

## LEARNER PERCEPTION OF SUPPORT SERVICES IN BLENDED LEARNING: IMPORTANCE-SATISFACTION ANALYSIS

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### ABSTRACT

*A new era dawned for distance education in Sri Lanka in 1976 with the establishment of the Sri Lanka Institute of Distance Education, which had the objective of providing tertiary-level education. The Open University of Sri Lanka was set up in 1980 to cater to more students. Since 2004, several conventional universities and private educational institutions began offering distance learning programmes. There are now 23 state and private institutions doing so in the country. This article presents the findings of a study on which support services were deemed as important and satisfactory by distance learners in Sri Lanka. This study employed the deductive approach as it involved the use of a theory to derive specific assumptions. These assumptions were tested through the collection of data and the use of the importance-satisfaction analysis. The study identified which support services the learners deemed as important and which they were satisfied with. The results showed that they gave the most importance to motivational workshops, followed by course materials which were easy to understand, tutors and study guides. They were most satisfied with motivational workshops but were least satisfied with course materials.*

*Keywords: Distance education, Blended learning, Support services, Learner satisfaction, Sri Lanka*

### INTRODUCTION

The need for distance education in Sri Lanka was recognised in 1972. The University of Ceylon, which had been preparing students for the external degree of the University of London, wanted to hold the required authority for conducting the external examinations by the university. As a result, the External Examination Agency was established in 1973. This agency, which functioned independently, was later renamed as External Service Agency. In 1976, the Sri Lanka Institute of Distance Education was established to provide tertiary-level education to more students in the fields of mathematics, science, management and technical studies who were unable to continue their education in institutions of higher learning due to socioeconomic and other factors.

The Open University of Sri Lanka (OUSL) was set up in 1980 linking all the three institutions to fulfil the needs of those who did not get the opportunity to obtain free higher education. OUSL has been conducting multimedia content blended mode courses in the Faculty of

Sciences and Engineering since 2009. The Faculty of Humanities and Social Sciences initiated the development of multimedia content for delivery through the blended/online mode in 2014 with the assistance of the Quality Improving Grant (QIG) given under the Higher Education for the Twenty-First Century (HETC) project by the Asian Development Bank. With the support of Asian Development Bank's Distance Education Modernisation Project (DEMP) which was started in 2004, several conventional universities and private educational institutions initiated distance mode teaching programmes in Sri Lanka. These institutions were supported by the National Online Distance Education Service which provided technical support. Five conventional universities, namely, University of Moratuwa, Rajarata, Jaffna, Colombo and Peradeniya, started distance learning programmes with the support of DEMP and became dual-mode universities. Currently, there are 23 state and private institutions that offer distance learning programmes in different streams available in the country. Out of the 23 institutions, 19 offer blended mode courses while four offer fully online courses (Gamage & Fernando, 2012). These parent organisations offer sufficient library, academic and administrative support services to facilitate self-learning as the characteristics of the distance learners vary. Generally, Sri Lankan distance learners are young adults who are not used to distance learning as they had received face-to-face education from Grade 1 to 13. As a result, they request more teacher support (Gamage & Fernando, 2012; Gunasekera, 2015, 2017). Many institutions, like OUSL, have started a number of prerequisites that students have to cover before undertaking the core courses so as to train them in self-learning.

The provision of effective learner support services has become an important subject of discussion among higher education institutions and has been extensively studied in recent years by a number of researchers (Mohamed & Zainal, 2015; Kalema, Olugbara, & Kekwaletswe, 2014; Cheawjindakarn, Suwannathachote, & Theeraroungchaisri, 2012; Silva & Fernandes, 2012). These researchers have consistently shown that, without the necessary support services, a distance education programme will not succeed. The support can be in the form of facilities, administration, learning materials, reading materials and references, human interaction, and advice and moral support (Sim, Atan, & Idrus, 2005). Theories in distance learning mostly emphasised the importance of learners' interaction with peers, teachers and learning materials for self-learning.

In the same manner, local researchers revealed the importance of sufficient support service to facilitate learning (Gunasekera, 2015, 2017; Perera, 2015; Fernando, 2003; Gamage & Fernando, 2012). Their findings implied that institutions which provide distance education must provide sufficient support service effectively to help learners achieve academic success. They also need to use information and communication technology to bridge the time, geographical, economic and social distance between learners and the university.

## **LITERATURE REVIEW**

### **Empirical literature**

Blended learning is a thoughtful integration of traditional classroom-based face-to-face learning and computer-based online learning (Garrison & Kanuka, 2004). It describes learning that mixes various event-based activities, including face-to-face classrooms, live e-learning, and self-paced learning.

### **Model of Blended learning**

As pointed out by Driscoll (2001), blended learning has sometimes been a hyped-up phenomenon and the term can mean different things to different people. However, most educators would agree on Driscoll's description of it as a blend of:

- (1) Any form of instructional technology with face-to-face instructor-led training;
- (2) Mixed modes of web-based technology to accomplish an educational goal;
- (3) Various pedagogical approaches (e.g. constructivism, behaviourism, cognitivism) to produce an optimal learning outcome with or without instructional technology; and
- (4) Instructional technology with actual job tasks to create a harmonious effect between learning and working.

### **Learner Support Services**

Effective learner support is now widely and increasingly recognised as an essential component of a distance/blended/online learning system. It is probably one of the most important responsibilities of the institution offering distance mode programmes as stated by the Association of College and Research Libraries (1990).

Generally, distance learners are adult self-learners who study away from peers and teachers. They are dynamic individuals whose characteristics often change in response to both educational and life experiences. They are isolated and come from different economic, social, educational and occupational backgrounds. Ali (2011) describes them as mostly employed married and having family commitments. They are bound by time and place due to job and geographic location. Besides that, they are different in age and levels of education so their personal experiences, abilities and skills are different. Hence, they face various problems when engaging in self-learning activities. Many studies revealed that students without adequate support are likely to delay the completion of their studies or drop out from their distance education programme. The studies also indicated that customer satisfaction influences customer retention. Therefore, quality services should be provided to distance learners to satisfy them if the education providers want to survive in the field. However, Tait (1995) states that there can be no universal blueprint for the design of support services because of the different settings faced by planners.

The learner support includes information, administration and admission, tutoring, counselling and assessment. The definition includes that the library, faculty administration (information), supportive administrative staff, IT coordination, finance (administration and admission), tutor/mentor (tutoring), academic staff (counselling and assessment) of the distance mode teaching institution. Erdos (1975) states that these sub-systems are dependent on each other and should have a tightly interlocked relationship to provide efficient support services.

Many researchers pointed out that one of the main reasons for the increasing dropout rate of distance learners is the barriers faced by the institutions which offer distance mode programmes (Kalema et al., 2014; Zaheer, Elahi, Gondal, & Qadri, 2015). Time constraint in meeting deadlines, project component difficulties, coordination and communication procedures, lack of uniformity in introducing a learning management system to students, lack of teacher-learner interaction and lack of proficiency in English were the reasons for Sri Lankan distance learners dropping out (De Zoysa, Munashinghe, Seneviratne, & Mukunthan, 2011; Liyanagama, Kulasekera, & Vidanapathirana, 2015; Liyanagunawardena, 2012).

Service provider institutions need to make an authentic effort to measure their performance regularly. A considerable body of research has given some insight into the factors which contribute to students' success or failure in open and distance learning, success of learner support services and success of learner support systems (Mohamed, 2015). High-quality learner support services are linked to student satisfaction and success. Therefore, all universities which offer distance mode programmes should ensure that their learners have access to quality support services in order to remove barriers and facilitate academic endeavours. The success of distance learners mainly depends on their personal skills and

abilities as well as interaction with academic staff, learning content, family and peers (Asbee & Simpson, 2006). It also depends on their employers and direct support given by the learning institution.

### **Distance learner satisfaction**

Learner satisfaction is achieved when students are successful in their learning experience and are pleased with it (Moore, 2009). It is the perception of enjoyment and accomplishment in the learning environment (Sweeney & Ingram, 2001). Both definitions focus on accomplishment and pleasure. Satisfaction is an affective construct that is often considered to be a predictor of learning outcomes (LaPointe & Gunawardena, 2004). Stein (2004) found that satisfaction is determined by the degree of structure in the course. Elements that defined structure include clearly defined objectives, assignments, and deadlines. Richardson and Swan (2003) studied learners' perceived social presence and its relationship to perceived learning and satisfaction with instructors. They found that all the variables correlated and that social presence was a good predictor of student satisfaction. Beyond being important from the learner's perspective, student satisfaction is important to the institution because it has been shown to be an important factor in student retention (Liu, Magjuka, 2007; Bonk, C. J., Lee, S. (2007); Liu, Hu, Li, 2009). Student satisfaction is one of the five pillars of quality in online education, together with learning effectiveness, access, faculty satisfaction and institutional cost effectiveness (Sloan Consortium, 2002). Bolliger (2012) revealed that interaction with instructors and peers was important to respondents and learners were satisfied with course content which was appropriate, engaging and challenging.

### **Theoretical background**

The framework of this study is based on the theory of transactional distance introduced by Moore in 1960. This theory discusses three main things related to distance learning. These are structure of content, dialogue (interaction) and autonomy (learner responsibility). Structure refers to the elements of a course's design, such as learning objectives, activities, assignments, planned interaction and evaluation whereas dialogue is the communication between instructor and learners (Moore & Kearsley, 1996). Distance is the psychological and communication gap between teachers and learners. Autonomy is a characteristic of learners who control and manage their learning in a self-reliant way (Vasiloudis, Koutsouba, Giossos, & Mavroidis, 2015). Kuhn and Bassack (1997) stated that according to this theoretical framework, a series of transactions are made by learners in distance education programmes with their:

- (1) course materials;
- (2) tutors;
- (3) peers; and
- (4) institution.

The theory of transactional distance provides one way of analysing the learning and teaching context by considering it in terms of separation between learner and teacher, and learner and learner. Moore's view is that transactional distance involves psychological, rather than geographical, distance between learners and the teacher which is bridged through an appropriate balance of dialogue, structure, and learner autonomy which provides a means of considering how these design elements can be addressed based on the teacher's knowledge of the teaching and learning text. The theory posits that high structure (S) and low dialogue (D) result in greater transactional distance and more responsibility on the learner to be autonomous in order to succeed (Moore & Kearsley, 1996). Transactional distance is lessened in courses with high levels of dialogue (+D) and little predetermined structure (-S) because learners receive ongoing guidance from instructors (tutor/mentors) and are able to modify instructional materials to meet their needs. Moore and Kearsley

(1996) noted that success in distance learning is determined by the extent to which the instructor and the institution are able to provide appropriate structure, quantity and quality of the dialogue (interaction) between instructor and learner, taking into account the extent of the learner's autonomy.

This study sought to find out whether Sri Lankan distance learners received satisfactory learner support service at the right time to continue their studies without difficulty. Liyanagunawardena (2012); Suraweera, Liew, and Cranefield (2012) conducted a feasibility study to identify the critical success factors for the implementation of an e-learning system in the country. However, no study has been conducted so far in Sri Lanka to identify the success factors for student support services, which is considered important by learners. After knowing student expectations, practical contributions which will influence the level of student satisfaction and academic performance can be recommended. It is therefore more beneficial to focus on what learners seek from their universities. It is important to understand what contributes to student success and satisfaction in open and distance learning, particularly for students who fail to do well in their studies in current circumstances. It is worth identifying important support services in distance education in Sri Lanka to develop the distance education system.

The objective of this study is to measure the gap between the level of importance and satisfaction using importance-satisfaction analysis related to learner support services. The research question being studied is:

What is the gap between the level of importance and satisfaction on support services?

### **Hypotheses**

- H<sub>1</sub>: The importance and satisfaction pertaining to learner support services provided by the universities in the sample are equal.
- H<sub>1</sub>: There is an association between perceived importance and satisfaction on learner support services in the distance education system in Sri Lanka.

## **RESEARCH METHODOLOGY**

### **Research framework**

As the study aims to reveal learners' perception of support services, Figure 1 depicts the four attributes selected for the study. The framework of this study is based on the transactional theory introduced by Moore in 1960. The conceptual framework for the study given in Figure 1 was developed to identify the importance of effective and satisfactory learner support services in open and distance learning, since both structure and relationships are important in the provision of effective learner support services.

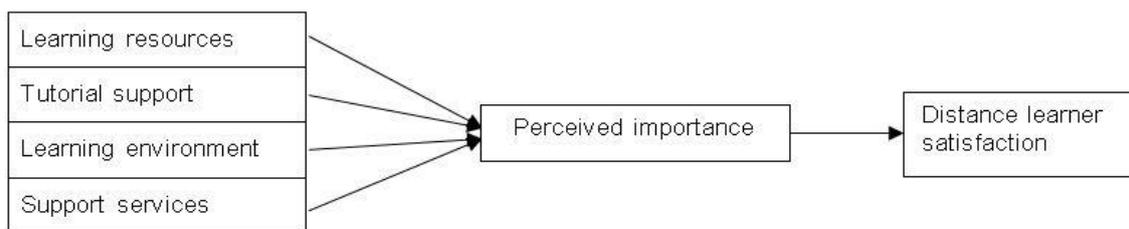


Figure 1: Research framework

## Research Method

The case study method was used as a research design. The deductive approach was employed. According to Engel and Schutt (2010), deductive research starts with a theory from which specific expectations are derived and data is collected to test them. In this study, theories were studied and hypotheses were formulated. The hypotheses proposed a relationship of two or more variables. As stated in the research framework, independent and dependent variables were used in the study and data were collected to test the hypotheses. Accordingly, the framework was formulated and tested using the two hypotheses stated in the previous section.

## Sample of the Study

A sample of 297 respondents was chosen from four universities which offered blended mode programmes. They comprised 36 learners from the University of Jaffna, 52 from the University of Peradeniya, 44 from the University of Rajarata and 165 from OUSL. A total of 287 learners took part in the study as the 10 questionnaires were rejected due to incompleteness.

## Research Tool

The main research tool was the questionnaire, which was prepared according to the four dimensions given in the framework in Figure 1 and the following set of attributes.

- (1) Ten attributes of availability, accessibility and acceptability of course content, relevance of content in the course and media in the content were included under dimension 1, "Learning Resources," and labelled as LR 1 – LR10 in the analysis and shown in Table 1 (Zaheer et al., 2015).
- (2) Ten items on tutorial support, teacher-student communication, teacher-learner interaction using information and communication technology, telephone, e-mail and online chatting were included in the questionnaire under the second dimension, "Tutorial Support," and labelled as TS1-TS10.
- (3) Twelve items were included on teaching and mentoring methodology, instructor support, academic guidance, counselling, assessment in the questionnaire under the third dimension, "Learning Environment," and labelled as LE1-LE12.
- (4) Eleven success factors related to the level of administrative support available, technical support and logistics, IT coordinator support, availability of policies, computers, Internet access and library facilities were included under the fourth dimension, "Support Services," and labelled as SS1-SS11.

A total of 43 attributes were included in the questionnaire to identify learners' satisfaction with support services. The students were then asked to mark the level of importance and satisfaction writing the five-point Likert scale ranging from "to a great extent" to "not at all". The data collection for the pilot study was conducted after reliability testing. The Chronbach  $\alpha$  obtained was 0.741 (74.1%) and the questionnaire was considered satisfactory. Randomly selected 297 final-year distance learners were asked at the day schools to fill the questionnaire.

### Data collection and analysis

The study used the I-S model to identify the level of importance and satisfaction indicated by Sri Lankan distance learners on the aforementioned four domains. The I-S model is popular in the higher education sector (Latif, Bahroom, & Khalil, 2015; Sim, Atan, & Idrus, 2005). The data collected was analysed using the SPSS package. The I-S ranked values were also calculated using the I-S model to calculate the importance and satisfaction scores associated with each attribute for hypothesis testing (Yang, 2003). The Importance-Satisfaction (IS) rating is a unique tool that allows service providers to have a clear understanding of the highly important strategic steps in decision making for each of the services they provide. The Importance-Satisfaction rating was calculated for each item of the questionnaire. The IS rating,  $IS \geq 0.20$ , denotes that identified areas should receive significantly more emphasis in the future. Similarly, IS ratings of  $0.10 \leq IS < 0.20$  indicated that identified service areas should receive increased emphasis. IS ratings of  $IS < 0.10$  imply that services should continue to receive the current level of emphasis.

## RESEARCH FINDINGS

The feedback given by respondents was analysed and calculated to find the level importance and satisfaction towards the support services offered to Sri Lankan distance learners.

The factors rating less than 0.10 are listed in Table 1. The IS values range between 0.05 and 0.08 and the IS-ranked values range from 1 to 6. The IS rank value of 2 indicates the importance of these success factors (SFs) from 1 to 6 and indicates that these items are satisfactory and need to keep the current level of emphasis. Accordingly, motivational workshops (SS11) are the first Success Factor (SF) in the study. The second SF is the course materials (LR1) while the third is the tutor (TS1).

Items given in Table 1 are related to the increased emphasis category as the ratings ranged from 0.10 to 0.20. The ranked IS rating ranged from 7 to 17, indicating that the items should receive increased emphasis i.e. increased importance and decreased satisfaction. The results indicated that service providers have to pay extra attention regarding the services provided to distance learners.

According to Table 1 "Online course materials accessibility at any time" (LR2) is the most important factor and rated as no 7. The eighth important factor is "course materials are well organised" (LR9). In that way, the ranking goes up to 17 which is "tutor accessibility" (TS2).

The IS ratings of  $\geq 0.20$  listed in Table 1 indicate that the ratings vary from 0.20 to 0.72. The ranked IS ratings ranged from 18 to 43. Based on the IS ratings and the ranked IS ratings, it is clear that most of the services listed under  $IS \geq 0.20$  should receive significantly more emphasis in the future. Hence, increased emphasis should be given to these SFs in order to provide effective support service.

Further analysis using the I-S matrix and the distribution of the factors on the grid is shown in Figure 2. The results are shown on a grid of four divided by the overall IS values of importance and satisfaction. It is significant that the factors related to the four dimensions are distributed in all four quadrants of excellent, to be improved, surplus and careless.

As shown in the distribution of the factors on the grid, 20 factors fall into the third quadrant while 21 are plotted in the second quadrant. Only one factor related to the support service (SS) dimension fell into the “excellent” area (high importance and high satisfaction) and another factor in the dimension of learning resources’ (LR) is placed in the “careless” area (low importance and low satisfaction).

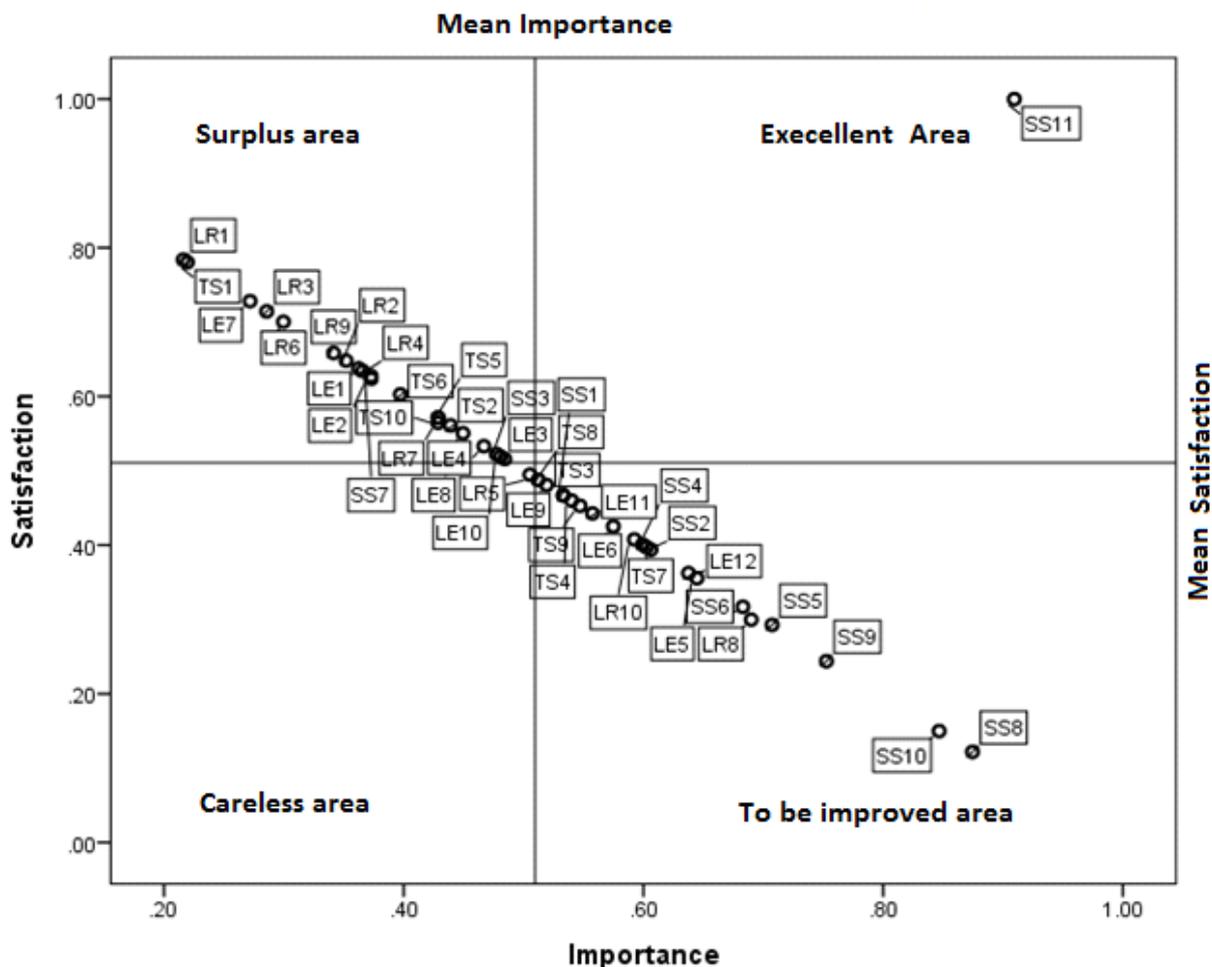


Figure 2: Importance-Satisfaction Assessment Matrix for Services Offered to Sri Lankan distance Learners

Figure 2 shows a total of 21 services are clustered in the “to be improved” area and the majority of support services are grouped in the “surplus” area quadrant. The services clustered in the “to be improved” area are more important for distance learners and necessary steps should be taken to improve them for the learners.

Similarly, a total of 20 services which belong to four domains – learning resources (two factors), tutor support (five factors), learning environment (five factors) and support services (eight factors) – are clustered in the “surplus” area, indicating that these services are satisfactory according to student responses. However, these services are not rated by the

learners as important services in distance education. Therefore, there is no need for any action by the service provider to improve these services.

The 21 factors plotted in the second quadrant, “to be improved” (high importance and low satisfaction) are very important to the learners but they are not satisfied with the services. Therefore, the authorities would need to take action to improve these services to meet the learners’ demand for a satisfactory learning environment.

## DISCUSSION

According to findings shown in Figure 2, only one service (SS11-instructions for accessing course-related open educational resources online) is the most important and satisfying service placed in the “excellent” area by the learners. It was noted that out of 43 attributes, 19 were considered as important and 24 were labelled as not that much important for their learning. The other 18 factors placed in the “to be improved” area are described below.

### Learning Resources

It was noted that out of 10 factors under the “learning resources” dimension, the following seven were selected as important by the learners:

- (1) Course materials are easy to understand (LE1);
- (2) Course materials are well organized (LE2);
- (3) Course materials are relevant to the subject (LE3);
- (4) Course material content is in Sri Lankan context (LE4);
- (5) Course materials developed my subject knowledge (LE6);
- (6) Questions and activities are appropriate (LE7); and
- (7) Online course materials are accessible anytime (LE9).

However, the students were unsatisfied with these services and placed them in the “to be improved” area. Therefore, authorities must improve these services in order to develop the national blended learning system.

It was also revealed that the learners were not fully satisfied with their course materials. This finding supports, Gamage and Fernando (2012); Ariadurai and Manohanthan (2008) who revealed that course materials did not consider the Sri Lankan context. Thanh, Quang, and Minh (2015) had pointed out that the success of blended learning depended on flexible learning content. Rai (2010); Patrick and Iherjirika (2012) also supported that opinion and reported that course materials were the most important and useful learning resource for the majority of students while audiovisual materials were popular only among 15% of students. Furthermore, Alias and Hashim (2015) stated that distance learners totally depended on course materials so relevant, readable and flexible course materials should be given to them.

### Tutor Support

According to Zaheer et al. (2015) tutorial support consisted of communication, teacher-student, teacher-learner interaction using information and communication technology, telephone, e-mail, online chatting, etc. The finding indicates that out of 10 factors available under the “tutor support” dimension, students requested to improve following services.

- (1) Very easy to access tutor whenever I need help (TS12);
- (2) Tutor persuade to communicate with peers at face-to-face sessions (TS15);
- (3) Tutor treats students individually (TS16);
- (4) Tutor encourages learner-learner interaction online (TS17); and
- (5) Helpfulness of the academic coordinator in providing academic support (TS20).

These findings indicate that Sri Lankan distance learners need tutor interaction and assistance to facilitate their academic activities. This necessity has been indicated by many other researchers (Gamage & Fernando, 2012; Gunasekera, 2015, 2017). According to some researchers, course tutors are the main reason for the success of blended learning (Brooke, McKinney, & Donoghue, 2013; Thanh, Quang, & Minh, 2015).

Another important finding is the interaction between peers and teachers which is ranked as to be improved. Wahab, Saad, & Selamat, (2014) fully supported this, stating that students' academic performance could be further enhanced with a proper interaction channel. Wu, Tennyson, and Hsia (2014). Kuo, Walker, Belland, and Schroder (2013) found that interaction has a significant effect on learning climate. Alias (2014) conducted a research with the Bachelor of Finance course at UiTM Malaysia and pointed out that sustained conversation with the instructor should be developed. Learner interaction should be improved up to the satisfaction level of the learners as it is an essential service for them.

### **Learning Environment**

Seven factors, for which efforts should be made to maintain in the dimension of "learning environment", indicate the importance of orientation sessions, proper counselling, clear academic guidance and proper assessment methods in distance learning. The seven factors are based on these items:

- (1) The general orientation session was useful to understand distance learner responsibilities;
- (2) The orientation session improved my knowledge of learner support services;
- (3) Academic counselling services adequately meet students' concerns/needs;
- (4) Assignments are relevant and useful (LE28);
- (5) Student study/academic guide are available (LE27);
- (6) Counselling service developed time management skills (LE24); and
- (7) Getting assignments with marks and comments (LE30).

Researchers, such as Zaheer et al. (2015); Patrick and Iherjirika (2012); Alias (2015); Latif, Bahroom, and Khalil (2015) support these findings and indicate the value of providing these facilities to students in their studies.

### **Support Services**

Two factors have fallen to the second category out of eleven, "to be improved" (high importance and low satisfaction) in the dimension of support services:

- (1) Administrative support at registration (SS35); and
- (2) Accessing online course materials at home (SS39).

Distance learners were unhappy with administrative support and requested for improvement contrary to the finding by Perera (2015). These services should be reviewed improve the learners' satisfaction.

When considering access to online course materials at home, learners may not have the required facilities. Liyanagunawardena (2012); Suraweera, Liew, and Cranefield (2012) stated that infrastructure facilities should be improved before initiating blended learning.

It can be summarised that technology use, access to open educational resources, additional reading support, online library facilities, content quality, assessment method, counselling, updated information facilitation, peer interaction, administration support, study sessions, day school, feedback and coordinator support are the national-level success factors identified by the distance learners. The findings indicate that the learners were not fully satisfied with the learner support services available to them. The most important services for them were

motivational workshops, course materials, tutors and study guides, and in that order. The most satisfactory service was the provision of motivational workshops and the most neglected service was up-to-date course materials.

## CONCLUSION

It was found that Sri Lankan distance learners are not fully satisfied with the learner support services provided. The most important services are motivational workshops, course materials which are easy to understand, tutors and proper study guides. They are the most satisfied with the provision of motivational workshops and the least satisfied with the course materials. Accordingly, the hypothesis, "There is an association between perceived importance and satisfaction with learner support services in the distance education system in Sri Lanka," is accepted, while the second hypothesis is rejected.

Table 1: The IS ratings and ranked IS of the items that need current level emphases

Rating	Item	Importance (%)	Ranked importance	Satisfaction (%)	Ranked satisfaction	I-S value	Ranked I-S value
<b>Definitely Increase Emphasis</b>	LE10	48	20	0.52	23	0.23	21
	LE11	56	29	0.44	14	0.31	30
	LE12	64	35	0.36	8	0.41	36
	LE3	48	21	0.52	22	0.23	22
	LE4	0.47	18	0.53	25	0.22	19
	LE5	0.64	36	0.36	7	0.42	37
	LE6	0.57	30	0.43	13	0.33	31
	LE8	0.45	17	0.55	26	0.20	18
	LE9	0.52	24	0.48	19	0.27	25
	LR10	0.59	31	0.41	12	0.35	32
	LR5	0.51	22	0.49	21	0.26	23
	LR8	0.69	38	0.30	5	0.48	39
	SS10	0.85	41	0.15	2	0.72	42
	SS1	0.53	26	0.47	18	0.28	27
	SS2	0.60	33	0.40	10	0.36	34
	SS3	0.48	19	0.52	24	0.23	20
	SS4	0.60	32	0.40	11	0.36	33
	SS5	0.71	39	0.29	4	0.50	40
	SS6	0.68	37	0.32	6	0.47	38
	SS8	0.87	42	0.12	1	0.77	43
	SS9	0.75	40	0.24	3	0.57	41
	TS3	0.53	26	0.47	18	0.28	27
	TS4	0.54	27	0.46	16	0.29	28
	TS7	0.61	34	0.39	9	0.37	35
	TS8	0.51	23	0.49	20	0.26	24
	TS9	0.55	28	0.45	15	0.30	29
	LE1	0.36	8	0.64	35	0.13	9
	LE2	0.37	11	0.63	33	0.14	11
	LR2	0.35	7	0.65	36	0.12	8
	LR4	0.37	9	0.63	34	0.13	10
LR7	0.43	14	0.56	28	0.19	16	
LR9	0.34	6	0.66	37	0.12	7	
SS7	0.37	11	0.62	32	0.14	12	
TS10	0.43	14	0.57	30	0.18	15	
TS2	0.44	16	0.56	27	0.19	17	
TS5	0.43	14	0.57	30	0.18	15	
TS6	0.40	12	0.60	31	0.16	13	
<b>Maintain Current Emphasis</b>	LE7	0.27	3	0.73	40	0.07	4
	LR1	0.22	1	0.78	42	0.05	2
	LR3	0.29	4	0.71	39	0.08	5
	LR6	0.30	5	0.70	38	0.09	6
	SS11	0.91	43	1.00	43	0.00	1
TS1	0.22	2	0.78	41	0.05	3	

## REFERENCES

- Ali, A. (2011). Key factors for determining students' satisfaction in distance learning courses: A study of Allama Iqbal Open University. *Contemporary Educational Technology*, 2(2), 118-134.
- Alias, N., & Hashim, R. A. (2015). *Learners' satisfaction and performance in a blended learning environment. Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 1047-1056), Kuala Lumpur Convention Centre, Malaysia.
- Asbee, D.S., & Simpson, O. (2006). Partners, Families and friends: Student support of the closest kind, open learning. *The Journal of Open, Distance and e-Learning*, 13(3), 56-59. doi: 10.1080/0268051980130309
- Ariadurai, S. A., & Manohanthan, R. (2008). Instructional strategies in teaching engineering at a distance: Faculty perspective. *International Review of Research in Open and Distance Learning*, 9(2), 1-11.
- Association of College and Research Libraries (1990). *ACRL History*. Retrieved from <http://www.ala.org/acrl/aboutacrl/history/history>
- Bolliger, D.U. & Halupa, C. (2012). Student perceptions of satisfaction and anxiety in an online doctoral program, *Distance Education*, 33(1), 81-98
- Brooke, C., McKinney, P., & Donoghue, A. (2013). Provision of distance Learner support Services at U.K. Universities: Identification of Best Practice and Institutional Case Study. *Library Trends*. Winter, 61(3), 613-635. doi: 10.1353/lib.2013.0003
- Cheawjindakarn, B., Suwannathachote, P., & Theeraroungchaisri, A. (2012). Critical success factors for online distance education: A review of the literature. *Creative Education*, 3(8b), 61-66. doi:10.4236/ce.2012.38b014
- De Zoysa, T. S. V., Munashinghe, D. M. W., Seneviratne, P., & Mukunthan, T. (2011). Study on student dropouts in advanced certificate in preschool education programme in the Open University Sri Lanka, presented at the *Annual Academic Session*. Nawala, Sri Lanka.
- Driscoll, M. (2001). *Strategic plans from scratch ASTD learning circuits*. Retrieved from <http://www.learningcircuits.org/2001/aug2001%20driscoll.html> (accessed 17 September 2016).
- Engel, R. J., & Schutt, R. K. (2010). *Fundamentals of social work research*, Los Angeles: SAGE.
- ErDOS, R. (1975). The system of distance education in terms of sub-systems and characteristic functions. In Ljosa, E. (Ed.). *The system of distance education*. Papers to the 10th ICCE International Conference. Oslo: ICCE (Unpublished).
- Fernando, M. S. D. (2003, September). Effective use of e-learning in the Sri Lankan university context: Strategies and policies, *IEE Sri Lanka 10th Annual Conference*. Colombo, Sri Lanka.

- Gamage, D., & Fernando, S. (2012). *Engaging interactivity in eLearning: Review of practices and challenges in Sri Lanka*. Retrieved from <http://www.nitc.lk/old/archive2012/images/pdf/4%20Dilrukshi.pdf>
- Garrison, D., & Kanuka, H. (2004). Blended learning uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7(2), 95-105. doi: 10.1016/j.iheduc.2004.02.001
- Gunasekera, D. (2015, November). Perceptions on study skills needed by distance learners: A Sri Lankan perspective. *Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 612-623), Kuala Lumpur Convention Centre, Malaysia.
- Gunasekera, D. (2017, March). Learner satisfaction in blended learning: A case study at the Open University of Sri Lanka. *International Technology, Education and Development Conference* (pp. 418-426), Valencia, Spain.
- Kalema, B. M., Olugbara, O., & Kekwaletswe, R. M. (2014). Identifying Critical Success Factors: The case of ERP systems in higher education, *The African Journal of Information Systems*, 6(3), 68-75.
- Kuhn, E. and Bussack, B. (1997). Concepts and roles in support services in distance education. In Dilley, L. and Roman, A. (Eds.), *Support services in distance education*. South Africa: SACHED Trust.
- Kuo, Y. C., Walker, A. E., Belland, B. R., & Schroder, K. E. E. (2013). A predictive study of student satisfaction in online education programs. *International Review of Research in Open and Distance Learning*, 14(1), 16-39.
- LaPointe, D. K., & Gunawardena, C. N. (2004). Developing, testing and refining of a model to understand the relationship between peer interaction and learning outcomes in computer-mediated conferencing. *Distance Education*, 25(1), 83-106.
- Latif, L. A., Bahroom, R., & Khalil, M. A. K. M. (2015). Prioritizing services and facilities in higher education institutions: Importance-satisfaction quadrant and gap analysis. *Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 653-663), Kuala Lumpur Convention Centre, Malaysia.
- Liu, X., Magjuka, R. J.; Bonk, C. J., Lee, S. (2007). Does sense of community matter? An examination of participants' perceptions of building learning communities in online courses. *Quarterly Review of Distance Education*, 8(1), 9-24.
- Liu, Y., Hu, F., Li, H. (2009). Understanding learners' perspectives on m-learning: results from a survey. In Proceedings of the 2009 Euro American Conference on Telematics and Information Systems: New Opportunities to increase Digital Citizenship, New York, USA.
- Liyanagama, J., Kulasekera, G. U., & Vidanapathirana, U. (2015). The effectiveness of the online conversion strategy of the Open University of Sri Lanka: What, how and why. *Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 212-221), Kuala Lumpur Convention Centre, Malaysia.

- Liyanagunawardena, T. R. (2012). *Information communication technologies and distance education in Sri Lanka: a case study of two universities* (Theses submitted for the degree of Doctor of Philosophy, University of Reading). Retrieved from <http://centaur.reading.ac.uk/32337/>
- Mohamed, N. H., & Zainal, A. H. (2015). Critical success factors of e-learning in open and distance learning institutions. *Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 1174-1184), Kuala Lumpur Convention Centre, Malaysia.
- Moore, B. (2009, Summer). Emotional Intelligence for school administrators: A priority for school reform?. *American Secondary Education*, 37(3), 20-28. Retrieved from <https://pdfs.semanticscholar.org/dc65/d6723dcbd47ef5180e47e5990f909f65ccb2.pdf>
- Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view*. Boston, MA: Wadsworth Publishing.
- Patrick, J. M., & Iherjirika, J. C. (2012). Students' perception of the quality of learner support services in National Open University of Nigeria. *Journal of Education and Practice*, 3(13), 134-141.
- Perera, M. J. R. (2015, November). Service quality and student satisfaction in open distance education in Sri Lanka. *Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 978-994), Kuala Lumpur Convention Centre, Malaysia.
- Pardeep, R. (2010). Learning resources for distance learners: a case study of BLIS learners of Indira Gandhi National Open University. *Annals of Library and Information Studies*, 57(1), 72-78. Retrieved from <http://nopr.niscair.res.in/handle/123456789/8281>
- Richardson, J. & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Networks*, 7(1). 68-88. Retrieved from <https://www.ideals.illinois.edu/bitstream/handle/2142/18713/RichardsonSwan%20JALN7%281%29.pdf?sequence=2>
- Sloan consortium. (2002). *Quick guide: pillar reference manual*. Retrieved from [http://sloanconsortium.org/publicatios/books/dprm\\_sm.pdf](http://sloanconsortium.org/publicatios/books/dprm_sm.pdf)
- Silva, F. & Fernandes, P.O. (2012). Empirical study on the student satisfaction in Higher education: importance-satisfaction analysis. *Information Sciences index*, 6(6)
- Sim, H. K. C., Atan, H., & Idrus, R. M. (2005). The learners' support system in distance education: a study of the satisfaction quality. *International Journal of Instructional Technology and Distance Learning*, 2(9), 13-24.
- Stein, D. (2004). Student satisfaction depends on course structure. *Online Classroom*, 4-5.
- Suraweera, N., Liew, C. L., & Cranefield, J. (2012, August). *E-learning in information management education in Sri Lanka: Discussion of the impact of information literacy*. Paper presented at IFLA conference, Helsinki, Finland.
- Sweeney, J. C., & Ingram. D. (2001). A comparison of traditional and web marketing education: An exploratory study. *Journal of Marketing Education*, 23(1), 55-62.

- Tait, A. (1995). Student support in open and distance learning. In F. Lockwood (Ed.), *Open and distance learning today* (pp. 232-241). London: Routledge.
- Thanh, L. V., Quang, N. V., & Mihn, H. T. (2015, November). The use of information and communication technology for blended learning an experience of Hanoi Open University. *Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL* (pp. 196-202), Kuala Lumpur Convention Centre, Malaysia.
- Vasiloudis, G., Koutsouba, M., Giossos, Y., & Mavroidis, I. (2015). Transactional distance and autonomy in a distance learning environment. *European Journal of Open, Distance and E-Learning*, 18(1), 114-122.
- Wahab, M. S. A., Saad, R. A. J., & Selamat, M. H. (2014, November). A survey of work environment inhibitors to informal workplace learning activities amongst Malaysian accountants. In Dandago, K. I., Che-Ahmad, A., Ahmi, A., & Saidin, S.Z. (Eds.), *Procedia - Social and Behavioral Sciences*, 164, 409-414. doi: 10.1016/j.sbspro.2014.11.096
- Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2014). A study of student satisfaction in a blended e-learning system environment. *Computers & Education*, 55(1), 155-164.
- Yang, C. C. (2003). Improvement actions based on the customers' satisfaction survey. *Total Quality Management & Business Excellence*, 14(8), 919-930. doi: 10.1080/1478336032000090842
- Zaheer, M., Babar, M. E., Gondal, U. H., & Qadri, M. M. (2015, November). *E-learning and student satisfaction*. Proceedings of the 29th Annual Conference of the Asian Association of Open Universities: New frontiers in ODL (pp. 275-285), Kuala Lumpur Convention Centre, Malaysia.