

## **Effective student support services – An achievement-oriented approach**

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### **Abstract**

The provision of support services for students is an important component of distance education. Evidence exists to suggest that there is a positive relationship between students' academic performance and effective use of support systems. In the light of this, it is a matter of concern that large numbers of students either choose not to make optimum use of some or all of these services, or do not know how to use them effectively. Consequently it is important to understand more about students' perceptions and use of support systems in order to maximise the effectiveness of these to enhance students' performance.

In order to gain more understanding about the relationship between achievement and use of support services, this paper compared a group of high achieving students' knowledge about, use of, and satisfaction with a range of student support services to those of a group of low achievers. Responses to a questionnaire survey indicated that, apart from face-to-face sessions, use of other services was low for both groups. A follow-up interview with a sample of the students explored whether or not they perceived the support offered by these services was in fact useful in helping them to address the problems that affected their achievement, or whether they turned to other sources to address these problems.

The results suggested that for effective student support, related student characteristics such as educational background should be taken into consideration. For students with higher educational qualifications, time and motivation were identified as major problems that differentiated high from low achievers. For students with lower qualifications, in addition to the above, anxiety about tests and examinations and awareness of support services and seeking help for the anxiety were among the major factors. Based on these findings, it is proposed to develop training programs that help students to improve their study skills and time management. In addition, promoting the awareness of available support services and strengthening the student counselling can be an important key for enhancing students' achievement.

### **Introduction**

While flexibility of time, place and pace of study are desirable characteristics of distance and open learning (DOL), the disadvantage is that it can often be difficult to prepare students adequately to participate fully and effectively. Consequently, the provision of support services for students is an important component of DOL. Support can refer to anything other than the actual course material that an institution provides to its students (Croft 1991). At the Open University of Hong Kong (OUHK), major support services include financial aid, student counselling, library services, Internet services, face-to-face sessions such as tutorials, day schools and surgeries, support from tutors through, for example, telephone contact, and study centres. Providing these services imposes pressure on institutional resources, so it is clearly critical to monitor their effectiveness. Naturally, each support service has some unique characteristics and, in the process of monitoring, it is necessary to understand its strength and weakness. One approach to doing this is to

understand how individual services might affect students, a measure of this effect being students' academic achievement.

An earlier study by Fan (1998) related students' use of course-related support to their academic performance based on the results of a mathematics foundation course. This paper considers both general and course-related support on a much larger scale – not just the services but also support-related issues. It aims to identify patterns that can contribute to the development of general guidelines for an effective support system. It will begin with an examination of the students' perceptions of the problems most likely to affect their course achievement, and will then consider the students' perception and use of the support. The study reported here is part of a major project conducted at OUHK, in which the study habits and preferences of high and low achieving students were compared with respect to a number of factors that, in addition to the use of support services, included organisational strategies, self-perceptions, cognition, and the balancing of study with other commitments (CRIDAL 1999).

### **Methodology**

Data for the major project were collected by questionnaires completed by 712 students, and follow-up telephone interviews with a sub-sample of 32. The sample was selected from students ranked in the top 5 per cent (high achievers 'HA') and bottom 5 per cent (low achievers 'LA') of OUHK courses over four semesters ending from August 1996 to February 1998. Full details about the methodology, questionnaire and interview schedule have been reported by Chan et al. (1999). The discussion presented here is based mainly on the questionnaire results. Chi-squared tests for independence are performed when needed. The findings are considered significant or strongly significant if they are statistically significant at 0.05 or 0.01 level respectively.

### Sample

The aspect of the project to be reported in this paper focuses on what has been named an 'achievement-oriented approach'. That is, the analysis has differentiated students based on their academic achievement, enabling a focus on two extreme groups for a larger contrast. Educational background has been identified as a major factor affecting students' performance (Fan and Chan 1997), and is one of the major independent variables considered in the overall project. To avoid confounding effects, students with different educational backgrounds are considered separately – high education (HE) refers to students with matriculation standard or above, that is, normal entry requirement for local conventional universities, and low education (LE) as those who completed their former education before matriculation. The numbers of HE and LE students defined for the project are given in Table 1. It was found that a strongly significant relationship between educational background and academic performance existed.

Table 1: Number of students defined for the project

	HA	LA	Total
HE	1061	716	1777
LE	443	755	1198
Total	1504	1471	2975

This paper will focus on the LE and HE responses to the questionnaire survey. Students whose educational background details were not available have been omitted. To facilitate discussion, four subgroups are defined, namely, high education high-achiever (HE-HA), high education low-achiever (HE-LA), low education high-achiever (LE-HA) and low education low-achiever (LE-

LA). The number of students in the sample is given in Table 2. It is not surprising to see that HE and HA students were more responsive to the questionnaire than their counterparts.

Table 2: Number of students considered in this paper

	HA	LA	Total
HE	310	142	452
LE	123	99	222
Total	433	241	674

### Items to investigate use of support services

Two of the questionnaire items were designed to elicit information about students' use of support services. The first of these (Figure 1) was designed to identify the difficulties that students perceived to have affected their course achievement. An extension of this item (discussed in detail in Taplin et al 1999) measured the extent to which students sought help with these problems, and from whom. The second item (Figure 2) was designed to measure their awareness and use of and satisfaction with support services.

Figure 1: Item to identify students' perceptions of problems affecting course achievement

I perceived the following to cause me difficulties with this course:	A major cause		A moderate cause		Not at all
a) study materials	5	4	3	2	1
b) volume of materials to study	5	4	3	2	1
c) integration of studying and other responsibilities	5	4	3	2	1
d) my writing skills (in the language used in the course)	5	4	3	2	1
e) motivating myself	5	4	3	2	1
f) anxiety about tests and exams	5	4	3	2	1
g) finding time to study	5	4	3	2	1
h) the need to spend a lot of time with my family/friends/colleagues	5	4	3	2	1
i) my spouse/family becoming annoyed with the time I spent studying	5	4	3	2	1

Figure 2: Item to measure students' awareness and use of and satisfaction with support services

While doing this course I was familiar with the use of the following OUHK student support services: (Please tick as many boxes as you need to.)	I knew about this.		I used this service.		This service was satisfactory for me.	
	Yes	No	Yes	No	Yes	No
a) financial aid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) student counselling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) library services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Internet services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) face-to-face sessions (e.g. tutorials/day schools/surgeries)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) tutor support such as telephone tutoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) study centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Results

### Understanding students' difficulties and preferences with help-seeking

Table 3 gives the overall level of difficulty and lists the top and bottom ranked causes of difficulties. (Details are given in Table A1 in the Appendix.) Overall, the LA students rated more problems slightly higher than the HA, but all of the mean ratings were close to 3, which represented 'a moderate cause'. All four subgroups considered 'finding time to study' and 'family becoming annoyed' to be the problems the most and least likely to have caused them difficulties. The commonly least-rated problem implies that students generally obtained understanding and acceptance from their families. For 'finding time to study', the difference between the HE-HA and HE-LA was strongly significant. 'Integrating study and other duties' was the second-ranked problem for all except the LE-LA group, who gave their second highest rating to 'need to spend a lot of time with family and friends'. The third highest mean for both HE groups was 'volume of study materials' but for both LE groups it was 'anxiety about tests and exams'. Motivation was not considered as a major problem by students, but the differences between the ratings of HA and LA for both HE and LE were strongly significant.

Table 3: Rankings and mean ratings for causes of difficulties

Cause of difficulties	HE-HA	HE-LA	LE-HA	LE-LA
Finding time to study	1	1	1	1
Integrating study & other duties	2	2	2	
Volume of study materials	3	3		
Anxiety about tests and exams			3	3
Need of time for family/friends				2
Family becoming annoyed	9	9	9	9
Overall mean rating of difficulties	2.70	3.01	2.86	2.98

Consideration of the problems for which the students said they sought help has been discussed fully in Taplin et al. (1999). However, it will be mentioned briefly here because it has some important implications for the students' use of support services. Some interesting disparities were revealed (see Tables A2a–d in the Appendix), with the most help being sought for problems relating to course content – even though this was not rated highly as one of their perceived problems – and relatively little help sought for what was perceived to be the major problem, finding time to study. While 'anxiety about tests and exams' was not perceived as a major problem for the HE group, it was rated the second highest for which help was sought by all but the LE-LA group. For the LE-LA group, this had the third highest rating as a problem, but only the fifth highest rating for help-seeking. For the content and anxiety problems, the differences in mean help-seeking ratings between LE-HA and LE-LA were strongly significant.

Table 4 indicates the overall ranking of those from whom students sought help. The rankings for all four groups were basically the same. About 55% of each of HE-HA, HE-LA and LE-LA and 45% of LE-HA did not seek help at all for their problems. The difference between the means of the LE-HA and LE-LA was strongly significant, which suggests that student support was particularly important for the LE-LA students. When students did seek help, a friend or family member was the first choice and the tutor was their second choice. Their reluctance to seek help,

and preference to seek it from friends and family members ahead of University personnel, should be kept in mind when interpreting the students' use of OUHK support services.

Table 4: Help-seeking – ranked helpers

Helper	HE-HA	HE-LA	LE-HA	LE-LA
Did not seek help	1	1	1	1
Friend or family member	2	2	2	2
Tutor	3	3	3	3
Course co-ordinator	7	7	7	7

### Students' perception and use of support services

As mentioned earlier, this analysis considered both general and course-related services, with students being asked whether or not they knew about, used and were satisfied with each service. Table 5 summarises the average percentages of positive responses to these questions. (Details for individual services are given in Tables A3a–c in the Appendix.)

Table 5: Overall level of awareness, use and satisfaction of support services

	HE-HA	HE-LA	LE-HA	LE-LA
Knew about the services	82.5%	80.4%	83.2%	76.8%
Used the services	37.2%	35.0%	41.8%	34.2%
Were satisfied with the services	40.8%	40.4%	43.9%	37.4%

The level of awareness was high (around 80% for the two HE groups and LE-HA), with that of LE-LA being slightly lower (76.8%). However, there were still about 20% of students not aware of the services. Slightly more than one third of students had used the services and they were generally satisfied with them. On all three dimensions, namely 'knew about', 'used' and 'were satisfied with', the percentages of HA students were generally higher than LA. The differences between the two subgroups of HE were all insignificant. On the other hand, the differences between LE-HA and LE-LA were all strongly significant. Among those who knew about the services, the difference of usage between LE-HA and LE-LA was just marginally significant. This result suggests that awareness of the available support services could be a major factor that differentiated HA students from LA, among the LE group in particular.

For individual services, the relative levels of the four subgroups on each of the three dimensions were similar, that is, levels of HA were generally higher than LA and the differences between LE-HA and LE-LA were the largest. The most well-known services, of which more than 80% of students in each group were aware, were financial aid, library, face-to-face and general tutor support. Student counselling was the least known, selected by 60% or less of each group. It is not surprising that the students used the services about which they knew the most – or perhaps, conversely, had got to know about them because of their need to use them – face-to-face (used by more than 80% of HA students and 70% of LA), library (more than 60% and 50% respectively) and general tutor support (more than 50% and 40% respectively). Again, student counselling was the least used, by less than 11% of each group. Financial aid was also little used, by less than 14% of each group. This is consistent with the finding that relatively few students sought help for personal problems like lack of time and anxiety and that, when they did, they tended to seek it from family or friends rather than University personnel. When students were asked to indicate which services they found satisfactory, more than 70% of the HA groups selected face-to-face, although only 64.8% of the HE-LA and 59.6% of the LE-LA said they found this to be satisfactory. Library and general tutor support were the second and third most frequently

identified as satisfactory. Across all groups, less than 30% of students reported satisfaction with financial aid and student counselling. The largest differences between HA and LA were observed for face-to-face and general tutor support – for LE students, the differences in both usage and satisfaction between HA and LA were strongly significant; for HE, only the difference for face-to-face was significant. This result suggests that the use of tutor support services could be another factor that differentiated HA from LA, for LE in particular.

## **Discussion and Implications**

The evidence provided in this study showed that support services could have a potentially positive effect on students' academic achievement. Observations for HE and LE appeared to be very different. Therefore, if support is to be optimally effective, it is necessary to take into consideration related student characteristics such as educational background. In making recommendations about how to maximise the effectiveness of support services, it is also necessary to be aware of the problems that students perceive to be significant for them.

The highest-rated problems for the HE students were all time-related and the significant difference between HE-HA and HE-LA in finding time suggests that time-related problems could be the major issue that differentiated the two groups. It is not surprising to see that finding time was identified as a prominent problem, as it has been a 'well-known' problem encountered by part-time students (Bourner and Race 1995). The results pointed to the fact that no matter how well a student performed, time was always a problem. This might suggest that the problem was partially psychological. In actual fact, the survey results indicated that time spent in studying might have some effect on achievement, since LA students generally spent less time than HA in study. For example, LE-LA spent almost two hours per week or 20% less time in studying than LE-HA. Student support services cannot increase study time, but may be able to influence a similar effect on achievement by improving the efficiency of students' study. For instance, support in the form of a training program for time management and effective DOL study may help to enhance students' performance. This suggestion certainly warrants further investigation.

The ranked lists of difficulties also showed that HE and LE students had different concerns. Specifically, LE students rated anxiety about tests and exams highly as a problem. The anxiety could relate to their academic ability, but it clearly involved non-physical aspects such as confidence and sense of uncertainty. Motivation was also identified as a major difference between HA and LA of both HE and LE. None of the subgroups considered content of study materials to be a major problem, yet this was the most frequent problem for which students said they sought help. This, at least, reflected that students generally believed content-related problems to be solvable. The problem for which students sought help the least was finding time to study, which they appear to have accepted as unsolvable. An implication for the effective development of support services is the need to make clear to students how support services can address not only the problems they regard as 'solvable' but also those they regard as 'unsolvable', as this might directly relate to the difference in the usage of face-to-face support.

While students tended to ask University professionals (mainly tutors) for help with academic problems, for personal problems, they tended to rely on their family or friends. However, for some personal problems such as anxiety about tests and exams, a family member or friend might not have the necessary understanding and expertise to be able to offer appropriate advice. In such cases, student counselling may serve the purpose better (Hayes 1996), as long as they can obtain appropriate counselling for their particular needs. The results of this study reveal two problems. Some students, particularly LE-LA, preferred to try to find their own solutions to their anxiety problems than to seek help. This does not appear to be caused by unwillingness to seek help since,

as reported by Taplin et al. (1999), the majority of students said they thought help-seeking is an acceptable strategy. Instead, as the results suggest, many students simply were not aware of the existence of student counselling services. This implies that it is necessary to promote students' awareness of it and encourage students in need to use it

Finally, the above discussion focused on major problems identified by students. As well as considering the problems they rated highly, one should also be aware of those that they did not consider to be serious. For instance, none of the subgroups considered content of study materials to be a major problem. This was understandable for HE students, but for LE students it might be questionable. Since this was the problem that the most students sought help for, it might be that most content-related problems were solved and therefore became insignificant. However, the questionnaire results suggested that this might not be the case, for LE students in particular, and therefore a more fundamental question would be whether students really realise their problems. Student support should also assist students identifying their problems and encourage them to find out a solution actively.

## Appendix

Table A1: Students' level of difficulties\*

Cause of difficulties	HE-HA	HE-LA	LE-HA	LE-LA
Contents of study materials	2.49	2.57	2.42	2.61
Volume of study materials	2.83	3.16	2.94	3.02
Integrating study & other duties	3.09	3.27	3.12	3.10
Writing skills	2.36	2.62	2.68	2.82
Motivation	2.56	3.11	2.71	3.03
Anxiety about tests and exams	2.80	3.14	3.07	3.11
Finding time to study	3.29	3.77	3.50	3.49
Need of time for family/friends	2.75	3.16	2.99	3.15
Family becoming annoyed	2.16	2.33	2.28	2.51

\* 5 = most significant, 1 = least significant

Table A2a: Help-seeking of HE-HA

Cause of difficulties	Helper*	% of students						
		I	II	III	IV	V	VI	VII
Contents of study materials		26.8	7.4	56.5	12.3	32.3	19.4	18.4
Volume of study materials		56.1	4.2	26.5	4.2	17.4	6.8	11.6
Integrating study & other duties		54.8	1.0	13.2	9.0	12.3	17.7	5.2
Writing skills		59.4	0	11.0	6.8	6.5	17.4	5.2
Motivation		62.9	0	1.9	5.5	10.6	27.1	3.5
Anxiety about tests and exams		48.4	2.3	14.2	5.8	23.5	25.2	12.3
Finding time to study		70.0	0	1.6	3.9	4.5	22.6	1.0
Need of time for family/friends		56.8	0	0.3	3.9	2.6	38.7	1.3

\* I = did not seek help, II = course co-ordinator, III = tutor, IV = work colleague, V = student in the same course, VI = friend or family member, VII = former student

Table A2b: Help-seeking of HE-LA

Helper*	I	II	III	IV	V	VI	VII
Cause of difficulties	% of students						
Contents of study materials	25.4	6.3	47.2	10.6	31.0	18.3	25.4
Volume of study materials	53.5	4.2	19.7	5.6	18.3	8.5	14.8
Integrating study & other duties	53.5	3.5	13.4	9.9	11.3	18.3	11.3
Writing skills	57.7	0.7	13.4	4.2	9.2	17.6	8.5
Motivation	58.5	0.7	2.1	6.3	8.5	28.9	5.6
Anxiety about tests and exams	44.4	2.1	14.8	2.1	23.9	22.5	14.8
Finding time to study	70.4	0	1.4	8.5	4.2	18.3	3.5
Need of time for family/friends	60.6	0.7	0	2.8	0.7	33.8	0.7

\* refer to Table A2a

Table A2c: Help-seeking of LE-HA

Helper*	I	II	III	IV	V	VI	VII
Cause of difficulties	% of students						
Contents of study materials	13.8	8.9	59.3	16.3	43.1	27.6	22.0
Volume of study materials	41.5	4.1	28.5	7.3	30.9	13.0	10.6
Integrating study & other duties	48.8	3.3	21.1	13.8	15.4	21.1	8.9
Writing skills	46.3	1.6	17.1	12.2	10.6	34.1	8.9
Motivation	57.7	0	4.9	5.7	12.2	30.9	4.9
Anxiety about tests and exams	40.7	1.6	17.9	4.9	26.0	30.9	13.8
Finding time to study	63.4	0	0.8	5.9	8.1	25.2	4.1
Need of time for family/friends	49.6	0	0.8	7.3	3.3	44.7	0.8

\* refer to Table A2a

Table A2d: Help-seeking of LE-LA

Helper*	I	II	III	IV	V	VI	VII
Cause of difficulties	% of students						
Contents of study materials	29.3	9.1	49.5	11.1	23.2	13.1	18.2
Volume of study materials	47.5	2.0	33.3	3.0	15.2	7.1	11.1
Integrating study & other duties	47.5	5.1	14.1	9.1	14.1	18.2	7.1
Writing skills	56.6	4.0	15.2	13.1	7.1	21.2	5.1
Motivation	64.6	0	2.0	5.1	6.1	29.3	3.0
Anxiety about tests and exams	60.6	4.0	11.1	4.0	14.1	19.2	4.0
Finding time to study	75.8	2.0	2.0	4.0	3.0	17.2	1.0
Need of time for family/friends	61.6	1.0	1.0	3.0	4.0	34.3	1.0

\* refer to Table A2a

Table A3a: Students' awareness of support services

Knew about this service	HE-HA	HE-LA	LE-HA	LE-LA
Financial aid	90.0%	83.8%	90.2%	82.8%
Student counselling	61.3%	57.7%	56.9%	53.5%
Library services	92.3%	90.1%	93.5%	86.9%
Internet services	76.1%	78.9%	78.0%	75.8%
Face-to-face sessions	88.1%	84.5%	91.1%	80.8%
General tutor support	91.0%	90.8%	91.9%	89.9%
Study centre	79.0%	76.8%	80.5%	67.7%

Table A3b: Students' usage of support services

Used this service	HE-HA	HE-LA	LE-HA	LE-LA
Financial aid	11.9%	9.9%	13.8%	12.1%
Student counselling	5.5%	7.7%	11.4%	10.1%
Library services	61.0%	59.2%	69.1%	59.6%
Internet services	23.9%	24.6%	22.8%	25.3%
Face-to-face sessions	88.1%	76.1%	87.8%	72.7%
General tutor support	50.6%	47.2%	61.8%	44.4%
Study centre	19.4%	20.4%	26.0%	15.2%

Table A3c: Students' satisfaction with support services

Satisfied with this service	HE-HA	HE-LA	LE-HA	LE-LA
Financial aid	27.7%	24.6%	26.0%	21.2%
Student counselling	21.9%	21.1%	26.0%	24.2%
Library services	58.1%	57.7%	61.0%	58.6%
Internet services	31.0%	31.0%	26.0%	36.4%
Face-to-face sessions	74.5%	64.8%	79.7%	59.6%
General tutor support	45.2%	47.9%	55.3%	36.4%
Study centre	27.4%	35.9%	33.3%	25.3%

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