The Self-Directed Learning Readiness of Extension Cliente in Doctor Arroyo, Nuevo Leon, Mexico: Implications for Teaching and Learning

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Abstract

The purpose of this study was to describe the level of self-directedness of selected extension clienteles in Doctor Arroyo, Nuevo Leon, Mexico. The population for this study included 44 farmers and ranchers attending participatory rural development workshops in Doctor Arroyo, Nuevo Leon, Mexico. Data were collected through hand delivered questionnaires. Overall, research participants mean Self-directed Learning Readiness Scores (SDLRS) were similar to the worldwide adult mean. Participants’ individual scores, however, tended to be either below average or above average. An implication exists that both pedagogically and andragogically based teaching methods need to be used by agricultural and extension educators to educate this particular clientele group.
Introduction

Agricultural and extension educators rely on a variety of teaching methods to educate their clientele. Worldwide, the implementation of distance education, through various methods, is changing education. More learning in the future will be based on self-directed learning skills and activities in formal and non-formal educational settings. Alexander and Murphy (1998) identified one of the five learner-centered principles in learning as follows: “learning is as much a socially shared undertaking as it is an individually constructed enterprise” (p.39). There is a growing trend of social and technological change and innovation. Knowledge and information are regarded as global public resources, valuable assets, power, and the means to enhance the learning environment and support experience on which we can build a better world (World Science Forum, 2003). Cross (1981) suggested learning continues throughout life, as each person becomes more capable of directing his own learning. Learning takes place constantly in a knowledge and information-based society.

Self-directed approaches to teaching and learning are consistent with the goals of andragogy and result in deeper and more meaningful learning (Knowles, Holton, & Swanson, 1998). This approach also promotes the lofty premise of individuals controlling their own learning in a meaningful context. As agricultural and extension professionals, we aspire to help learners take responsibility for their own learning (Grow, 1991). Effective educators should attempt to design and deliver individualized instructional sequences to provide the greatest opportunity for a learner’s growth. Professional educators need to tailor their teaching based on learners’ self-directedness or degree of dependency as the situation requires. The theoretical framework for this study is grounded by Guglielmino’s (1989) research on self-directed learning and Knowles’ (1990) theory of adult learning (Andragogy).

Theoretical Framework

The theoretical framework of this study is based on understanding and facilitating self-directed learning abilities as a component of adult learning (Brookfield, 1986) and continues to be a goal in today’s educational system (Candy, 1991). Knowles (1975, 1980) theory of self-directed learning, when melded together with andragogy, produces a readily identifiable and workable philosophy of learning and teaching. Brockett and Hiemstra (1991) defined self-direction in learning as concept that recognizes the learner taking responsibility internally for the learning process. Self directed learning requires investigation of learning needs, developing learning goals, identifying resources, selecting appropriate learning strategies, and evaluation of learning outcomes. Knowles (1975) purports adults experience natural psychological development through self-directed learning. In viewing self-directed learning, he believed learning could be accomplished on one’s own or with the support of other learners and teachers. Grow (1991) supported Knowles’ belief by suggesting The Staged Self-Directed Learning (SSDL) model has a form educators can use to help learners be developed into self-directed learners within the formal learning process. Grow emphasized effective teachers consider the learner’s stage of self-direction while matching their teaching strategies with the learners learning styles.
In Malcolm Knowles’ (1990) seminal book, “The Adult Learner: A Neglected Species,” he noted that the appropriateness of teaching methods were contingent on students’ maturity and degree of dependency. Pedagogical approaches (teaching children) are appropriate for students with high degrees of dependency. Knowles noted that

The pedagogical model assigns to the teacher full responsibility for making all decisions about what will be learned, how it will be learned, when it will be learned, and if it has been learned. It is teacher-directed education, leaving to the learner only the submissive role of following a teachers’ instructions. (In Knowles, Holton, & Swanson, 1998, p. 62)

As a student gets older, the degree of dependence tends to lower and adragogical approaches (teaching adults) become more appropriate.

But it seems that the process of gaining a self-concept, of self-directedness, starts early in life and grows cumulatively as we biologically mature, start performing adult-like roles, and take increasing responsibility for making our own decisions. So we become adult by degree as we move through childhood and adolescence, and the rate of increase by degree is probably accelerated if we live in homes, study in schools, and participate in youth organizations that foster our taking increasing responsibilities. (In Knowles, Holton, & Swanson, 1998, p. 64)

There is no magic age when students stop being dependent and involved learners, and begin being involved and self-directed learners. There is no magic grade level when a teacher’s role should move from being an authority/coach to a motivator/guide to a facilitator to a consultant/delegator…it depends on the student. Infants, adolescents, and adults may under a variety of circumstances exhibit either low or high levels of dependence. It is the teacher’s responsibility to adjust their role based on a student’s level of self-directedness. Failure to do so results in what Grow refers to as mismatches. For example, if a student is a dependent learner and the teacher is acting in the role of a facilitator a mismatch will occur. “Students may resent the teacher for forcing upon them a freedom they are not ready for...they may even hate the teacher...” (Grow, 1991, p. 138). If a teacher is acting in the role of an authority/expert and the student is an involved learner, reversing the previous example, a mismatch will occur also. This is a classical example being carried out in many public schools today. “This mismatch may cause the learner to rebel or retreat into boredom” (p. 137).

Guglielmino (1977) finds self-directed learners to be independent in their learning, intellectually curious, unintimidated by the subject, and possessing high levels of closure. Guglielmino (1977, pp. 3-4) proposed the development of SDLRS in order “to obtain consensus from a panel of experts on the most important personality characteristics of highly self-directed learners, and to develop an instrument for assessing an individual’s readiness for self-direction in learning.”
Purpose

The purpose of this study was to describe the level of self-directedness of selected extension clientele in Doctor Arroyo, Nuevo Leon, Mexico. The objectives of the study were to:

- Describe selected extension clientele by their self-directed learning readiness score (SDLRS);
- Describe SDLRS by age;
- Describe SDLRS by gender; and
- Compare participants’ SDLRS to the adult population mean.

Methods and Data Sources

The population for this study included 44 farmers and ranchers attending participatory rural development workshops in Doctor Arroyo, Nuevo Leon, Mexico. The researchers used Guglielmino’s (1989) Self-directed Learning Readiness Scale (SDLRS) to describe participants’ level of self-directedness. SDLRS consists of a 34-item scale with five point Likert-type responses and was designed to indicate an individual’s current level of readiness for self-direction in learning. The instrument has been shown through numerous studies to be a valid and reliable predictor of adult readiness for self-direction in learning (Guglielmino, 1997; Delahaye & Smith, 1995). More than 50,000 adults from around the world have taken the SDLRS. The mean score from these individuals is shown in Figure 1. Respondents’ level of self-directedness was categorized as either above average (139-170), average (120-138), or below average (34-119). Reliability of the scale, using the Pearson split-half method was estimated at $r = .85$. An alpha level of .05 was used for all statistical tests and was set \textit{a priori}.

Results

Objective One

The first objective of this study described selected extension clientele (n=44) by their SDLRS. The mean score on the Self-directed Learning Readiness Scale was 118.1 with a standard deviation of 23. The range was 91, with a minimum of 74 and a maximum of 165.

Objective Two

The second objective described SDLRS by age. Figure 2 depicts the age categories of respondents. Approximately one-fifth (20.5%) of the respondents was between the ages of 20-33 and had a mean score of 125.9 ($SD=20.7$). The largest group of respondents fell between the ages of 34-41 and comprised around one third (29.5%) of the group with a mean score of 126.0 ($SD=25.2$). Slightly more than one-fifth (22.7%) of the respondents were in the 42-51-age category averaging a score of 108.1 ($SD=20.2$). The final group of 27.3% ranged in age from 53-79 and had a mean score of 111.9 ($SD=21.9$).
Table One
Self-directed learning readiness score by age

<table>
<thead>
<tr>
<th>Age</th>
<th>f</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-33</td>
<td>9</td>
<td>20.5</td>
<td>125.9</td>
<td>20.7</td>
</tr>
<tr>
<td>34-41</td>
<td>13</td>
<td>29.5</td>
<td>126.0</td>
<td>25.2</td>
</tr>
<tr>
<td>42-51</td>
<td>10</td>
<td>22.7</td>
<td>108.1</td>
<td>20.2</td>
</tr>
<tr>
<td>53-79</td>
<td>12</td>
<td>27.3</td>
<td>111.9</td>
<td>21.9</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>100.0</td>
<td>118.1</td>
<td>23.0</td>
</tr>
</tbody>
</table>

Note: SDLRS consists of a 34-item scale with five point Likert-type responses. Scale, 1= I never feel like this, 2= I feel like this less than half the time, 3= Half the time I feel this way, 4= I usually feel this way, 5= I feel like this all the time.

Objective Three
The third objective described the SDLRS by gender. Figure 3 shows the gender of the participants. As illustrated, the majority of respondents 36 (81.8%) were males and 8 respondents (18.2%) were female. The mean score for males was 118.5 (SD= 23.1) and for females it was slightly lower at 116.0 (SD=24.0).

Table 2
Self-directed learning readiness score by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>f</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>36</td>
<td>81.8</td>
<td>118.5</td>
<td>23.1</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>18.2</td>
<td>116.0</td>
<td>24.0</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>100.0</td>
<td>118.1</td>
<td>23.0</td>
</tr>
</tbody>
</table>

Note: SDLRS consists of a 34-item scale with five point Likert-type responses. Scale, 1= I never feel like this, 2= I feel like this less than half the time, 3= Half the time I feel this way, 4= I usually feel this way, 5= I feel like this all the time.

Objective Four
The fourth objective compared participants’ SDLRS to the adult population. SDLRS scores for participants ($M=118.2; SD=23.5$) in the study are visually depicted in Figure 1. The mean score for all adults, who have taken, the SDLRS is 129.0 ($SD=18.5$). The mean SDLRS scores for participants in this study were significantly lower than those of the mean adult population, $t=2.48, p<.05$. In this study, participants’ SDLRS scores did not differ by gender, $t=. 278, p>.05$. Participants’ SDLRS scores did differ by age, $F=1.88, p>.05$. 

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Conclusions and Discussion

A variety of teaching methods are used by agricultural and extension agents to educate their clientele. As the innovation of distance education diffuses more rapidly throughout the world, these clientele will rely more on their self-directed learning competencies than ever before for both formal and non-formal education. A variety of researchers including Brookfield (1986), Grow (1991), Guglielmino (1989), and Knowles (1990) have noted the need to understand and develop learners’ self-directedness in order to foster deeper and more meaningful learning in both formal and non-formal educational settings.

The findings of this study show that the 44 farmers and ranchers attending participatory rural development workshops in Doctor Arroyo, Nuevo Leon, Mexico had similar levels of SDLRS as did the worldwide adult mean. The average SDLRS for study participants was average: 1) Twenty-one (47.7%) participants had a below average SDLRS; 2) twenty-one (47.7%) participants had an above average SDLRS; 3) two (4.6%) participants had an average SDLRS. Although the mean SDLRS for this particular population was average, the participants’ scores tended to be skewed to below average and above average. An implication exists that a variety of teaching methods including both pedagogical methods and andragogical methods are warranted. Andragogical methods can be used for those exhibiting average or above average levels of self-directedness and pedagogical methods, for those exhibiting below average levels of SDLRS. For this latter group, educators can use a variety of strategies such as facilitated discussion, active involvement in creative thinking.

Figure 1. Mean self-directed learning readiness scores of survey participants compared to the adult population mean.
and problem solving, and team projects to accomplish the stated objective of the learning experience and to increase the learners’ level of self-directedness. A recommendation for future study includes reviewing extension programs for their efficacy in terms their adaptability to train a variety of learners. It is incumbent upon extension that an allowance for different learning methods be incorporated in all programs undertaken to enable their largest applicability for the users of their service.

There were no statistically significance differences in SDLRS by age of participants. This is not necessarily suggested by Knowles. In this study, self-directedness was not shown to be a function of the increase in the participant’s age. Further research should seek an understanding of this issue.

There were no statistically significance differences in SDLRS by gender. Women and men had tended to have similar SDLRS Implication exists for using andragogy and pedagogy as needed for both male and female populations. It is good to know that teachers in situations similar to this can focus on the content of the curriculum rather than the methodology of instruction.

The educational importance of this study is focused on two areas: needs assessment and self-directed learning. The results of this study will help extension professionals in Doctor Arroyo, Nuevo Leon, Mexico better understand their clienteles’ ability to use self-directed approaches to learning. An implication exists that self-directedness is contextually and geographically bound.

References


