

9. Conclusions and recommendations

9.1 Conclusions

Hypothesis HA1 (Demand for e-Learning in Sri Lankan tertiary education system affects socio-demographic factors of the users) can be accepted by considering all the factors except measuring concept 'sex' of the e-Learners.

Hypothesis HB1 (Technology, Cost, Recognition, Flexibility, Contents, Delivery methods and Culture affect the demand for e-Learning in Sri Lankan tertiary education system) can be accepted based on the significant differences in the statistical analysis.

I do not wish to comment on the hypothesis HC0 or HC1 (The provision of e-Learning systems in Sri Lankan tertiary education system is or is not affected by Technology Cost, ROI, Implementation Time, Target Market, Awareness, and Delivery method) based on the data collected from the study.

Experts in the field are on the view that 100% e-Learning is not effective in the current tertiary educational system and blended learning will be much more effective

Based on the responses of experts in the field of e-Learning, infrastructure, cost, technology and band width affects the supply of e-Learning programs.

9.2 Recommendations

1. When designing and delivering of e-Learning programs, socio demographic factors of the learners should be considered.
2. As the demand for e-Learning varies with Technology , Cost, Recognition, Flexibility, Contents, Delivery methods and Culture of the program, one has to consider providing e-Learning programs in Sri Lanka
3. Further longitudinal study with a larger sample size on the same objectives as well as studies on social and health implications due to e-Learning concepts, is recommended.



10. Limitations of the study

1. Since there were no previous studies done on this area, the sample size could not be calculated.
2. E-Learning is a new concept for Sri Lanka, so that there are very small number of e-Learning program providers in Sri Lanka.
3. Due to the time and logistics, sample is selected from Colombo and suburbs.
4. The concepts and variables were selected based on the literature review and mainly from foreign studies. There will be other factors, which affect e-Learning demand and supply in Sri Lankan tertiary education system.
5. Due to the limited time, response rate for the questionnaires was low. For instance, there were 160 questionnaires distributed and only 91 responses were received.
6. The study includes the current and past e-Learners in the society but not the potential e-Learners.



11. Abbreviations

ACM : Association for Computing Machinery

LAN : Local Area Network

WAN : Wide Area Network

WBT : Web Based Training

CAI : Computer Aided Instruction

ICTA : Information and Communication Technology Agency

PBS : Public Broadcasting Service

BIT : Bachelor of Information Technology.

DEPS : Distance Education for Public Servants.

PIM : Post Graduate of Management

CBT : Computer Based Training

ISP : Internet Service Provider

ICT : Information and Communication Technology

UNDP : United Nations Development Program

JICA : Japanese International Corporation Agency

SIDA : Sweden International Development Agency

ADB : Asian Development Bank

MIS : Management Information System

CMS : Course Management Systems

LMS : Learning Management Systems

LCMS : Learning Content Management Systems

CITE : Consortium for Information Technology in Education

VSAT : Very Small Aperture Terminals

CDC : Center for Disease Control

SEM : Scenario-Based E-learning Model

WWW : World Wide Web

ASP : Application Service Providers

BIT : Bachelor of Information Technology

SLT : Sri Lanka Telecom

USA : United States of America

MIT : Massachusetts Institutes of Technology

CODE : Collaborative Distance Education

EU : European Union

UK : United Kingdom

CETIS : Center for Educational Technology Interoperability Standards (UK)

HEFCE : Higher Education Funding Council for England

SPSS : Statistical Package for Social Scientists.

IT : Information Technology

ROI : Return On Investment

STD : Standard Deviation

CDROM : Compact Disc Read Only Memory

CPU : Central Processing Unit

HW : Hardware

ADSL : Asymmetric Digital Subscriber Line

PC : Personal Computer



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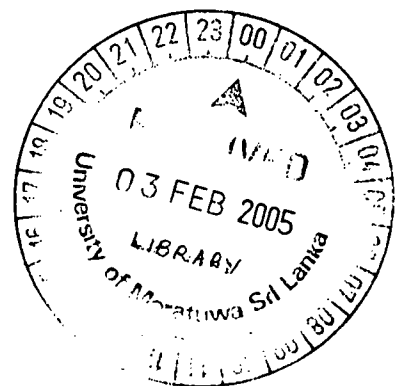
<http://www.accimt.ac.lk/Del.htm>

<http://www.trainingvillage.co.uk>

<http://www.geplearning.com>

<http://www.cetis.ac.lk>

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Annexure I

Operationalisation of Key Concepts and Variables of e-Learning Demand

Concept	Question Number	Variable	Weight	Indicator	Measure
Socio demographic Factors	1-2	Age		Value Range	Years
	1-3	Sex		Sex	Male/Female
	1-4	Marital Status		Status	Married/Unmarried/Other
	1-5	Occupational Status		Current Status	Full time student / unemployed /employed / employed in own business / studying while employed / any other
	1-6	Highest School Education		Level of Education	Up to OL / OL qualified / AL qualified / Any other
	1-7	Income Level		Value Range	Rs. per month
	1-8	Filed of Higher Education		Field	IT, IS ,Computer Science / Engineering / Management / Commerce / Marketing, Sales / Any Other field
	1-9	Current Educational Level		Certification Level	Diploma / Degree / Post Graduate diploma / Masters / Doctorate
	1-10	Internet Usage		Value Range	Number of Hours
	Technology	1-11	E-mail		E-mail usage
1-12		Data Communication Speed	60	Speed Level	Likert
1-13		Performance of the Program	40	Performance Level	Likert

	1-14	Hardware Accessories	Accessory Type	Camera / CDROM / Microphones / Speakers / Scanners / Extra RAM / Extra CPU / Do not use additional Hardware / Any other type
	1-15	Access method of e-Learning program	Access method	Internet via office or Institution network / Accessing via office or organizational network / Internet via home computers / Cyber cafes / Any other
Cost	1-16	Payments for e-Learning program	Type of payment	e-Learning course fee / Examination fee / Course and Examination fee / Administration and processing fee / any other / No payments
	1-17	Type of Hardware Cost involve in e-Learning program	Type of Hardware	Computer System / Upgrade the existing System / Hardware accessories / any other / No purchasing cost
	1-18	Type of Software Cost involve in e-Learning program	Type of Software costs	Purchasing of special software / Upgrade the existing software / Purchasing of software licenses / Any other software cost / No additional software cost
	1-19	Additional Expenses	Type of Expense	Dialup or Leased line fee / Internet and E-mail charges / Traveling cost / Logging cost / Any other costs / No payments for access
Recognition	1-20	Educational achievements after e-Learning program	Certificate level of achievement	Certificate / Diploma / Advanced diploma / Degree / Post Graduate Diploma / Masters / Doctorate / Professional certification / any other
	1-21	Industry recognition for the e-Learning	Parties, who recognize	Globally / Local public sector / Local private sector / both local private and



Flexibility	1-22	program Flexibility of program access	50	Level of Flexibility	public sector Likert
	1-23	Flexibility of access time	30	Level of flexibility	Likert
	1-24	Flexibility of program contents	20	Level of flexibility	Likert
Contents	1-25	Presentation quality of contents	40	Level of Presentation quality	Likert
	1-26	Level of matching with user's expectations	30	Level of matching	Likert
	1-27	Up to date contents in the program	20	Level of update	Likert
	1-28	Support and Help facilities of the program	10	Level of help	Likert
Delivery Methods	1-29	Delivery methods of the program		Methods of delivery	Fully on-line / on-line and text books / on-line and CDs / Online and class room work / on-line , CDs and Class room
Culture	1-30	Isolation during the Program	50	Level of Isolation	Likert
	1-31	Care given by the provider to the learner	50	Level of Care given	Likert

Annexure - II

Questionnaire - 1

SN

Questionnaire to identify the factors affecting the demand for e-learning in Sri Lankan tertiary education systems

As a post graduate student of MBA in IT program at the departments of Computer Science, Electronics and Telecommunications, University of Moratuwa, I am carrying out a cross sectional study to identify the factors affecting the demand for e-Learning in Sri Lankan tertiary education systems.

The result of the survey will be used for a research project, which is a partial requirement for my MBA program. The objective of my research is to analyze the main factors affecting demand for e-learning in Sri Lankan tertiary education system. In order to complete my research project you are kindly requested to fill this questionnaire according to instruction given.

All the data gathered through this questionnaire will be treated as highly confidential and will be used only for my research project.

e-Learning is the technology based learning, more precisely it can be defined as any form of learning that utilizes network for delivery, interaction and facilitation. The network could be the Internet, Private Local Area Network (private LAN), Wide Area network or any other network or computer based network. (Learning directly from CDs, TV and Radio networks are excluded for my study)

You may have already followed more than one e-Learning programs. In such cases, consider the latest situation when answering the questionnaire, mark " X " over the most appropriate answer.

Your background information (please cross the boxes)

1. Name :

2. Age : 18-24 25-30 31-36 37-42 43-48
 49-54 55-60 above 61

3. Sex : Male Female

4. Marital Status : Married Unmarried Other

5. Current occupational status : Full time Student Unemployed Employed
 Employed in own business Studying while employed
 Any other :

6. Highest School education : Up to O/L O/L Qualified A/L Qualified
 Any Other Level :

(P T O →)

7. Present Income level (in Sri Lankan rupees) : less than 25,000 25,001-50,000
 (if you are earning) 50,001-75,000 75,001 - 100,000
 Above 100,000 Not earning

8. Field of higher education : IT/IS/Computer science
 Engineering (any engineering field)
 Management (any management field)
 Commerce (accountancy, econ, etc)
 Marketing sales
 Any other field (please write) :

9. Your educational level : Diploma Degree Post graduate Dip
 Masters Doctorate
 Any other : (Please write)

10. If you are using the Internet, What is the average number of hours per week ?

Less than 7 7-14 15-21 22-28
 29-35 36-42 above 43

11. Do you use E-mail for communication ? Yes No

12. What level of data communication speed (bandwidth) you have experienced, when you access e-Learning program?

Very Good Good Average Poor Very Poor

13. What level of performance you have in your e-Learning program?

Very Good. Good Average Poor Very Poor

14. What type hardware accessories you are using for e-Learning program ?

Computer Camera CDROM Microphones Speakers Scanners
 Extra RAM Extra CPU Any Other (please write) :
 Do not use special Hardware

15. What type of network do you use for e-Learning ?

Internet via office or Institution's network Use internal office or Organization Network
 Internet via home PC Internet from Cyber Café
 Any Other networks (Please Write) :

(P T O →)

16. What is the type of payment involved in your e-Learning program?

- e-Learning course fee Examination fee Course and Examination fee
Administration or processing fee No fee involvement for the e-Learning program
Any other payments (Please write) :

17. What is the type of hardware costs involved for your e-Learning program ?

- Purchased a Computer system To upgrade the existing computer system
Purchased hardware accessories Any other cost :

No Additional cost for hardware

18. What is the type of software cost involved in your e-Learning program ?

- Purchased Additional software To upgrade the existing software
Purchased software licenses Any other cost :

No Additional cost for software

19. What are the additional expenses for e-Learning program access?

- Dialup or leased line fee Internet or E-mail charges Traveling cost
Logging cost Any other costs (Please write) :

No cost for network access

20. What is the level of educational achievement of your e-Learning program?

- Certificate Level Diploma Advanced Diploma Degree
Post Grad Diploma Masters Doctorate
Professional Certification Any other qualification / certification Level :

21. What kind of recognition you have gained after the e-Learning program ?

- Global Recognition Local public sector
Local private sector Both private and public sector

22. How flexible is your e-Learning program access ?

- Very Flexible Flexible Average Not Flexible Very Rigid

23. How flexible is your e-Learning program access time ?

Very Flexible Flexible Average Not Flexible Very Rigid

24. How flexible is your course contents ?

Very Flexible Flexible Average Not Flexible Very Rigid

25. What is the level of presentation quality of the e-Learning program ? (pictures, colors, animations and etc)

Very Good Fairly Good Average Poor Very Poor

26. What is the level of matching between the contents of the program and your expectations ?

Very Good Fairly Good Average Poor Very Poor

27. What is the level of update of contents in your e-Learning program ?

Very Good Fairly Good Average Poor Very Poor

28. What level of help you have in the e-Learning programs ?

Very Good Fairly Good Average Sri Lanka Poor Very Poor

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29. What are the delivery methods used in your e-Learning program ?

Fully online On-line and Text books
Online and CDs Online and Class room work
Online / Class Room / CDs

30. When you compare class room learning and e-Learning programs, What level of isolation you have in e-Learning Program ?

Very Low Low Average High Very High

31. What is the level of care given by the e-Learning provider during the program?

Very Good. Good Average Poor Very Poor

Thank you very much for spending your valuable time to complete the questionnaire.

Madura Liyanage

Annexure – III

Coding system for Questionnaire - 1

SN

**Questionnaire to identify the factors affecting
the demand for e-learning
in Sri Lankan tertiary education system**

As a post graduate student of MBA in IT program at the departments of Computer Science, Electronics and Telecommunications, University of Moratuwa, I am carrying out a cross sectional study to identify the factors affecting the demand for e-Learning in Sri Lankan tertiary education systems.

The result of the survey will be used for a research project, which is a partial requirement for my MBA program. The objective of my research is to analyze the main factors affecting demand for e-learning in Sri Lankan tertiary education system. In order to complete my research project you are kindly requested to fill this questionnaire according to instruction given.

All the data gathered through this questionnaire will be treated as highly confidential and will be used only for my research project.

e-Learning is the technology based learning, more precisely, it can be defined as any form of learning that utilizes network for delivery, interaction and facilitation. The network could be the Internet, Private Local Area Network (private LAN), Wide Area network or any other network or computer based network. (Learning directly from CDs, TV and Radio networks are excluded for my study)

You may have already followed more than one e-Learning programs. In such cases, consider the latest situation when answering the questionnaire, mark “ X “ over the most appropriate answer.

e-Learning user’s background information (please cross the boxes)

1. Name :

2. Age : 18-24 (1) 25-30 (2) 31-36 (3) 37-42 (4) 43-48 (5)
49-54 (6) 55-60 (7) above 61 (8)

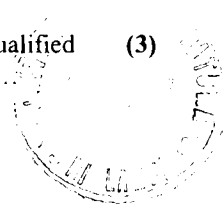
3. Sex : Male (1) Female (2)

4. Marital Status : Married (1) Unmarried (2) Other (3)

5. Current occupational status : Full time Student (1) Unemployed (2) Employed (3)
Employed in own business (4) Studying while employed (5)
Any other : (6).....

6. Highest School education : Up to O/L (1) O/L Qualified (2) A/L Qualified (3)
Any Other Level : (4).....

(P T O →)



7. Present Income level (in Sri Lankan rupees) : less than 25,000 (1) 25,001-50,000 (2)
 (if you are earning) 50,001-75,000 (3) 75,001 - 100,000 (4)
 Above 100,000 (5) Not earning (6)

8. Field of higher education : IT/IS/Computer science (1)
 Engineering (any engineering field) (2)
 Management (any management field) (3)
 Commerce (accountancy, econ, etc) (4)
 Marketing sales (5)
 Any other field (please write) : (6).....

9. Your educational level : Diploma (1) Degree (2) Post graduate Dip (3)
 Masters (4) Doctorate (5)
 Any other : (Please write) (6)

10. If you are using the Internet, What is the average number of hours per week ?

Less than 7 (1) 7-14 (2) 15-21 (3) 22-28 (4)
 29-35 (5) 36-42 (6) above 43 (7)

11. Do you use E-mail for communication ? Yes (1) No (2)



Q12, Q13, Q14 and Q15 will be used to measure 'Technology', Q12 and Q13 are used to build one composite variable. Weight for Q12 = 60% and Weight for Q13 = 40%

12. What level of data communication speed (bandwidth) have you experienced, when you access e-Learning program?

Very Good (60) Good (45) Average (30) Poor (15) Very Poor (0)

13. What level of performance you have in your e-Learning program?

Very Good. (40) Good (30) Average (20) Poor (10) Very Poor (0)

<u>Code</u>	<u>Total</u>	<u>Comment</u>
5	0 - 24	Very Poor
4	25 - 49	Poor
3	50 - 74	Average
2	75 - 99	Good
1	100	Very Good

14. What type of hardware accessories are you using for e-Learning program ?

Computer Camera (1) CDROM (2) Microphones (3) Speakers (4) Scanners (5)
 Extra RAM (6) Extra CPU (7) Any Other (please write) : (8)

Do not use special Hardware (9)

15. What type of network do you use for e-Learning ?

- Internet via office or Institution’s network (1) Use internal office or Organization Network (2)
- Internet via home PC (3) Internet from Cyber Café (4)
- Any Other networks (Please Write) : (5)

Q16, Q17, Q18 and Q19 will be used measure the ‘Cost’ concept of e-Learning programs

16. What is the type of payment involved in your e-Learning program?

- e-Learning course fee (1) Examination fee (2) Course and Examination fee (3)
- Administration or processing fee (4) No fee involvement for the e-Learning program (5)
- Any other payments (Please write) : (6)

17. What is the type of hardware costs involved in your e-Learning program ?

- Purchased a Computer system (1) To upgrade the existing computer system (2)
- Purchased hardware accessories (3) Any other cost : (4)
- No Additional cost for hardware (5)



18. What is the type of software cost involved in your e-Learning program ?

- Purchased Additional software (1) To upgrade the existing software (2)
- Purchased software licenses (3) Any other cost : (4)
- No Additional cost for software (5)

19. What are the additional expenses for e-Learning program access?

- Dialup or leased line fee (1) Internet or E-mail charges (2) Traveling cost (3)
- Logging cost (4) Any other costs (Please write) : (5).....
- No cost for network access (6)

Q20 and Q21 will be used to measure the ‘Recognition’ of e-Learning program

20. What is the level of educational achievement of your e-Learning program?

- Certificate Level (1) Diploma (2) Advanced Diploma (3) Degree (4)
- Post Grad Diploma (5) Masters (6) Doctorate (7)
- Professional Certification (8) Any other qualification / certification Level : (9)

21. What kind of recognition have you gained after the e-Learning program ?

- Global Recognition (1) Local public sector (2)
 Local private sector (3) Both private and public sector (4)

Q22, Q23 and Q24 were used to evaluate the flexibility of the e-Learning program. This is a composite variable, which consists of 'flexibility of program access' (50% weight), 'Flexibility of program access time' (30% weight) and 'flexibility of course contents' (20% weight).

22. How flexible is your e-Learning program access ?

- Very Flexible (50) Flexible (37.5) Average (25) Not Flexible (12.5) Very Rigid (0)

23. How flexible is your e-Learning program access time ?

- Very Flexible (30) Flexible (22.5) Average (15) Not Flexible (7.5) Very Rigid (0)

24. How flexible is your course contents ?

- Very Flexible (20) Flexible (15) Average (10) Not Flexible (5) Very Rigid (0)

Code	Total	Comment
5	0 - 24	Very Rigid
4	25 - 49	Not Flexible
3	50 - 74	Average
2	75 - 99	Flexible
1	100	Very Flexible



Q25, Q26, Q27 and Q28 were used to measure the 'Quality of the Contents' of the e-Learning program. This a composite variable, which contains 'level of presentation quality' (40% weight), 'level of expectation' (30% weight), 'level of update' (20% weight) and ' level of help' (10% weight) in the e-Learning program.

25. What is the level of presentation quality of the e-Learning program ? (pictures, colors, animations and etc)

- Very Good (40) Fairly Good (30) Average (20) Poor (10) Very Poor (0)

26. What is the level of matching between the contents of the program and your expectations ?

- Very Good (30) Fairly Good (22.5) Average (15) Poor (7.5) Very Poor (0)

27. What is the level of update of contents in your e-Learning program ?

- Very Good (20) Fairly Good (15) Average (10) Poor (5) Very Poor (0)

28. What level of help do you have in the e-Learning programs ?

Very Good (10) Fairly Good (7.5) Average (5) Poor (2.5) Very Poor (0)

<u>Code</u>	<u>Total</u>	<u>Comment</u>
5	0 – 24	Very Poor
4	25 - 49	Poor
3	50 – 74	Average
2	75 – 99	Fairly Good
1	100	Very Good

Q29 was used to measure the delivery method of the e-Learning program.

29. What are the delivery methods used in your e-Learning program ?

Fully online (1) On-line and Text books (2)
 Online and CDs (3) Online and Class room work (4)
 Online / Class Room / CDs (5)

Q30 and Q31 were used to measure the 'culture' of the e-Learning program. This is a composite variable, which contains 'level of isolation' (50% weight) and 'Level of care given' (50% weight) in the e-Learning program.



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30. When you compare class room learning and e-Learning programs, what level of isolation do you have in e-Learning Program ?

Very Low (50) Low (37.5) Average (25) High (12.5) Very High (0)

31. What is the level of care given by the e-Learning provider during the program?

Very good. (50) Good (37.5) Average (25) Poor (12.5) Very Poor (0)

<u>Code</u>	<u>Total</u>	<u>Comment</u>
5	0 – 24	Very Poor
4	25 - 49	Poor
3	50 – 74	Average
2	75 – 99	Fairly Good
1	100	Very Good

Thank you very much for spending your valuable time to complete the questionnaire.

Madura Liyanage

Annexure IV

Operationlisation of Key Concepts and Variables of e-Learning Supply

Concept	Question Number	Variable	Weight	Indicator	Measure
Background of the organization	2-1	Number of Employees	Value		Number of employees categorized into ranges
	2-2	Main Business		Type of the business	Software development / Education, Training / Manufacturing / Sales and Marketing of software, hardware / Research and Development work / Any other
	2-3	Number of e-Learners benefit	Value		Number of e-Learners categorized into ranges
	2-4	Purpose of e-Learning within the organization		Purpose	Host or Deliver “e-Learning” software / Train, Educate internal employees / Develop “e-Learning” related software / Sales, Market “e-Learning” related products / Research and Development of “e-Learning” related areas / any other
	2-5	Relationship with tertiary education in Sri Lanka		Relationship	Provide “e-Learning” programs / Provide “e-Learning” related software / sales ad marketing “e-Learning” related products / Involve Research and Development / Train, Educate people for “e-Learning” / Any Other / No relationship

Implementation Cost	2-6	Total Cost		Value	Total cost in Rs.
	2-7	Software Cost	40	Value	Percentage of the Total Cost
	2-8	Hardware Cost	30	Value	Percentage of the Total Cost
	2-9	Administration Cost	20	Value	Percentage of the Total Cost
	2-10	Training Cost	10	Value	Percentage of the Total Cost
Return on Investment	2-11	ROI		Analysis of ROI	Yes / No
	2-12	Payback Period	50	Time	Months
	2-13	Rate of Return	50	Value	Percentage of Rate of Return
Implementation Time	2-14	Implementation Time		Time	Months
Target Market	2-15	Level of Certification offer		Type of Certificate	Diploma, Higher Diploma / Degree / Post Graduate Dip / Masters / Doctorate / Professional Certificate / To enhance the knowledge / Any other
Awareness Creation	2-17	Awareness		Level of Awareness	Likert
	2-18	Media used to create awareness		Type of Media	Internet / TV, Radio / News Papers / Press Releases, Press Conferences / Brochures, Banners, Leaflets / Any other
Delivery of Contents	2-19	Content Delivery Method		Method of Delivery	Synchronous / Asynchronous / Partially Synchronous / Partially Asynchronous / Any other
	2-20	Content Delivery Media		Media of Delivery	The Internet / Organizational or Company Network / Third Party Network / E-mail / Any other



Questionnaire – 2

SN

**Questionnaire to identify the factors affecting
e-Learning provision
in Sri Lankan tertiary education system.**

Dear Sir,

As a post graduate student of MBA in IT program at the Departments of Computer Science, Electronics and Telecommunications, University of Moratuwa, I am carrying out a study of the “Factors affecting implementation and demand for e-Learning for Sri Lankan tertiary education System”. The result of the survey will be used for the research project, which is a partial requirement of my MBA program.

In order to fulfill the requirements for research project, you are kindly requested to fill this questionnaire according to the guidelines given. Sometimes you may have already considered/implemented more than one e-Learning related applications/developments in your organization. In such case consider the latest situation, when answering the questionnaire and mark “X” or write the most appropriate answer.

All the data gathered through this questionnaire will be treated as highly confidential and will be used only for my research project.

Tertiary education :

For my research, I considered tertiary education as the studies after the school education. It may include diploma, Advanced diploma, Degree, Post graduate diploma, Masters, Doctorate, any professional certifications and any other carrier development programs within the organizations

1. What is the number of employees in your Organization/Department ?

- less than 100 101 - 200 201- 300 301 - 400 401 – 500
Above 501

2. What is the filed of business in your organization ?

- Software Development Education/Training Manufacturing
Sales/Marketing of Software/hardware Research/Development
Other (please specify) :

(PTO →)


3. How many users benefit from your “e-Learning” system ?

- Less than 500 501-1000 1001-1500 1501-2000 2001-2500
above 2000

4. What is the main purpose of “e-Learning” in your organization ?
(mark more than one if applicable)

- Host or deliver “e-Learning” software Train/Educate internal employees
Develop “e-Learning” related software Sales/Market “e-Learning” related products
Research & Development of “e-Learning” related areas
Any Other (Please specify) :

5. What kind of relationship do you have between “e-Learning” product and the tertiary education system in Sri Lanka :

- Provide “e-Learning “ programs Provide “e-Learning” related software
Sell/market “e-Learning” related products Involve Research & Development
Train/educate people for “e-Learning” No relationship
Any other (Please write) :
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6. What is the total budgeted cost for e-Learning implementation ? Rs.....

7. What is the cost for e-Learning software implementation ? Rs.

8. What is the cost for e-Learning hardware implementation ? Rs.....

9. What is the cost for e-Learning administration ? Rs.

10. What is the cost for training internal employees for the e-Learning related activities ?

Rs.

11. Have you done Return on Investment analysis for the e-Learning implementation ?

- Yes No

If the answer is “Yes” please continue, otherwise please go to question No 14

(P T O →)

12. If the answer is “Yes” for the above question, what is the payback period?

- less than 6 months 7 – 12 months 13 – 18 months 19 – 24 months
25 – 30 months 31- 36 months more than 3 years

13. What is the rate of return?

- Less than 5 % 6 – 10 % 11 – 15 % 16 – 20 %
21 – 25 % 26 – 30 % More than 31 %

14. What was the duration for designing, implementing and launching e-Learning program?

- Less than 3 months 4 - 6 months 7 – 9 months 10 –12 months
13 – 15 months 16 – 18 months 19 – 21 months 22 – 24 months
more than 2 years Not known

15. What is the target market of your “e-Learning” product ?

- Diploma/Higher diploma Degree Level Post Grad Diploma
Masters Doctorates Provide professional certification
To enhance the knowledge of the employees
For any other higher education system :

16. What is the level of awareness created among the users/public about the “e-Learning” program?

- Very High High Average Low
Very Low

17. What is the media used to create awareness ?

- Internet as Advertisement tool TV/Radio News Papers
Press Releases/Press Conferences Brochures/Banners/Leaflets
Any other (Please write) :

18. What type of content delivery method do you have planed in the e-Learning system ?

- Synchronous Asynchronous Partially Synchronous
Partially Asynchronous Any Other(please specify)

(P T O →)

19. What type of network did you consider to deliver “e-Learning” services ?

- The Internet Organization/Company network Third party network
E -mail
Any other (please specify) :

21. In your opinion, what are the main advantages of “e-Learning” for Sri Lankan tertiary education system ?

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22. As an experienced person in the field, what would be the main issues for provision of “e-Learning” for Sri Lankan tertiary education system ?

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22. With your experience in IT field, what are the suggestions to improve “e-Learning” for Sri Lankan tertiary education system ?

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Thank you very much for spending your valuable time to complete the questionnaire. You may have contributed to open up new avenues and enhance the quality of Sri Lankan tertiary education system

Thank you

Madura Liyanage
(Graduate Student, MBA in IT Program, University of Moratuwa)

Tel (office) :
Tel (Home) :
E-mail :



Annexure VI

Coding system for Questionnaire - 2

SN

Questionnaire to identify the factors affecting for e-Learning provision in Sri Lankan tertiary education system.

Dear Sir,

As a post graduate student of MBA in IT program at the Departments of Computer Science, electronics and Telecommunications, University of Moratuwa, I am carrying out a study about the "Factors affecting for implementation and demand for e-Learning for Sri Lankan tertiary education System". The result of the survey will be used for the research project, which is a partial requirement of my MBA program.

In order to fulfill the requirements for research project, you are kindly requested to fill this questionnaire according to the guidelines given. Some times you may have already considered/implemented more than one e-Learning related applications/developments in your organization. In such case consider the latest situation, when answering the questionnaire and mark "X" or write the most appropriate answer.

All the data gathered through this questionnaire will be treated as highly confidential and will be used only for my research project.

Tertiary education :

For my research, I considered tertiary education as the studies after the school education. It may include diploma, Advanced diploma, Degree, Post graduate diploma, Masters, Doctorate, any professional certifications and any other carrier development programs within the organizations

Q - 1 to Q - 10 will be used to evaluate background of the organization

1. What is the number of employees in your Organization/Department ?

- less than 100 (1) 101 - 200 (2) 201- 300 (3) 301 - 400 (4) 401 - 500 (5)
Above 501 (6)

(PTO →)

2. What is the field of business in your organization ?

- Software Development (1) Education/Training (2) Manufacturing (3)
Sales/Marketing of Software/hardware (4) Research/Development (5)
Other (please specify) :

3. How many users benefit from your “e-Learning” system ?

- Less than 500 (1) 501-1000 (2) 1001-1500 (3) 1501-2000 (4) 2001-2500 (5)
above 2000 (6)

4. What is the main purpose of “e-Learning” in your organization ?

(mark more than one if applicable)

- Host or deliver “e-Learning” software (1) Train/Educate internal employees (2)
Develop “e-Learning” related software (3) Sales/Market “e-Learning” related products (4)
Research & Development of “e-Learning” related areas (5)
Any Other (Please specify) :



(6) University of Moratuwa, Sri Lanka
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5. What kind of relationship do you have between “e-Learning” product and the tertiary education system in Sri Lanka :

- Provide “e-Learning “ programs (1) Provide “e-Learning” related software (2)
Sell/market “e-Learning” related products (3) Involve Research & Development (4)
Train/educate people for “e-Learning” (5) No relationship (6)
Any other (Please write) : (7)

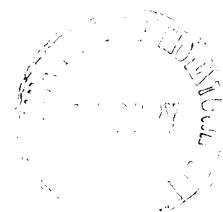
6. What is the total budgeted cost for e-Learning implementation ? Rs. (amount)

7. What is the cost for e-Learning software implementation ? (percentage)

8. What is the cost for e-Learning hardware implementation ? (percentage)

9. What is the cost for e-Learning administration ? (percentage)

(P T O →)



10. What is the cost for training internal employees for the e-Learning related activities ?
(percentage)

11. Have you done Return on Investment analysis for the e-Learning implementation ?

Yes (1) No (2)

*If the answer is “Yes” please continue, otherwise please go to question No 14
Q12 and Q13 were used to measure ‘Return On Investment’*

12. If the answer is “Yes” for the above question, what is the payback period?

less than 6 months (1) 7 – 12 months (2) 13 – 18 months (3) 19 – 24 months (4)
25 – 30 months (5) 31- 36 months (6) more than 3 years (7)

13. What is the rate of return?

Less than 5 % (1) 6 – 10 % (2) 11 – 15 % (3) 16 – 20 % (4)
21 – 25 % (5) 26 – 30 % (6) More than 31 % (7)



Q14 is used to measure the ‘Implementation Time’ of the e-Learning programs

14. What was the duration for designing, implementing and launching e-Learning program?

Less than 3 months (1) 4 - 6 months (2) 7 – 9 months (3) 10 –12 months (4)
13 – 15 months (5) 16 – 18 months (6) 19 – 21 months (7) 22 – 24 months (8)
more than 2 years (9) Not known (10)

Q15 is used to measure the ‘Target Market’

15. What is the target market of your “e-Learning” product ?

Diploma/Higher diploma (1) Degree Level (2) Post Grad Diploma (3)
Masters (4) Doctorates (5) Provide professional certification (6)
To enhance the knowledge of the employees (7)
For any other higher education system :..... (8)

(P T O →)

Q16 and Q17 are used to measure the 'Awareness' concept of e-Learning programs

16. What is the level of awareness created among the users/public about the “e-Learning” program?

- Very High (1) High (2) Average (3) Low (4)
Very Low (5)

17. What is the media used to create awareness ?

- Internet as Advertisement tool (1) TV/Radio (2) News Papers (3)
Press Releases/Press Conferences (4) Brochures/Banners/Leaflets (5)
Any other (Please write) :..... (6)

Q18 and Q19 are used to measure the 'Delivery' concept of e-Learning programs

18. What type of content delivery method do you have planed in the e-Learning system ?

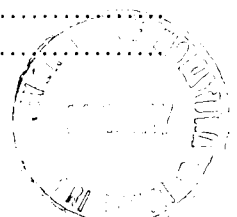
- Synchronous (1) Asynchronous (2) Partially Synchronous (3)
Partially Asynchronous (4) University of Moratuwa, Sri Lanka
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www.lib.mrt.ac.lk
Any Other(please specify) :..... (5)

19. What type of network did you consider to deliver “e-Learning” services ?

- The Internet (1) Organization/Company network (2) Third party network (3)
E -mail (4)
Any other (please specify) : (5)

20. In your opinion, what are the main advantages of “e-Learning” for Sri Lankan tertiary education system ?

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(P T O →)

21. As an experienced person in the field, what would be the main issues for provision of “e-Learning” for Sri Lankan tertiary education system ?

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22. With your experience in IT field, what are the suggestions to improve “e-Learning” for Sri Lankan tertiary education system ?

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Thank you very much for spending your valuable time to complete the questionnaire. You may have contributed to open up new avenues and enhance the quality of Sri Lankan tertiary education system

Thank you



Madura Liyanage
(Graduate Student, MBA in IT Program, University of Moratuwa)

Tel (office) :
Tel (Home) :
E-mail :