# USER PERCEPTIONS AND EXPECTATIONS ON E-INFORMATION LITERACY DEVELOPMENT PROGRAMMES: A GAP ANALYSIS

## Percepción y expectativas de usuarios sobre programas de alfabetización electrónica

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**Abstract**
This paper discuses the user perceptions and expectations of postgraduate students of the University of Colombo towards the e-information literacy skills development programme conducted by the library. Data was collected from 21 individuals through semi-structured questionnaire using gap theory. Overall, students satisfy with the quality of the programme and found three impediments to develop the service such as staff attitude, lack of mentoring and high customer demand.
**Key words:** User perceptions, user expectations, e-Information literacy, Sri Lanka

**Resumen:**
El artículo revisa las percepciones y expectativas de estudiantes de postgrado de la Universidad de Colombo hacia la alfabetización electrónica y el desarrollo de habilidades conducido por la biblioteca. La data proviene de 21 individuos a través de un cuestionario semi estructurado. Los estudiantes mostraron satisfacción con el programa y encontraron barreras para el desarrollo del servicio: las actitudes del personal, la guiatura y las altas demandas.
**Palabras Clave:** percepción de usuarios, expectativas de usuarios, literatura en electrónico, Sri Lanka

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## 1.0   INTRODUCTION

User perceptions and expectation studies have become one of the most popular studies in the area of service quality in many academic disciplines such as psychology, business, library science etc. The user expectations and perceptions has been used to determine the service quality which is been seen as critical for service organizations to position themselves strongly in a competitive environment and also as indicators of business performance (Metha, Lalwani & Soon, 2000; Shemwell, Yavas & Bilgin, 1998). A thorough review of the literature revealed a shortage within the current body of knowledge relating to the identification of user perceptions and expectations on e-information literacy development programmes. On the other hand, there is a dearth of research studies addressing this phenomenon within the context of university libraries in Sri Lanka. Considering the state of literature in identifying the user perceptions and expectations on e-information literacy development programmes in university libraries even in the globe, it becomes obvious that this is an area which has not been thoroughly researched. Thus this paper is merely based on the identification of user perceptions and expectations on e-information literacy development programmes in the University of Colombo library system.

### 1.1   The University Library

The University of Colombo library system consists of the Central Library and two faculty libraries namely Science Library and Medical Library. All these libraries host text books, periodicals, reports etc., in their collection. The existing system consists of Permanent Reference section, Reference section, Reading rooms, Lending section, Binding section, E-Resources centre, Training Centre and the Computer room. The printed monograph repository collection of the library system is over 400,000 and it adds 5000 to 6000 printed monographs to its stock every year. The central library has also received depository status from the International Monetary Fund (IMF) for its publications and communications. The library of the Medical Faculty was founded in 1870 and it is the second oldest medical library in the Asia. The medical library is the focal point of the Health Literature Libraries and Information Services Network (HELLIS) and privileged as the WHO depository

library in the country. Numerous user education programmes are conducted by the University of Colombo library to conscious its wider user community in relation to the services. e-information literacy development programme is one of the most popular user awareness programmes which has been using for the education of different user segments in the university library since 2003.

## 1.2   e-Information Service

According to the opinions of the researchers, access to fresh international research results as they are presented in international scholarly journals, is a prerequisite for meaningful research endeavor. With the objective of providing online scholarly information, the e-information service was established in 2003 at the university of Colombo library and it was very quickly became the heart of the library services and a catalyst for change and collaboration. The e-Information service of the University of Colombo's leading edge resource based learning and resource based teaching facility, provides a collaborative interdisciplinary environment with over 60 personal computer workstations in three laboratories in the Main, Science and Medical libraries which facilitates e-accessing to its electronic information collection.

This service provides infrastructure for functional integration of the information and the technology services, information literacy, learning support offered by the University of Colombo library. The formal instructing space that is the training room which is the Training Centre of the library and it is well positioned in the library building to conduct training programmes on different skills development activities. The room is equipped with state-of-the-art audiovisual and presentation technologies. The major activity of this training centre is to provide e-Information Literacy Skills Development programmes for the students, teachers, researchers and sometime for the outsiders. The library staff of the University of Colombo consists of senior level Librarians with sound working knowledge on ICT and electronic resources which are particularly needed for teaching, learning and research activities of the university. Specially the Senior Assistant Librarian in-charge of the e-Learning section arrange number of training sessions with their

academic counterparts in different faculties to train the users on e-Information literacy.  From 2003 to now, more than 50 training sessions have been conducted by the e-information service to the users including undergraduate students, postgraduate students, librarians and researchers. These training sessions include the support for users on how to use the major electronic resources available in the library including WWW resources and other relevant topics such as on-line databases, information searching, retrieving and analyzing. In addition, e-Resource centers located in the central library, science library and medical library provide general hardware, software trouble shooting support, scanning and downloading assistance for e-Resource users within the library system. There are dedicated Library Assistants working in the help desks of these centers on roster basis to assist the users when they are in need any assistance for accessing, downloading and saving electronic information. Even if there are no dedicated Reference Librarians who are responsible for answering user queries relating to electronic information and the e-information service, the Senior Asst. Librarian in-charge of e-Learning activities instructs the users extensively when the users find difficulties in accessing e-information. He supports the user to derive the maximum benefits of information literacy skills development programmes conducted by his department facilitating wider tangible and intangible access provisions.

## 1.3    Importance of E-Information Literacy Skills

It is well recognized that the skill level of e-information literacy has a great deal to do with the final success of an e-information service of a university. In view of the fact, that the general users of the libraries do not have adequate knowledge on e-resources and how to use them effectively. However the knowledge required about not just the technology, but the domain of the application and the skills needed to determine "what they need" and "how they use". The shift from purchasing important resources according the user requirements to one of being an effective service provider in promoting what we have subscribed and encouraging patrons to utilize the resources in effective manner. This is purely based on the importance of various skills which leads to the success of both the user activities and the service. That also prompts further studies of skill requirements.

The most intriguing finding of the recent research studies is the establishment of an empirical link between the importance of skill, proficiency of that skill, and outcome variables (Tesch et.al, 2003). Skill importance or skill proficiency alone is unable to predict the outcomes – only how they relate together. However, the empirical result of the recent research studies entail that Information System (IS) management should manage user expectations of information skill importance and information provider's skill proficiency.

One unique study in the IS skill literature examined the difference in expectations of skills between the user community and the information skill providers (Green, 1989). Service provider must fully understand users' expectations to avoid the 'misfit' between the users' needs and the delivered service. It can be expected that the impart of e-information literacy on service success is the result of not only matching the expectation of quality of the programme, but also matching expectations between users and e-information literacy development programme. Unfortunately no study in the literature has incorporated the expectation gap between users and skill providers along with the expectation-perception gap within the user group.

## 2.0   THE PROBLEM

Research studies have delineated many of the differences between users and the providers (Oliver 1980; Oliver & DeSarbo 1988). This is referred to as the "user-provider gap". Individuals develop their own schema for understanding the external world. Different working environments and/or individual differences (e.g. education, knowledge) often influence one's schema development and thus, users and service providers may perceive things differently. In other words, the expectations and perceptions of the users towards the quality of the e-information service and the e-information literacy development programmes are likely to differ from the real quality of these two services. The question becomes not whether there is a difference, but what is the impact of the differences? The postgraduate students who participated for the e-information literacy development programmes conducted by the e-information service of the library expect different qualities from the programme. In this research, these users asses whether there is a gap between what they expect and what they perceive. This study therefore aims to asses the extend that the users

expectations and perceptions towards the existing e-information literacy programmes conducted by the library of the university of Colombo. Since the organizations including libraries live and die with the satisfaction of their users, as a consequence user assessments of services are very important for reengineering the existing service in providing better service. Extensive efforts are been made by business industries to gauge user expectations and satisfaction and reactions to user services in a continuous effort to improve the values of their organizations in rising their service quality. However, Sri Lankan libraries have not been well recognized that user satisfaction which can be gained through strengthening the quality of services is more important in the current market place than ever before. Thus, the outcomes of the research will become a reference tool for library administrators and specifically the policy makers in the higher education sector, allowing them to make decisions to raise the quality of the e-Information literacy development programmes to strengthen the knowledge of the wider user community..

## 3.0   SECURITIZATION OF CONSTRUCTS

Data was collected form 21 individuals employing structured and semi-structured questionnaire from postgraduate students in the Faculty of Education, Management and Graduate Studies selected on purposive sampling technique. 7 students from each faculty and those who have participated for e-information Literacy Programme and who also use electronic information service of the university for their learning and research activities were utilized as the inclusive criterion for the selection of sample of this study. The study adopted the combination of qualitative and quantitative research strategy and the field-based research approach (Yin, 1984). This format corresponds to data collection used is the social sciences (Gribich, 1999). The questionnaires kept the interactions focused, but allowed for individual perspectives and experience to emerge. Semi-structured questions were designed to allow respondents to think freely and to describe their feelings and experience with respect to e-Information literacy development programme. The questions were designed to be included in the questionnaire from informal discussions with the library users, observations and practical experience of the researcher being a senior information professional with nine years experience. The structured

questions in the questionnaire mainly consisted of 25 questions in relation to the quality determinants/success factors of the programme which was measured by 7 point likert scale. The determinants for evaluating quality of e-Information skills development programmes were selected based on the opinions of three professionals in the field of library science including the researcher.

The analysis was based on the gap scores of expectations and perceptions as demonstrated by the expectancy disconfirmation theory. Accordingly,

Expectation gap = Performance (P) – Expectation (E)

If performance of equal expectations, that is, P=E, then expectations is confirmed. It says that user satisfaction on a particular determinant occurs when the actual performance is equal to the customers' expected level of performance of the e-information literacy development programme. If performance exceed expectations, that is P>E, then expectations are positively disconfirmed. It says that when performance is greater than the user' expected level of performance of the e-information literacy development programme, high user satisfaction will result as the service performs better than they expected. However, if performance do not exceed expectations, that is, P<E, then expectations are negatively disconfirmed. It says that user dissatisfaction occurs when the performance is less than the customers expected level of service as the e-information literacy development programme performs poorer than the customers expected level. A confirmation of expectations, or zero disconfirmation, is considered a state of satisfaction. A negative disconfirmation indicates expectations were not met and yields a state of dissatisfaction.

## 4.0   FINDINGS

All the respondents were young i.e. the age range of 30-45 and there were 14 males and 07 females. All the respondents had significant experience using e-information service and all had attended e-information literacy programmes conducted by the library. 12 out of 21 had also experienced library orientation programmes in addition to the e-information literacy development programme.

The three experts identified 25 determinants for measuring quality of the e-Information Literacy development programmes as indicated in the Table I. All the respondents in the sample were asked to provide information about the expectations of the determinants and the degree of satisfaction i.e. performance. On other words, respondents were first asked to indicate their level of expectation towards the determinants. An example for a question, "what level should be the presenters' knowledge about e-Information?". Then they were again asked that "how would you rate your satisfaction with presenters' knowledge on e-Information". Each scale was scored using seven point Likert Scale ranging from 1 (unimportant/unsatisfied) to 7 (very important/Very satisfied).

All respondents were assured that their responses would be kept highly confidential. All valid responses were used in scale validation and fortunately all the matched observations were used in the analysis.

## 4.1    Expectation Gap

The expectation gap was calculated by contrasting the student mean expectation score of the determinants with the mean performance score of what happens at the e-Information Literacy Development programmes. In the first step, the respondents were asked to measure the expectation of the criteria presented and then to measure the performance in line with the identified determinants.

Practical experience, Language competency, Easy communication and teaching ability in the presenter's quality category, Available PCs, and adequate time allocatiion in the Infrastructure category and User manuals, Manageable number of students in the help category. Accuracy and quality contents in the presentation quality category and Academic staff support and Curriculum integration in the contribution of the academic staff category were identified as highly important factors for the success of the progrmme. As can be seen from Table 1, the majority of the students perceived that the programme offered at the university library in a positive light (μ>5) on the Presenter's quality factor.

## Figure 1: Calculation of quality gap

| *Determinants* | *Performance (P)* | *Expectation (E)* | *(P-E)* |
|---|---|---|---|
| **Presenter's quality** | | | |
| 1.  Knowledge | 6.33 | 5.76 | 0.57 |
| 2.  Language competency | 5.81 | 5.52 | 0.29 |
| 3.  Practical experience | 6.10 | 5.62 | 0.48 |
| **4.  Personality** | 4.76 | 4.90 | **-0.14** |
| **5.  Appearance** | 3.95 | 4.33 | **-0.38** |
| 6.  Teaching ability | 5.62 | 5.38 | 0.24 |
| 7.  Easy communication with  presenter | 5.38 | 5.10 | 0.28 |
| 8.  Good rapport with the presenter | 3.43 | 3.24 | 0.19 |
| **9.  Subject competency  of the presenters** | 3.52 | 4.24 | **-0.72** |
| **Infrastructure** | | | |
| 10. Available PCs for hand on exercises | 6.19 | 5.29 | 0.90 |
| **11. Adequate    time    allocation    for    practical training** | 3.95 | 5.48 | **-1.53** |
| **12. Network bandwidth** | 2.86 | 5.48 | **-2.62** |
| 13. Comfortable training space with related facilities | 6.14 | 3.38 | 2.76 |
| **Help** | | | |
| 14. Help at the practical sessions | 3.95 | 3.52 | 0.43 |
| 15. User manuals | 6.29 | 5.14 | 1.15 |
| **16. Web based instructions for future access** | | | |
| 17. manageable number of students at a given time | 3.33 | 4.05 | **-0.72** |
| 18. Ongoing support | | | |
|  | 5.30 | 4.76 | 0.54 |
| **Quality of the Presentations** | 3.30 | 3.05 | 0.25 |
| 19. Relevance of the lecture for the discipline | 5.14 | 4.48 | 0.66 |
| 20. Accuracy  of  the  information  delivered in  the lecture | 6.10 | 6.10 | 0.00 |
| 21. Quality of the contents of the presentations | | | |
|  | 6.38 | 5.90 | 0.48 |
| **Contribution from the academic staff** | | | |
| *22. support    from    the    concerned    academic members* | 3.62 | 5.90 | *-2.28* |
| *23. Curriculum integration* | 1.95 | 6.38 | *-4.43* |
| *24. continuation  of  the  programme  for  more advanced skills* | 1.76 | 4.33 | *-2.57* |
| **25. *feed back communication*** | 2.43 | 2.80 | *-0.37* |

Source: Author constructed

There were a number of determinants that the postgraduate students rated more important on the performance scale. Knowledge, The positive determinants of this factor are Knowledge, Language competency, Practical experience, Teaching ability, Easy communication with presenter. In the Infrastructure factor, Available PCs, Comfortable training space and in the Help factor, User Manuals and manageable number of students were in positive light. In the Quality of the presentation factor, Relevance, Accuracy, Contents quality determinants were good in the programmes. Further it reveals that no determinants in the "Contribution from the Staff" were identified. Even if the support from the concerned academic members and curriculum integration are very important determinants, the involvement of these two were substantially poor in the University of Colombo. Although, there is a significant gap in students' expectations and performances, an analysis of the frequency of responses showed that majority of students agreed that the library was providing above average service to their postgraduate students. However, this study has shown that there is a emerging need for the improvement of the e-information literacy development programme offered to postgraduate students and it must also be taken into account that the annual registration of the postgraduate students are increasing gradually and the support form the academic staff and the university authority in relation to curriculum integration of the programme are very poor.  The respondents believe that the academic staff may think as this programme is an unimportant endeavor because of its non-curriculum integration. Therefore the academic staff support for the programme in relevant course of studies is not adequate and specifically less encouragement for the students from teachers end.

However, 18 students in the survey expressed that they were satisfied with the overall e-Information literacy development programme conducted by the library. Only 03 students have expressed that they are unsatisfied with this particular service. However the most interesting finding was the perception scores of some quality determinants were exceeded than they expect from the determinant. Especially a number of determinants in the "quality of the presenter" have been rated more than they expect from that category. For example, knowledge and experience have better stand, i.e. more than their minimum expectation from the programme.

Comfortable training space were extremely higher than they expect from the service as it indicates 2.6 gap (p-e = 6.14-3.38).

The most important finding was the quality determinants in the academic staff contribution for all determinants were very poor. Especially the postgraduates were highly concerned on the curriculum integration, i.e. the e-information literacy should be incorporated into the academic curriculum. Majority of the postgraduate students expressed that even if the importance of the skills in line with the modern electronic information literacy is highly appreciated, it has not been integrated into the academic curriculum which is timely important for the advancement of their studies. Further, they expressed that it is very important to educate the new students on accessing electronic information for their learning and research activities for the reason that one aspect of their success will also be based on the prevailing literature. In addition, they expect more support from the concerned academic departments to encourage the students for possible attendance to advance and strengthen their studies by this programme. Majority of the students stressed that the support of the academic staff and concerned department is not perfect and the encouragement given by them for the students to participate the programme were also absolutely poor. As a whole, the contribution from the academic staff towards the programme was in short supply. Inadequacy of time allocation for hands on sessions allocated in the program, low bandwidth of the Internet, inadequate user manuals have also been introduced as the less prioritized areas of the determinants by the postgraduate students.

## 4.2   Impediments

Analysis of the data revealed several impediments to developing the service. The impediments fell into three broad areas which can be summarized as: Staff attitudes, lack of mentoring and high customer expectations

1. Staff attitudes: The opinions, value and beliefs of the staff of the university in respect of the competency of the students have been critical. The academic staff does not provide support for the programme and the reason is unexplained.
2. Lack of mentoring: A lack of curriculum integrated well organized

3. programme which provides yonder postgraduate students and their supervisors is a critical problems. If the supervisors, coordinators and lecturers do not have sufficient knowledge on using electronic information resources and they may be very poor in mentoring the students in encouraging the students to use more informational resources. However the library is the most suitable place for intervene the faculty integrate the e-information literacy development programme to their general curriculum Lecturers, supervisors ,coordinators and students with access to guidance from experienced librarian in the e-information service can also be an impediment to better education.

4. High customer demand: As customer become more experienced, sophisticated and better understand the importance and value added features of the electronic information, their desire and expectations increase. Indeed, they can expect more for less- thus producing a "gap" between customers' expectations and the disorganizations belief about a reasonable offer.

## 5.0   DEMARCATIONS

The demarcations with the current study are preliminary related to the scope of the research. There are four other faculties who run the postgraduate programmes have not been selected for the study, but this study canvassed the views of postgraduates in only three of the faculties. However although the sample is not large, particular attention was paid to several important attributes – including usage statistics, availability of service through web, location and willingness of the participants. The author believes that the sample size is adequate representation of the postgraduate user community in the university.

In addition the findings restricted to university of Colombo conditions and it might not therefore be applicable to other universities to generalize the results in Sri Lankan context
Furthermore the study focused on e-information literacy service in the university, and the findings might not therefore be applicable to the other services in the university library services and library services as a whole.

## 6.0    IMPLICATIONS AND CONCLUDING REMARKS

Staff attitudes, a lack of mentoring and high expectations of customers impede the delivery of e-information literacy development programme. These impediments potentially have significant consequences for the long term sustainability of competitive advantage in the sector.

The findings have several implications. Practitioners must consider the setting of expectations in the light of all results. The joint results and other studies on consonance indicate that a realistic set of expectations will result in the best target for satisfaction and other measures of success.

Extending the recently explored (e-p) gap effect, the results of this study are significant to researchers because it is not just user expectations that are important, it is the realism of user expectations that is potentially a factor in service success or failure.

In conclusion, the findings of the present study suggest that leaders in the e-information service should take responsibility for overcoming the impediments to serve their customers more effectively. If they do not do so, the sustainability of their library services in the current competitive environment will place at risk.

### 7.0    FUTURE RESEARCH DIRECTIONS
This research has provided important insights into the impediments that stand in the way of improved service. There has been no research on this theme in Sri Lankan context, and the present study provides a basis for further investigation into the aspects of service that customer consider to be important in their overall experience, and the changes that libraries must need to make to meet expectations of customers. However the exploratory nature of this research requires authentication of beliefs expressed by the postgraduate students here. In sum up, in extensions of this study, the concepts should be examined over more stakeholders, different measurers of success, and expectations regarding development factors other than the service provider's ability. Future studies should expand the context to include additional organization types and projects of varying scope.

## 8.0  REFERENCES

Churchill, G.A. and Suprenant, C (1982). An investigation into the determinants of consumer satisfaction", **Journal of Marketing Research**.
Vol.28 No. 4, 491-504pp

Czepiel, J.A., Soloman, M.R. and Suprprenant, C.F. (1985). **The service encounter**, D>C. Health and Company, NewYork, NY

Grbich, C. (1999). **Qualititative Research in Health**: An introduction, Allen and Wnwin and Sage International, Beverly Hills, CA

Green, GI. (1989), Perceived importance of systems analysts' job skills, roles, and non-salary incentives, **MIS Quarterly**, June, 115-33.

Mehta, SC., Lalwani, AK. & Soon, Li Han. (2000). Service quality in retailing: relative efficiency of alternative measurement scales for different product-service environments. **International Journal of Retail & Distribution Management**, 28 (2):62-72.

Oliver, RL. (1980). A cognitive model of the antecedents and consequences of satisfaction response. **Journal of Marketing Research**. 17(4):460-470

Oliver, R. (1981), "Measurement and evaluation of satisfaction processes in retail settings", Journal of Retailing, Vol.57. No 3., 25-48pp

Oliver, RL, & DeSarbo, WS. (1988). Response determinants in satisfaction judgments. **Journal of Consumer Research**. 14(4):495-507


Shemwell, DJ., Yavas, U, & Bilgin, Z. (1998). Customer-service provider relationships: an empirical test of a model of service quality, satisfaction and relationship oriented outcome, **International Journal of Service Industry Management**, 9(3):155-68

Yin, R (1994). Case Study Research – Design and Methods, 2nd ed., Applied Social Research Method Series. 5, Sage publications, thousands Oaks, CA