THE LEVEL OF SELF-DIRECTED LEARNING AMONG TEACHER TRAINING INSTITUTE STUDENTS – AN EARLY SURVEY

KOK BOON SHIONG[1], BAHARUDDIN ARIS[2] & ZAIDATUN TASIR[3]

Abstract.   Current learning approaches have various structured learning activities as well more self-directed learning tasks guided through consultation with academics. The aim of this research is to determine students' self-directed learning readiness (SDLRS) in a Teacher Training Institute. 266 students from the *Kursus Perguruan Lepasan Ijazah* (KPLI), *Program Ijazah Sarjana Muda Perguruan* (PISMP) and *Program Persediaan Ijazah Sarjana Muda Perguruan* (PPISMP) group took part in the research. The instrument is a questionnaire adopted from Guglielmino SDLRS questionnaire. Result from the data analysis showed that most of the students are on average or below average in term of SDLRS. Based on SDLRS, there is also significant difference between gender with respect to self-directed learning readiness. In addition, there ia also significant difference of students' SDLRS with respect to their courses.

Keywords: Self-directed learning readiness; Self-directed learning

Abstrak.   Pendekatan pembelajaran terkini mempunyai struktur aktiviti pembelajaran yang pelbagai dan pembelajaran kendiri yang lebih terbimbing dari segi akademik. Tujuan kajian ini adalah mengenal pasti kesediaan pembelajaran kendiri di Institut Perguruan Malaysia. Seramai 266 orang pelajar dari kumpulan kursus Perguruan Lepasan Ijazah (KPLI), Program Ijazah Sarjana Muda Perguruan (PISMP) dan Program Persediaan Ijazah Sarjana Muda Perguruan (PPISMP) terlibat dalam kajian ini. Instrumen kajian ialah soal selidik yang diubah suai daripada soal selidik *Self-Directed Learning Readiness* oleh Guglielmino. Dapatan kajian daripada analisis data menunjukkan kebanyakan pelajar mempunyai kesediaan pembelajaran kendiri yang sederhana atau rendah. Kajian juga mendapati terdapat perbezaan yang signifikan di antara kesediaan pembelajaran kendiri pelajar perempuan dan lelaki. Selain itu, terdapat juga perbezaan yang signifikan di antara kesediaan pembelajaran kendiri pelajar mengikut kursus.

Kata kunci: Kesediaan pembelajaran kendiri; pembelajaran kendiri

1.0   INTRODUCTION

The study of online learning has attracted much attention from scholars and teachers, especially those in higher education institutions or colleges (Hill, Wiley, Nelson, and Han, 2003; Hofmann, 2002). However, an understanding of learner attributes and the impact of learning theory in online learning contexts is equally important

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[1]   Jabatan Teknologi Pendidikan, Institut Pendidikan Guru Malaysia, Kampus Kent, Tuaran, Sabah
[2&3] Jabatan Multimedia, Fakulti Pendidikan, UTM Skudai, 81310, Johor

(Song, and Hill, 2007). Furthermore enhancements of online technologies have also created a different variety of pedagogical approaches in the instructional system design.

In the past few years, inquiry has been focused upon the relationship between self-directed readiness and personality variables (Martin, 1996). Several researches have been conducted in finding the relationship between learning style, multiple intelligence, and learners' personality on self-directed learning (SDL). However, more recent trends are focused on the development of theory which has led to the generation of models to explain the meanings and contexts of SDL.

According to Roberson (2005), many researchers refer to similar works that have laid to the foundation of self-directed learning and due to the complexity of self-directed learning; researchers have re-structured their discourse of SDL around these parameters:

(1)   An individual learner's dispositions and activities characterizing self-directed approaches;
(2)   Relevant cultural goals or educational philosophy;
(3)   The social and historical environment;
(4)   Education background.

1.1   Self Directed Learning

Self-directed learning (SDL) has been variously defined (Kerka, 2005). Among the well-known researchers definition of SDL are:

(1)   Knowles (1975) described self-directed learning as "a process in which individuals take the initiative, with or without the help of others." The processes in self-directed learning include diagnosing one's own learning needs, setting personal goals, making decisions on resources and learning strategies and assessing the value of the outcomes.
(2)   Guglielmino (1977) theorized that "self-direction in learning can occur in a wide variety of situations, ranging from a teacher-directed classroom to self-planned and self-conducted learning projects." She further stated that it is the personal characteristics of the learner (i.e., attitudes, values, beliefs, and abilities) "that ultimately determine whether self-directed learning will take place in a given learning situation. The self directed learner more often chooses or influences the learning objectives, activities, resources, priorities and levels of energy expenditure than does the other-directed learner."
(3)   Gibbon (2002) described self-directed learning as an increase in knowledge, skill or performance pursued by any individual for personal reasons employing any means, in any place at any time at any age.

In short, SDL is a process, in which learners take the initiative to gain learning experiences, learning resources, implementing learning activities and evaluating the learning outcomes.

1.2 Self-Directed Learning Readiness

Some scholars have recognized the importance of the learning context for SDL (Candy, 1991), noting that learners may exhibit different levels of self-direction in different learning situations or environment. According to Candy (1991), learners may have a high level of self-direction in an area in which they are familiar, or in areas that are similar to a prior experience. For example, a Malay-speaking learner may have a high level of self-direction in learning the English Language, and a learner who plays rugby may be highly self-directed when learning to play badminton. Hence, more research are needed in this area if we want to gain a richer understanding of how SDL functions in specific contexts (Song and Hill, 2007).

1.3 Self-Directed Learning Readiness Scale

McCune (1989) who identified variables associated with self-directed learning indicated one of the most frequently used instruments for measuring self-directed learning as Guglielmino's Self-Directed Learning Readiness Scale (SDLRS). The SDLRS is a 58-item Likert-type scale self-reporting instrument that yields scores between 58 and 260, with higher scores indicating more readiness for self-directed learning.

Since its initial development, the Self-Directed Learning Readiness Scale (SDLRS) also known as the Learning Preference Assessment, (LPA) has been used widely. The SDLRS-A has been used by more than 500 major organizations around the world. The instrument has been translated into Spanish (Castilian, Columbian, and Cuban), French, German, Italian, Korean, Malay, Chinese, Japanese, Finnish, Greek, Portuguese, Afrikaans, Russian, Latvian, Lithuanian, Farsi, Dutch, Polish and Turkish. More than 70,000 adults and 5,000 children have taken the SDLRS/LPA. It has been used in numerous research studies including more than 90 doctoral dissertations.

The adult version of the questionnaire (SDLRS-A or Learning Preference Assessment) has 58 items. Respondents are asked to read a statement and then indicate the degree to which that statement accurately describes their own attitudes, beliefs, actions or skills. The SDLRS/LPA is available in a research version (for which scoring is done by Guglielmino and Associates) and a self-scoring version. There is also an elementary form, the SDLRS-E, and an ABE version (SDLRS-ABE).

The SDLRS/LPA and the SDLRS-ABE can be accessed online. The elementary form is available in paper format only:

(1) SDLRS-A   : For the general adult population (58 items)
(2) DLRS-E   : For elementary children (58 items)
                    Paper format only
(3) SDLRS-ABE   : For adults with Los reading levels or non-native English
                    Speakers (34 items)

According to Guglielmino (1978), there are eight factors related to self-directed learning readiness: "love of learning, self concept as an independent learner, ability to handle risk, ambiguity, and complexity in learning, creativity, seeing learning as an ongoing lifelong process, taking the initiative in learning, understanding one's self, and being responsible for one's learning. These factors suggest that some personality factors may relate to self-directed learning" (Ware, 2003). In 1991, Guglielmino and Guglielmino designed a self-scoring format for the instrument.

McCune, Guglielmino, and Garcia (1990) indicated that many validation studies of the SDLRS have been conducted, with most researchers reporting range of scores approximating the desired bell shaped curve. While many researchers taught the validity and reliability of the SDLRS, it has not been without its controversy. Bonham (1991) challenged the construct validity of the instrument, questioning whether low scoring measured a student as not ready for self directed learning or not reading for any type of learning, other-directed or self-directed. Other critics include Field (1989) and Brookfield (1993), believing the SDLRS to be inappropriately validated and conceptually flawed.
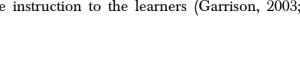
2.0 RATIONALE OF THE RESEARCH STUDY

Self-directed, lifelong learning is the most basic ingredient for surviving and thriving in a world of change (Guglielmino, 2005). In other words, students must be able to learn and re-learn in order to survive in the fast pace era. According to Grow (1996) high self-directed learners are able to set their own goals and standards with or without help from experts. They even use experts, institutions, and other resources to pursue these goals. Grow (1996) also stressed that low SDL learners or dependent learners need an authority-figure to give them explicit directions on what to do, how to do it, and when. For these students, learning is teacher-centered.

What is the major problem face by tertiary education students in learning? Will the students with low SDL survive in the system? Can this group of students survive without the lecturer guidance throughout their learning process? Students in the Teacher Training Institute are allocated with 1-2 hours per week for their independent study.

Beside the problem of infrastructure in the institute, for instance the problem to access the internet, lack of computer and lack of LCD projector, it is found that the low level of SDL indeed affect the students. Why? It is generally believed that online learning gives more control of the instruction to the learners (Garrison, 2003;

Gunawardena and McIssac, 2003). Recent research in an online distance education indicates that students need to have a high level of self-direction to succeed in online learning environment (Shapley, 2000). In other words, students with low level of SDL may hardly survive in this complex learning environment.

3.0   RESEARCH METHODOLOGY

3.1   Purpose of the Study

The purpose of the study is to determine the level of self-directed learning readiness (SDLRS) among the students and the differences in SDRLS between Kursus Perguruan Lepasan Ijazah (KPLI), Program Ijazah Sarjana Muda Perguruan (PISMP) and Program Persediaan Ijazah Sarjana Muda Perguruan (PPISMP) students.

3.2   Research Objective

There are four objectives in this research; i.e. to:

(1)   Determine the level of self-directed learning readiness among the students.
(2)   Determine any differences in the level of self-directed learning between PISMP and KPLI students.
(3)   Determine any differences in the level of self-directed learning between female and male students.
(4)   Determine any differences between the students' SDLRS and their options.

3.3   Research Design

This research is part of the development project which is descriptive in nature but adopted the quantitative method. Since the study was not concerning the improvements in students' performance before and after a lesson, experimental research design was not enforced in the study. It was an early survey on students' self-directed learning readiness.

3.4   Research Instrument

The research instrument consisted of a questionnaire with 58 items which was adopted from Guglielmino's Self-Directed Learning Readiness Scale (SDLRS). The Likert scale was used in the questionnaire namely: 1 as Strongly Disagree, 2 as Disagree, 3 as Somewhat Agree, 4 as Agree and 5 as Strongly Agree.

   Guglielmino (1977) developed the instrument to assess readiness for self-directed learning, the Self-Directed Learning Readiness Scale. The Self-directed Learning Readiness Scale (SDLRS) is a 58-item Likert-type scale self-reporting instrument which ranks from 1 to 5, with 17 negative items, the higher scores indicating more

readiness for self-directed learning. This SDLRS is designed to measure the complex of attitudes, abilities and characteristics which comprise readiness to engage in self-directed learning.

Evidence of reliability and validity for the SDLRS was recently reviewed and summarized. The reported reliability data for internal consistency are split-half and coefficient alpha between 0.67 and 0.96, and test-retest reliability of 0.79 and 0.82. The validity of the SDLRS has been studied extensively. Some of the evidence cited in the review of the instrument includes:

(1) Content validity: strong congruence between Guglielmino's original Dephi results and a review of the literature on self-directed learning (Finestone, 1984).
(2) Construct validity: Significant convergent and divergent validity found in five different studies (Delahaye and Smith, 1995).
(3) Criterion validity: Significant positive correlations reported with learning projects (Graeve, 1981; Jones, 1992).
(4) Undertaken, with hours spent on self-directed learning, and with observable student behaviors related to self-directed learning

4.0 RESULTS OF THE STUDY

The respondents consisted of 266 Program Persediaan Ijazah Sarjana Muda Pendidikan (PPISMP), Program Ijazah Sarjana Muda Pendidikan (PISMP) and Kursus Pendek Lepasan Ijazah (KPLI) students. Among the 266 students, 124 students belong to KPLI mode and 142 students from PISMP or PPISMP mode.

The analysis has been divided into two parts: KPLI and PISMP group of students. Basically the researchers wished to identify the differences between these two groups of students' with respect to their self directed learning readiness.

(1) SDLRS of PISMP and PPISMP Students
SDLRS data collected from PISMP, PPISMP and PPPR4T mode students. 3 groups of PISMP and 4 groups of PISMP students took part in this research.

Table 2.1   SDL of PISMP and PPISMP students

SDL	Female	%	Male	%	Total	%
Low	2	2.35	1	1.75	3	2.11
Below Average	24	28.24	17	29.82	41	28.87
Average	35	41.18	27	47.37	62	43.66
Above Average	19	22.35	11	19.30	30	21.13
High	5	5.88	1	1.75	6	4.23
Total	85	100%	57	100%	142	100

From Table 2.1, 142 students took part in this survey. The number of students with SDL below average are 106 (74.65%) and 36 (25.35%) students with SDL above average or higher.

(2) SDL of KPLI Students

Data collected from 6 groups of KPLI students, ie. a total of the 142 students. They were from KPLI Bimbingan dan Kaunseling, KPLI Bahasa Melayu, KPLI Pendidikan Jasmani dan Kesihatan, KPLI Pemulihan, KPLI Pra Sekolah dan KPLI Sains.

Table 2.2   SDL of KPLI students

SDL	Female	%	Male	%	Total	%
Low	5	6.17	2	4.65	7	5.65
Below Average	22	27.16	10	23.26	32	25.81
Average	26	32.10	22	51.16	48	38.71
Above Average	22	27.16	7	16.28	29	23.39
High	6	7.41	2	4.65	8	6.45
Sum	81	100	43	100	124	100

From Table 2.2, 124 students took part in this survey. The number of students with SDL below average are 87 (71.03%) while 37 (28.97%) students with SDL above average or higher.

(3) Overall Result of SDL

The overall data of 266 students who took part in the research were collected during the early semester of the year.

Table 2.3   SDL of all students in this institute

SDL	Female	%	Male	%	Total	%
Low	7	4.22	3	3.00	10	3.76
Below Average	46	27.71	27	27.00	73	27.44
Average	61	36.75	49	49.00	110	41.35
Above Average	41	24.70	18	18.00	59	22.18
High	11	6.63	3	3.00	14	5.26
Total	166	100	100	100	266	100

From Table 2.3, 266 students took part in this survey. The number of students with SDL below average are 193 (72.55%) while 73 (27.45%) students with SDL above average or higher.

(4) SDL between Different Options

Data analysis based on the students SDLRS with respect to their options in the institute is shown below:

Table 2.4   SDL of all students in this institute

Source	Type III Sum of Squares	Degree of Freedom	Mean Square	F-Value	Significance Value
Corrected Model	30122.68	13	2317.13	5.41	.000
Intercept	11731643.45	1	11731643.45	27396.32	.000
Options	30122.69	13	2317.13	5.41	.000
Error	107911.36	252	428.22		
Total	12175961.00	266			
Corrected Total	138034.05	265			

From table 2.4, the comparison of SDLRS among differences option students, significance value 0.000 shown that there is a difference between SDLRS and students' options.

5.0   DISCUSSION

In order to succeed in the process of learning, students must be capable of learning independently, take initiative to find extra resources and must be able to complete in-hand task within the time frame. This is in line with Durr, Guglielmino and Guglielmino (1996) point of view; self-directed learning is an effective alternative to classroom learning in many situations. Gibbon (2002) stressed that self-directed learning is any increase in knowledge in any place at any time at any age.

5.1   Level of SDRLS among the Students

From the data analysis, only 27% of the students, i.e 73 students, SDLRS is on average or below. Although the institute always highlights the importance of self-directed learning through allocation of Independent Self Learning (ISL) session to the students, it is still not enough to promote self-directed learning readiness among the students. Durr, Guglielmino and Guglielmino (1996) suggested high level of readiness in self-directed learning is important to make effective use of self-directed learning.

5.2   Level of SDLRS between PISMP and KPLI Students

In comparing the SDLRS between PISMP and KPLI students, it is found that 29% of KPLI students' SDLRS and 25% of the PISMP students' SDLRS were above average

(refer to table 2.1 and 2.2).Thus, it is obvious that SDLRS of KPLI students were slightly higher than the PISMP students. One of the reasons why the level of SDLRS among KPLI students was higher when compared to the PISMP students is mainly because KPLI students are graduates. Undergraduate students are mature and their interaction with peers and teachers will be better than non-graduates. This is line with Bickel *et al.* (1981) research which found that graduates students have already learnt how to study and how to ration the other temptations of student life in order to keep up with their studies. This makes graduates better able to handle a self-directed learning approach than non-graduates.

5.3 Level of SDLRS between Male and Female Students

From table 2.3, it is obvious that 31% of the female students' (SDLRS) were above average but only 21% of the male students' SDLRS were above average. Thus, this can concluded that the level of SDLRS female students is better than male students. Studies from Reio and Davis (2005) also found that at the age 14-20, males were less self-directed than the younger females.

5.4 Level of SDLRS between Students with Different Options

The ANOVA test in table 2.4, showned that there is a significant difference between students' SDLRS and their options. Thus, do their option's effect their SDLRS? Among all the options, PISMP PRA SEKOLAH has the highest average of SDLRS whereas KPLI BIMBINGAN KAUNSELING has the lowest average of SDLRS. James and Chilvers (2001) pointed out that for graduates to make a difference, courses must be designed specifically for graduates and "build upon their strengths, motivation, and prior learning."

6.0 CONCLUDING REMARKS

From the results and discussion of this research, it can be concluded that the pedagogical strategies and approaches must be changed in order to enhance self-directed learning among the students. Students with different gender and options could also influence their SDLRS. Thus, it is important to determine the level of SDLRS among other institute students and enhance their SDLRS in future research. The concept of self-directedness encompasses awareness of one's learning needs, the ability to choose what learning methods and strategies to enforce and the ability of self-assessment when evaluating the outcome of one's learning activities (Guglielmino, 1977).

REFERENCES

Bickel, J. W, C. R. Sherman, J. Ferguson, L. Baker and T. F. Morgan. 1981. The Role of MD-PhD Training in Increasing the Supply of Physician Scientists. N Engl J Med.

Bonham, L. A. 1991. Guglielmino's Self-Directed Learning Readiness Scale: What Does it Measure? *Adult Education Quarely*. 41(2): 92-99.

Brockett, R. and R. Hiemstra. 1991. *Self-Direction in Adult Learning Perspectives on Theory Research and Practice*. London: Routledge.

Brookfield, S. D. 1986. *Understanding and Facilitating Adult Learning*. San Francisco: Jossey-Bass.

Candy, P. C. 1991. *Self-direction for Lifelong Learning*. San Francisco, California: Jossey-Bass Publishers.

Delahaye, B. L. and H. E. Smith. 1995. The Validity of the Learning Preference Assessment. *Adult Education Quarterly*. 45: 159-173.

Durr, R., L. M. Guglielminio and P. J. Guglielmino. 1996. Self-Directed Learning Readiness and Occupational Categories. *Proquest Education Journals*. 7(4): 349-358.

Fidishun, D. 2000. Andragogy and Technology: Integrating Adult Learning Theory as We Teach with Technology. Retrieved January 26, 2003 from http://www.mtsu.edu/%7Eitconf/proceed00/fidishun.htm

Field, L. 1989. An Investigation into the Structure, Validity, and Reliability of Guglielmino's Self-Directed Learning Scale. *Adult Education Quarterly*. 39: 125-139.

Finestone, P. 1984. A Construct Validation of the Self-Directed Learning Readiness Scale with Labour Education Participants (Doctoral Dissertation, University of Toronto, 1994). Dissertation Abstracts International. 46: 5A.

Garrison, D. R. 2003. *Self-directed Learning and Distance Education*. In M. G. Moore & W. Anderson (Eds.), Handbook of Distance Education. Mahwah, NJ: Lawrence Erlbaum. 161-168.

Graeve, E. A. 1981. Patterns of self-directed Learning of Registered Nurses (Doctoral Dissertation, University of Minnesota). Dissertation Abstracts International. 48: 820.24.

Grow, G. 1996. Teaching Learners to be Self-Directed. *Adult Education Quarterly*. 41(3): 125-149.

Gibbons, M. 2002. *The Self-directed Learning Handbook: Challenging Adolescent Student to Excel*. San Francisco, Jossey-Bass Publishers.

Guglielmino, L. M. 2002. Contributions of the International Self-Directed Learning Symposia. *Proquest Education Journals*. 14(4): 23-25.

Guglielmino, L. M. 1977. Development of the Self-directed Learning Readiness Scale. (Doctoral Dissertation, The University of Georgia, 1977). Dissertation Abstracts International. 38: 6467A.

Gunawardena, C. N. and M. S. McIssac. 2003. Distance Education. In D. H.

Jonassen (Ed.), *Handbook of Research for Educational Communications and Technology*. Mahwah, NJ: Lawrence Erlbaum.

Hartley, K. and L. D. Bendixen. 2001. Educational Research in the Internet age: Examining the Role of Individual Characteristics. *Educational Researcher*. 30(9): 22-26.

Hiemstra, R. 1994. Self-directed Learning. In T. Husen & T. N. Postlethwaite (Eds.). *The International Encyclopedia of Education*. Second Edition. Oxford: Pergamon Press.

Hill, J. R., D. Wiley, L. M. Nelson and S. Han. 2003. *Exploring Research on Internet-based Learning*: From *Infrastructure to Interactions*. In D. H. Jonassen (Ed.), Handbook of Research for Educational Communications and Technology. Mahwah, NJ: Lawrence Erlbaum.

Hofmann, D. W. 2002. Internet-based Distance Learning in Higher Education. *Tech Directions*. 62(1): 28-32.

James, D. and C. Chilvers. 2001. Academic and Non-academic Predictors of Success on the Nottingham Undergraduate Medical Course 1970-1995. *Med Educ*. 35: 1056-1064.

Jones, J. E. 1992. Validation Study of the Self-Directed Learning Readiness Scale with a Sample of Adult Visual Art Students. In H. B. Long and Associates, Self-directed Learning: Application and Research. 131-146. Norman, O.K: Oklahoma Research Center for Continuing Professional and Higher Education. University of Oklahoma.

Knowles, M. 1975. *Self-Directed Learning: A Guide for Learners and Teachers*. New York: Association Press.

Kaur, J. and N. Thirumanickam. 1996. Distance Education – Meeting the Challenges. Paper presented at 10th Annual Conference, Asian Association of Open Universities, November 14-16, 1996, Tehran.

Martin, R. 1996. The Role of Self-Directed Learning in Career Development: An Issues Paper for Foundations in Adult Education: Professor John Wilson, Iowa State University, Ames, Iowa, December 9, 1996.

McCune, S. K. 1989. A Statistical Critique of Field's Investigation. *Adult Education Quarterly*. 39: 243-245.

McCune, S. K, L. M, Guglielmino and G. Garcia. 1990. Adult Self-direction in Learning: A Preliminary Meta-analytic Investigation of Research using the Self-directed Learning Readiness Scale. In: Long HB & Associates, eds. Advances in Self-directed Learning Research. Norman, Okla: Oklahoma Research Center for Continuing Professional and Higher Education, University of Oklahoma.

Reio, T. G. and W. Davis. 2005. Age and Gender Differences in Self-Directed Learning Readiness: A Developmental Perspective. *International Journal of Self-Directed Learning*. 2(1): 40-49.

Roberson, D. J. 2005. Masters of Adaptation: Learning in Late Life Adjustments. *International Journal of Aging and Human Development*. 6(4): 265-291.

Rodney, A. S. 2007. Evaluating the Self-Directed Learning Readiness of Engineering Undergraduates:A Necessary Precursor to Project-Based Learning. *World Transactions on Engineering and Technology Education*. 6(1): 59-62.

Shapley, P. 2000. On-line education to develop complex reasoning skills in organic chemistry. Journal of Asynchronous Learning Networks, 4(2). Retrieved December 8, 2003, from http://www.sloanc.org/publications/jaln/v4n2/index.asp

Song, L., E. S. Singleton, J. R. Hill and M. H. Koh. 2004. Improving Online Learning: Student Perceptions of useful and challenging characteristics. *Internet & Higher Education*, 7(1), 59-70.

Ware, J. 2003. *Creating a Responsive Environment*. 2nd edition. London: David Fulton.