A study on self-directed learning among preliminary school teachers in Esfahan

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Abstract

This descriptive research aimed at examining self-directed learning among teachers, and was carried out by survey method. Its statistical population comprised preliminary school teachers of Esfahan, Iran, in the academic year 2010–2011. The research sample comprised of 400 individuals. The instrument used was Fischer et al self-directed learning readiness scale questionnaire. After the data were collected, the reliability coefficient was calculated via Cronbach’s $\alpha$ (0.88). The data then were analyzed through Student t-test for independent groups and one-way analysis of variance (ANOVA) with Scheffe follow-up test. The results showed that self-directed learning has a high level among teachers.

Keywords: self-directed learning, self-management, self-adjustment, learning readiness

1. Introduction

Generally, the progress and survival of any society are dependent upon the quality and efficiency of education in that society. Any country needs motivated and efficient teachers, as one of the pillars of education, so that it can train its youths according to its educational system and prepare them for a better future (Emadzadeh, 2001). However, one of the current problems of the educational system is the lack of efficient specialist human resources. On-the-job training and pre-job training have practically proved its failure in triggering any considerable changes in educational systems (Fathi Vajargah, 1997). Undoubtedly, one cannot expect teachers who are entangled in their own problems and shortcomings to exploit all their energy and intelligence to learn and use the best teaching methods (Salsabili, 1992). Therefore, we have to search for a new method in the process of teacher training which would finally result in reasonable classes, that is, methods through which people do not wait for passive learning, but instead, they take initiative in learning, and owners and managers are responsible for their own learning and training (Abdollahi, 2009).

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Long (2005) suggests that self-directed learning refers to a process in which the learner undertakes various stages of beginning, planning, implementing, and monitoring their own learning. Limen (1997) and Morrow, Sharkey, & Firestone (1993) consider self-directed learning as a gradual controller of changes from teacher to student and believe that in self-directed learning the learners set goals, take decisions about learning, and make evaluations (Nadi & Kazemi, 2003).

Basically, self-directed learning needs environments where learners are not controlled from outside and they manage the learning processes themselves. Such environments could be the educational environment of employees. In fact, in order to train adults—who have more individual differences—teachers should help learners take control of their own learning (Abdollahi, 2009).

Knowles quotes Williamson as saying that learners who enter educational programs without having self-directed learning skills usually face stress or failure (Williamson, 2007). Therefore, developing self-directed learning skills has become one of the goals of adult education during the last few decades. Despite the obvious importance of teaching activities related to self-directed learning, few researches has been conducted so far on this subject, but such researches have recently increased; for example, Shooshtarizadeh et al (2010) conducted a research to determine the amount of readiness for self-directed learning and to identify learning styles among nursing students and to study the relation between these two; the results indicated that this self-directed learning readiness was high in most of the units, and the dominant learning style was ‘accommodating’. Goradshekan et al (2011) carried out a research in order to determine the influence of teaching the metacognitive package on self-directed learning among students of medical documents; the results showed that teaching the metacognitive package positively influenced the total score of self-directed learning and its subscales.

Linares (1999) conducted a study on the relation between learning style and self-directed learning. He found that the preferred style for both groups of students and faculty members was the converging style and that self-directed learning readiness in both groups was at a high level. Nonetheless, the faculty members were more self-directed than the students were. Linares showed that there was a significant relation between the amount of self-directed learning readiness and styles of learning.

Magdalena et al (2005) carried out a research with the aim of developing self-directed learning in student teachers. The results of this research indicated that student teachers improved differently in terms of their capacity for self-directed learning. In addition, both qualitative and quantitative changes were observed in student teachers’ conceptualization of educational research.

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2. Research questions

2.1. What is the level of self-directed learning readiness among elementary school teachers of Esfahan?

2.2. What is the level of self-directed learning based on demographic traits among these teachers?

3. Methodology

This is a descriptive research whose statistical population is comprised of all the elementary school teachers of Esfahan, that is, 3463 teachers (2875 females and 588 males). 400 teachers were selected via random stratified sampling method (10% more questionnaires were distributed among them so that lost or altered ones would be taken into consideration), that is, in each district, male teachers from boys’ schools and female teachers from boys’ and girls’ schools were selected randomly and in proportion with their share of the population.

The data collection tool in this research was Fisher, King, and Tague's self-directed learning readiness scale. The tool most used in educational researches to evaluate self-directed learning readiness is Guglielmino(1978) self-directed learning scale; however, due to several reasons, including its validity being questioned (Long and Agyckum, 1983 & 1984; Straka, 1995), not being easily accessible, problems about its cost, validity, and reliability (Linares, 1999), this scale was modified and improved by Fischer et al (2001). Guglielmino’s scale is a self-report questionnaire with 58 Likert statements, which was reduced to 41 and then 40 statements by Fischer (2001); it is categorized into three areas of self-directed learning:
3.1. Self-management:

Self-directed learners are able to identify what they need during the learning process, to set learning goals, to control their energy and time during learning, and to arrange work feedbacks.

3.2. Willingness to learn:

Such individuals have a strong motivation for acquiring knowledge.

3.3. Self-regulatory abilities:

Self-directed learners are completely independent people who can analyze, plan, implement, and assess their learning activities independently.

In order to determine the reliability of this scale, the Cronbach alpha coefficient was used; this coefficient for the whole questionnaire was found to be 0.88, and for the subscales of self-management, self-regulatory abilities, and willingness to learn were 0.77, 0.66, and 0.74 respectively. With regard to the importance of making sure of the validity of the validity of the instrument, construct validity was used, which was assessed through confirmatory factor analysis. To do this, the Amos 16 software program was used; the results showed that statements had a significant factor loading on subscales, and the model can be considered fit according to the fitness indices. It should be noted that for a model to be fit, RMSEA should be below 0.08, and chi square on the degree of freedom lower than 4, and the closer the indices of GFI, AGF, and CFI to each other, the fitter the model.

For the purpose of statistical analysis of the research data, descriptive statistical indices (mean, variance, standard deviation, and frequency distribution table) as well as inferential statistics (t-student test for independent groups, and one-way analysis of variance) were applied.

4. Results

In order to determine the level of self-directedness in teachers, at first the hypothetical mean of the variables was calculated. Since the self-directedness questionnaire and its subscales have the Likert spectrum between 0 and 4, if an individual gave answer 2 to all the questions, a score will be obtained which will be considered as the hypothetical mean of that subscale (as shown in the table below); then in order to compare the mean of variables in the sample and the hypothetical mean, one-sample t-test was used, the results of which are shown in Table 1 below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>number</th>
<th>Hypothetical mean</th>
<th>T</th>
<th>Significance</th>
<th>Mean difference</th>
<th>Degree of freedom</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-directedness</td>
<td>400</td>
<td>74</td>
<td>29.32</td>
<td>0.00</td>
<td>29.81</td>
<td>399</td>
<td>20.33</td>
</tr>
<tr>
<td>Self-management</td>
<td>400</td>
<td>26</td>
<td>29.68</td>
<td>0.00</td>
<td>12.93</td>
<td>399</td>
<td>8.71</td>
</tr>
<tr>
<td>Self-regulatory abilities</td>
<td>400</td>
<td>28</td>
<td>18.36</td>
<td>0.00</td>
<td>7.19</td>
<td>399</td>
<td>7.71</td>
</tr>
<tr>
<td>Willingness to learn</td>
<td>400</td>
<td>20</td>
<td>20.07</td>
<td>0.00</td>
<td>9.68</td>
<td>399</td>
<td>6.66</td>
</tr>
</tbody>
</table>

As shown in the table above, the obtained values of T with the degrees of freedom of 399 and the level of significance of 0.000 have been significant; since the acceptable level of significance is equal or lesser than 0.05, it can be concluded that there is a significant difference between the hypothetical mean and the calculated mean, and that the teachers’ level of readiness in variables is high.

In order to compare the level of self-directed learning in teachers based on their gender, t-student test for independent groups was used, and the results are shown in Table 2 below:
Table 2: level of self-directed learning in teachers based on their gender

<table>
<thead>
<tr>
<th>Groups</th>
<th>number</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Difference of means</th>
<th>t</th>
<th>Degree of freedom</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>68</td>
<td>96.33</td>
<td>20.58</td>
<td>-9</td>
<td>-3.36</td>
<td>398</td>
<td>0.001</td>
</tr>
<tr>
<td>Female</td>
<td>332</td>
<td>105.34</td>
<td>79.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As shown above, the observed value of t (-3.36) with the degree of freedom of 398 is greater than the critical value, therefore, it can be said with 0.99 confidence that there is no significant difference in the level of self-directed learning among teachers in terms of gender differences.

Furthermore, in order to compare self-directed learning in teachers based on their age, education, years of teaching, and their respective district, the analysis of variance test was used, the results of which are presented in table 4 below:

Table 3: comparison of self-directed learning in teachers based on age, education, and years of teaching

<table>
<thead>
<tr>
<th>Statistical indices</th>
<th>Sources of changes</th>
<th>Sum of squares</th>
<th>Degree of freedom</th>
<th>Mean squares</th>
<th>Values of F</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Inter-group</td>
<td>1895.51</td>
<td>2</td>
<td>974.75</td>
<td>-9</td>
<td>-3.36</td>
</tr>
<tr>
<td></td>
<td>Intra-group</td>
<td>16304.04</td>
<td>397</td>
<td>410.7</td>
<td>-9</td>
<td>-3.36</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>164943.56</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Inter-group</td>
<td>3021.91</td>
<td>3</td>
<td>1001.30</td>
<td>2.46</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
<td>Intra-group</td>
<td>161921.64</td>
<td>396</td>
<td>408.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>164943.56</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of teaching</td>
<td>Inter-group</td>
<td>2463.96</td>
<td>5</td>
<td>492.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intra-group</td>
<td>162479.59</td>
<td>394</td>
<td>412.385</td>
<td>1.19</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>164943.56</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of Table 3 above indicate that there is no significant difference between the level of self-directed learning among teachers in terms of their age, education, and years of teaching.

Discussion and Conclusion

The results of this research showed that the level of self-directed learning readiness is high among teachers. Although there has been no similar research conducted on teachers before, similar studies by Salsabili (1992), Shooshariatizadeh et al (2010), Gordanshekan et al (2010), Nadi and Sajjadian (2006), Linares (1999), and Magdalena et al (2005) have been carried out on university and school students, the results of which are compatible with those of the current research. All of these studies show that self-directed learning is a necessity and innovation for learners and researchers.

When studying the ability of learning in adults, Lorig (1944–1947) found out that the ability of older adults up to the age of 70 is good just like that of young adults; this is compatible with the current research results, which indicate there is no significant difference in self-directed learning between teachers in terms of their age.

Although no research has been directly conducted with the hypothesis of there being a significant difference between teachers in terms of their education, studies done by Shaker et al (2002) demonstrate that the level of self-directedness is higher among medical students than that among adult learners; therefore, the latter research is incompatible with the results of our research as regards the effect of education on self-directed learning.

Finally, it should be noted that due to the benefits of self-directed learning, organizational and educational environments emphasize its importance, and its value as a skill required for learning and working in the 21st century has attracted much attention recently.

References

Development Special Edition.