.2017.306
- Shulman, L. S., & Shulman, J. H. (2004). How and what teachers learn: A shifting perspective. *Journal of Curriculum Studies*, 36(2), 257-271. doi:10.1080/0022027032000148298
- Tatum, B. C. (2010). Accelerated education: Learning on the fast track. *Journal of Research in Innovative Teaching*, 3(1), 34-50. Retrieved 24-12-2018, from <https://www.nu.edu/wp-content/uploads/2018/11/journal-of-research-in-innovative-teaching-volume-3.pdf>.
- UNESCO. (2019). Teacher policy development Guide. *The International Task Force on Teachers for Education 2030*. France. Retrieved from https://teachertaskforce.org/sites/default/files/2020-09/370966eng_o_1.pdf
- UNESCO Regional Office in Beirut & Regional Centre for Educational Planning. (2020). *Regional online discussion on the future of education after coronavirus pandemic*. Retrieved 5-4-2021, from <https://youtu.be/nNozLpoAZUc>
- Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research*, 79(2), 702-739. Retrieved from <http://www.jstor.org/stable/40469054>. doi:10.3102/0034654308330970
- Wlodkowski, R. (2003). Accelerated learning in colleges and universities: New directions for adult and continuing education, 97. *Wiley Periodicals*. 5-15. Retrieved 24-2-2018, from <https://www.deepdyve.com/lp/wiley/accelerated-learning-in-colleges-and-universities-1eVesguOYD#bsSignUpModal>
- Yaniawati, R. P., Kartasasmita, B. G., Kariadinata, R., & Sari, E. (2017, July). Accelerated learning method using Edmodo to increase students' mathematical connection and self-regulated learning. In *Proceedings of the 2017 International Conference on Education and Multimedia Technology* (pp. 53-57). Retrieved 11-6-2020, from https://www.researchgate.net/publication/319694258_Accelerated_learning_method_using_edmodo_to_increase_students%27_mathematical_connection_and_self-regulated_learning