COMMUNICATION

Estimation of Study Hours in Relation to Selected Courses in the PGDE Programme of the OUSL

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Abstract : *In distance education, the academic worth of courses and programmes of study are denoted by their credit rating. Yet the method of estimating the credit rating may differ from institution to institution and thus may not be an accurate representation of the work load that a distant learner is expected to shoulder.*

This article presents the findings of a research study conducted in the Open University of Sri Lanka to estimate the credit rating of selected courses in the Post-graduate Diploma in Education programme. The findings indicate that discrepancies that exist between expected and actual number of hours devoted to study by students with differing background characteristics.

Introduction

Academic worth of individual courses as well as programmes of study in distance education is denoted by their credit rating. The credit rating represents the average number of hours that a distance learner would devote to a course. The concept of credit rating is fundamental to the accreditation and recognition of the qualifications awarded by educational institutions. Especially in view of recent interest in providing flexibility in higher education to allow for progression from one particular programme of study or from one institution to another, the concept of credit rating becomes important for granting exemptions and accreditation.

Whether the credit rating is an accurate estimate of the study hours is, however, open to question. The present study attempts to estimate the average number of hours devoted by two samples of students to study four courses in the Post Graduate Diploma in Education Programme conducted by the Open University of Sri Lanka. Information related to study hours devoted by students was collected by the use of journals. The rationale for the use of journal in estimating study hours has been discussed in an earlier article (Gunawardena & Lekamge, 1997).

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Review of Pertinent Literature

Despite its importance as a basic characteristic of distance education no consensus exists regarding the estimation of credit rating. In Sukothai Thamathirat Open University (STOU), Thailand, each one credit distance education course follows a standard 15 unit format. One unit requires one week's study. Macintosh, Woodley, Morrison (1980) estimated that each credit would require an average of 10 hours of study a week for 36 weeks of the year. At the Open University of Sri Lanka (OUSL) a credit is considered as equivalent to 450 study hours.

Studies have shown (Black lock, 1976, Chambers, 1994) that a distance learning course tends to heavily exceed the stipulated study time. Mckay (1978) found that the average maximum study time was in the range of 40 per week. This finding was supported by Vos (1991). These researchers also reported that within this maximum period, different academic activities compete for attention.

Studies have also shown that learner characteristics tend to affect the amount of study time expended by students. Morgan, Taylor and Gibbs (1982), Entwistle and Ramsden (1985) and Marton, Howell and Entwistle(1984) indicate that a students' degree of motivation, their preferred learning styles, personal circumstances such as the level of their existing knowledge/skill and the ease with which they pick up new ideas and learn new skills affect their studies.

Among the methods used to calculate study time are asking individuals to record it on a scale between "very heavy/very light" or " far too much/ far too little" so that an average response can be calculated. Others have asked students to keep a diary or log of the hours they work over a given period continuously (Vos, 1991) or in retrospect (Mckay, 1978).

The following rules have been developed through experimentation by calculating the time it takes the average learner to study discursive texts (Whalley, 1982; Lockwood, Williams and Roberts, 1988)

An easy read	100 w.p.m
A fairly straight forward text	70 w.p.m
A difficult text	40 w.p.m

These findings cover reading and comprehension and therefore are not merely reading speeds.

Chambers(1989) assessed workload by calculating the time it would actually take the average learner to study all the course material that has been prepared. She calculated that an hour would be sufficient for the study of a workbook of 45 pages at an average of 100 words per page.

Studies have also looked at study time needed for other academic activities such as audio-video material, practical work and assignments. It has been suggested, for example, that the study time of AV material should be double the playing time (Chambers 1992).

It has also been estimated that exercises and practical activities require longer hours

than course writers predict (Lockwood, 1992). Melton (1993) found exercises based on the use of AV extracts would be the most time consuming. Weerasinghe et al (1997) found the workload required of B.Sc. and B. Tech programmes at the OUSL to be "heavy" even though the majority perception seemed to be that the workload of 900 study hours per academic year is manageable. Chambers (1994) explains that the methods of assessing workload such as a subjective rating, work diaries or logs are not very reliable and argues that a systematic approach to assessing workload and more robust methods are needed.

Diaries and journals have been used widely in teaching -learning, especially in relation to languages. Drew (1980) points out how journal keeping by students can help them to learn from each other and to use instruments at a faster rate. Tarnove (1988) explains that journals can help teachers gauge both their own teaching and their students' grasp of material. Yinger and Clark (1985) discuss the theory and practice of using journals as an aid to student learning and teachers' professional development and also describe how it has helped teachers to take control of their own professional development.

Howell-Richardson and Parkinson (1988) emphasize that diary research requires consideration to be given to variables such as journal layout, access, assignment administration and feedback. They also point out the practical difficulties that can arise from these variables which include marking or grading of entries, contlicting student and teacher purposes, contlicting teacher and administrator uses, first versus second language use in entries. Similarly, Yinger and Clark (1981) raise questions regarding whether or not the journal as a personal document, be a legitimate inquiring mode for studying human experience and if so, what safeguards must be instilled to defend the quality and validity of the research. They still conclude that journal keeping as a research tool is an economical device.

The present study attempts to estimate the workload of Post-graduate Diploma in Education (PGDE) programme by analyzing the records maintained by a selected sample of students in journals.

Method

The study focuses on three main objectives:

- The development of an instrument (a journal) to assess the average number of hours in selected courses.
- The estimation of study hours and a suitable credit rating for the courses selected for the study based on student entries in their journals, and
- Identification of variations in study patterns in relation to student background characteristics

This article will present the analysis of data related to the last two objectives. The procedure used for developing the journal and its limitations were discussed elsewhere (Gunawardene & Lekamge, 1997).

Two instruments were used to collect information for the study.

i) a short questionnaire to gather basic information such as sex, marital status, etc

ii) journal to collect information on study hours and study patterns.

The format of the journal had to accommodate all seven days of the week and five main time slots.

Sample

The students following the Postgraduate Diploma in Education Programme in 1995-96 (2548) represented the target population for this study. The original sample was to consist 300 Sinhala medium students and 150 Tamil medium students. As the response rate of Tamil medium students' was very low, the sample was confined to the Sinhala medium students only. The assistance of tutors was obtained in distributing the questionnaire. Three hundred questionnaires were distributed to these students at the beginning of the study. Only 222 out of 300, completed the short questionnaire which was used to gather basic information.

Having collected their background information, these students were asked to complete the journal for six months. The highest response in journal completion was recorded for the second month (June) and response had declined steadily as time went on. One reason might be that tutors were able to maintain continuous contact with their students during the early part of their studies. These tutors who had assisted in collecting data in this study might have had an opportunity to remind their students about the completion of the journal. After the scheduled five tutorial sessions they had less contact with students. The total number of students who completed both the short questionnaire and the journal during these months was 103, thus representing a response rate of 34.3%. Most of the problems which surfaced in data collection, not unsurprisingly, stemmed from the nature of the journal. To continue as participants in the research it was essential for the students to complete the journal every day of the week, and week after week for a period of six months. Further, specific entries had to be made in relation to the courses studied and the type of activity engaged in. Such a commitment was undeniably too demanding from a student group who were employed and probably had family, social and work obligations to fulfil.

We were also conscious that all journal entries may not be genuine. Even though the majority appeared to be maintaining an accurate record of their study patterns, a few respondents had indicated unrealistically long hours of study.

Background Characteristics of the Respondents

Table 1 to 7 show the background characteristics of the respondents in the sample.

Table 1 : Classification of respondents by sex and programme level

Sex	*Level 6%*	*Level 7%*	*Total*
Female	69.2	73.4	71.8
Male	30.8	26.6	28.2
Total%	37.9 (N 39)	62.1 (N 64)	100.0 (N 103)

Table 2 : Classification of respondents by age and programme level

Age	*Level 6 %*	*Level 7 %*	*Total*
Below 30	28.2	10.9	17.4
31 -40	46.2	32.8	37.9
Above 40	25.6	56.3	44.7
Total%	37.9 (N 39)	62.1 (N 64)	100.0 (N 103)

Table 3 : Classification of respondents by grade in profession and programme level

Grade	*Level 6%*	*Level 7%*	*Total*
Teacher	87.2	95.3	92.2
Vice Principal/ Sectional Head	7.7	3.1	4.9
Principal/Other	5.1	1.6	2.9
Total%	37.9	62.1	100.0

Table 4 : Classification of respondents by the field of study and programme level

Field of Study	*Level 6 %*	*Level 7 %*	*Total*
Arts	79.4	81.3	80.6
Science and Commerce	20.6	18.7	19.4
Total%	37.9	62.1	100.0

Table 5 : Classification of respondents by marital status and programme level

Marital Status	*Level 6%*	*Level 7%*	*Total*
Married	61.5	78.1	71.8
Single	38.5	21.9	28.2
Total%	37.9	62.1	100.0

Table 6 : Classification of respondents by no. of children and programme level

No. of Children	*Level 6%*	*Level 7%*	*Total*
None	46.1	32.8	37.9
1-2	43.6	54.6	50.5
3-4	10.3	12.6	11.6
Total	37.9	62.1	100.0

Table 7 : Classification of respondents according to distance from the centre* and programme level

Distance from Centre	*Level 6%*	*Level 7 %*	*Total*
Less than 5 miles	17.9	18.8	18.4
6-10 miles	10.3	18.8	15.5
11- 20 miles	28.2	23.4	25.3
More than 20 miles	43.6	39.0	40.8
Total	37.9	62.1	100.0

* Regional or Study Centre closest to the residence

The above tables indicate that female students predominate at both levels of the programme: the majority of the total number of respondents as well as in Level 7 (PGDE - Part II) are aged more than 40 years; the large majority of the respondents are married and they work at the level of teachers in the profession. Nearly 80% are Arts graduates, 92% are teachers in profession and have either no children or one to two children. Sixty to seventy percent of the respondents at both levels appear to living at a distance of more than 10 miles from the closest Regional/Study Centre. This shows the typical characteristics of students who follow the Post-graduate Diploma in Education programme at the OUSL.

Estimation of Study Hours by Course

Out of eight courses offered for the Post-Graduate Diploma in Education Programme, four were selected for this study. They were Educational Psychology (ESP 1306), Evaluation of Learning Outcomes (ESP 1308), Curriculum, School and Society (ESP 2207) and Comparative Education and Problems of Education (ESP 2208). The number of study hours for different courses was estimated on the basis of the journal entries made by the student respondents.

The procedure used for estimation of number of study hours was as follows. The actual number of study hours as given in the journals were totalled and the mean was calculated per week taking into consideration the number of weeks in which the student could have engaged himself/herself in studying the particular course. The latter (the number of weeks in which the student was engaged in studying a course) was the period between the dispatch of course materials and the examination. In the case of ESP 1306 and ESP 2207, the period was 28 weeks (7 months) as they were distributed at the time of registration while in the case of ESP 1307 and 2208 it was20 weeks (5 months). On the basis of this computation, the learner workload for the selected courses of study were as follows (Table 4.1).

Table 8 : Study hours by course: mean and total

Course	*Mean*	*Total*	*Expected No. of Study Hrs according to Credit Rating*	*Discrepancy in Hours*
ESP 1306	11.52	323	225	+98
ESP 1307	9.73	194	225	-31
ESP 2207	13.01	364	150	+214
ESP 2208	11.70	234	150	+84

The above table brings out the variations that exist among the study hours devoted to different courses and the discrepancies between the actual hours and the expected hours of study. While one course (ESP 1307) appeared to have a workload which is lesser than the expected workload, in the course ESP 2207, the actual workload appeared to be even more than double the expected workload. One reason for spending less hours for the course ESP 1307, would be that the module is based on basic statistics for which much reading is not needed. The other three modules introduce various concepts, theories and their applications and it can be argued that a typical distant learner needs more time to study them.

In other words, it can be questioned whether the credit rating is at par with the actual amount of work completed by the students. However, the studies conducted by Blacklock (1976) and Chambers (1994) also prove that distance learning courses exceed the stipulated study time.

Table 4 also reveals that, on the whole, students at level 7 (the second year of the programme) tend to devote more time for the selected courses than those at level 6, a mean of 10.62 for a week at level 6 as compared to 12.35 per week at level 7. As indicated by the credit rating of the selected courses, it should be other way around. At level 7, the selected courses have been given 1/3 credit rating, perhaps with the expectation that having completed one year of their studies, students would be better equipped to handle distance education courses. Even though we cannot vouch for the accuracy of the journal entries, the above figures make out a case for a closer re-examination of course material.

Variations in Study Hours According to Background Characteristics of Students

Several factors can give rise to variations in study hours, that is, how many actual hours are expended in studying. These include motivation to learn, learning style of the students, the level of their existing knowledge (Morgan, Taylor and Glibbs 1982, Martin, Howell and Entwistle, 1984), the perceptions associated with the value of the academic qualification obtained or the level of difficulty of a particular course, extraneous factors which facilitate or obstruct the engagement of a learner in studies. However, the effect of some of the above factors cannot be estimated from an analysis of information gathered through journals. Therefore, an attempt was made to examine whether relationships exist (which may always not be causal) between the number of study hours and some selected background characteristics of respondents. In the following section of the article, student responses regarding actual study hours are analyzed in relation to sex, age and marital status. More than 92% of the respondents were teachers by Grade in profession and 80% were in the Arts field so a decision was taken not to consider differences in relation to these variables. Similarly, even though the students indicate a more dispersed residential pattern according to the distance from the closest Study/Regional Centre, as the programme of study was being conducted in the distance mode, analysis of information related to this variable was also not carried out.

Table 5.1 illustrates the average time spent on studies per week and total time spent on studies during the study period (28/20 weeks) by women and men students in relation to selected courses and levels .

As the table indicates, men spend more time than women across all courses except ESP 2207 (368-354 = +14). It confirmed the general belief that women students, especially adult women with multiple roles, tend to devote less time to their education than their male counterparts. However, this finding does not prove that the students need less time than the time expected according to its credit rating. When taking two courses together to represent levels, the actual time spent by the students were much higher than the expected time.

Table 9 : Average time and total time spent on studies by women and men

Course	*Women (Mean)*	*Men (Mean)*	*Women (Total No. of Hrs)*	*Men (Total No. of Hrs)*	*Women (Difference from expect. hours)*	*Men (Difference from expect. hours)*
ESP 1306	9.26	16.01	260	448	+35	+233
ESP 1307	10.04	10.65	200	213	-25	-12
ESP 2207	13.13	12.65	368	354	+218	+204
ESP 2208	11.20	13.09	224	262	+74	+112
Level I, ESP 1306+ 1307	9. 13	14.00	438	672	-12	+222
Level II, ESP 2207+ 2208	10.71	12.87	514	618	+214	+318

T tests were calculated to see whether the difference between study hours spent by women and men in relation to average time spent was significant. Table 11 illustrates the results. It was interesting to find that men spend more time on studies than their female counterparts, though, the difference between these two groups in relation to three courses (ESP 1307,2207, 2208) was not significant at .05 level. With regard to Educational Psychology, (ESP 1306) the mean difference was statistically significant at .05 level. The same results could be found when comparing average time spent by all the women in Level 6 with all the men in Level 6.

Table 10 : Mean differences between women and men students in relation to courses and levels

Course	*Women*	*Men*	*t value*	*5%*	*sig. or not*
ESP 1306	9.26	16.01	-12.52	1.67	significant
ESP 1307	10.04	10.65	-0.95	1.67	not sig.
ESP 2207	13.13	12.65	0.28	1.67	not sig.
ESP 2208	11.20	13.09	-0.60	1.67	not sig.
Level I 1306+ 1307	9.13	14.00	-7.16	1.67	significant
Level II ESP 2207+ 2208	10.71	12.87	-0.20	1.65	not sig:

Table 11 : Average time and total time spent on studies by married and unmarried students

Course	*Married (Mean)*	*Unmarried (Mean)*	*Married (Tolal no. of hrs)*	*Unmurried (Total no. of hrs)*	*Married (Difference from expec. hrs)*	*Unmarried (Difference from expec. hrs)*
ESP 1306	9.77	12.99	274	364	+49	+139
ESP 1307	8.82	11.18	174	223	-5 1	-02
ESP 2307	11.70	16.05	328	449	+178	+199
ESP 2208	10.73	14.54	215	291	+65	+141
Level I ESP 1306+1307	9.30	12.09	446	588	+04	+138
Level II ESP 2207+2208	11.22	15.33	538	736	+238	+436

Table 11 shows that in relation to three courses, both married and unmarried students spend more time than the time denoted by the credit rating. Only for ESP 1307 (Evaluation of Educational Outcomes), do both groups spent less time than the time denoted by the credit rating. It seemed that single students are spending more time on their studies than married students across all the courses. This supports the view that single students with less family and other responsibilities place their studies at a high priority. Analysis of mean differences further supports this view. As Table 12 shows, mean differences between married and unmarried students in relation to three courses out of four and in relation to all levels were statistically significant in .05 level.

Table 12 : Mean differences between married and unmarried students in relation to courses and levels

Course	*Married*	*Unmarried*	*t value*	*5%*	*Sig. or not*
ESP 1306	9.77	12.99	-3.61	1.67	significant
ESP 1307	8.82	11.18	-1.82	1.67	significant
ESP 2207	11.70	16.05	-1.45	1.67	not sig.
ESP 2208	10.73	14.54	-1.93	1.67	significant
Level I ESP 1306+ 1307	9.30	12.09	-2.12	1.67	significant
Level II ESP 2207+ 2208	11.22	15.33	-2.16	1.65	significant

Table 13 : Average and total time spent by younger and older students in relation to courses and levels

Course	*Below 40 (Mean)*	*Above 40 (Mean)*	*Below 40 (total no of hrs)*	*Above 40 (total no. (of hrs)*	*Below 40 (Difference from exp. Hrs)*	*(Above 40 Difference from exp. Hrs)*
ESP 1306	11.34	10.81	318	303	+93	+78
ESP 1307	10. 15	7.23	203	144	-22	-81
ESP 2207	12.03	14.26	337	399	+187	+249
ESP 2208	11.57	12.63	231	252	+81	+102
Level I ESP 1306+ 1307	10.74	9.30	515	446	+65	-04
Level II ESP 2207+ 2208	11.80	13.49	566	628	+266	+328

As Table 13 illustrates, in relation to first two courses (level 6), younger respondents (below 40 years of age) reported that they spend more time than older students (above 40 years of age). However, it is not possible at this stage to figure out why older students tend to spend more time than younger students in relation to the other two courses. One possible reason is that the older students find it more difficult to resume their education after a lapse of a longer period. It is also possible that younger students have greater commitment towards young families. Separate studies should be directed to explore this further. Five T tests out of six, computed to check the difference between younger and older students had shown significant results.

Table 14 : Mean differences between younger and older students in relation to courses and levels

Course	1+ 2 age groups	3 and ahove	t value	5%	Sig. or not
ESP 1306	11.34	10.81	+3.61	1.67	significant
ESP 1307	10.15	7.23	+1.82	1.67	significant
ESP 2207	12.03	14.26	-1.45	1.67	not sig.
ESP 2208	11.57	12.63	-1.93	1.67	significant
Level I ESP 1306+ 1307	10.74	9.30	+2.12	1.67	significant
Level II ESP 2207+ 2208	11.80	13.49	-2.16	1.65	significant

Concluding Note

Several important findings emerged from this study.

1. On the whole, there was a wide discrepancy between the expected number of study hours as indicated by the credit rating and the actual number spent by the sample of

students on the selected courses. While one course (ESP 1307) had an under-estimated credit rating, all the others appeared to demand more commitment in terms of study hours from students.

2. In the case of one course (ESP 1306- Educational Psychology) there was a significant difference in the number of study hours spent by men and women which was absent for other courses.
3. There was a significant difference between the time spent by married and unmarried students on courses at both levels of study, as well as for three of the four courses.
4. A similar significant difference was found between the time spent by younger and older students.

The credit rating of the four courses studied needs to be re-considered in view of the above findings. It is possible that the remaining courses may also have similarly overrated credit ratings and that even the entire programme of study may be over-loaded than necessary. It is desirable that a similar investigation be done in respect of the other four courses of the programme before a decision about the credit rating is made.

It is not possible to explain why the difference between the men and women regarding study hours is significant for one particular course and not for the other courses. This finding warrants investigation into the nature of the content of the course (ESP 1306) which includes a considerable proportion of the content devoted to Developmental Psychology.

The difference in study hours between married and unmarried students is easy to understand. Even though all students are employed, unmarried students have less family responsibilities and therefore, would find it comparatively easy to find time for studies.

Similarly, older students who embark on their education after a longer break undoubtedly need more time to get back into the mainstream, than their younger peers.

These findings indicate a need to provide educational support to these categories of students to enable them to cope better with their education.

On the whole, the study indicates a need to re-examine the assumptions about the credit rating of all courses and programmes of study offered by the Open University. The difficulties encountered in getting the students to complete the journal, the questions which may arise regarding the reliability of the records maintained indicate the desirability of selecting a group of students, adequately trained in completing the journals, with a commitment to participate in a second study to refine the methodology and improve the reliability of the instrument used. Despite these few shortcomings the study provided valuable insights into the workload of the selected courses in the Post-graduate Diploma in Education Programme of the OUSL.

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