

Appendix A

Letter of Request to Human Resource Managers for participation of Administrative Support Staff in Survey (Versions in English and Bahasa Melayu)

Date

(Address)

Through:

Head
Department of Educational Development

Dear Sir:

REQUEST FOR PARTICIPATION OF ADMINISTRATIVE SUPPORT STAFF IN A SURVEY – IT COMPETENCIES OF ADMINISTRATIVE SUPPORT STAFF IN NETWORKED ORGANIZATIONS IN MALAYSIA

The purpose of this survey is to gain information about information technology competencies required of administrative support staff employed in your organization. We would like the participation of administrative support staff in this questionnaire because they are the best people to talk about their position and their skills. The input from your administrative support staff will help us learn more about their jobs, training needs and preferences. The information will, in turn, assist us in our continuing effort to provide better training programs for those wishing to embark and succeed in an office career.

Therefore, we would appreciate if you would allow 5 – 10 administrative support staff with the following criteria to participate in our survey:

1. Administrative support staff designated as stenographers, secretaries, executive secretaries, executive assistants and administrative assistants.
2. Six months or more secretarial experience in the organization.
3. Have access to a networked PC and uses information processing technologies categorized as word processing, spreadsheet, database, presentation, desktop publishing/graphics, communications and Internet/Intranet.

All answers will be handled in the *strictest confidence*. The only persons given access to the information will be members of the research team. If you have any queries, please do not hesitate to contact me at 03-55129375.

Thank you very much for your time and cooperation. I greatly appreciate your organization's and your help in furthering this research endeavor.

Please return your answer using the form in the enclosed, stamped envelope by (date).

Cordially,

Feridah Mohd. Nadzar
Doctoral Student

Enclosure: Agreement to participate in the survey
Stamped, self-addressed Envelope

AGREEMENT TO PARTICIPATE

A SURVEY OF IT COMPETENCIES REQUIRED BY ADMINISTRATIVE SUPPORT STAFF IN NETWORKED ORGANIZATIONS IN MALAYSIA

By:

Feridah Mohd. Nadzar
Doctoral of Education Program, University Malaya

Name: _____

Designation: _____

Organization: _____

Please tick () the appropriate box and write the number of administrative support staff nominated for participation:

☐ YES, I agree to nominate _____ administrative support personnel to participate in the above survey.

Comments:

☐ NO, we are **unable** to participate in the above survey.

Comments:

Tarikh

(Alamat Penerima)

Melalui: Prof. Madya Dr. Saedah Hj. Siraj
Ketua
Jabatan Pembangunan Pendidikan

Tuan:

**MEMOHON PENYERTAAN PEMBANTU TADBIR KESETIAUSAHAAN
(SETIAUSAHA/JURUTRENGKAS) DI DALAM MENJAWAB SOALSELIDIK
“DEVELOPMENT OF IT COMPETENCIES AMONG ADMINISTRATIVE
SUPPORT STAFF IN NETWORKED ORGANIZATIONS IN MALAYSIA”**

Kajian ini bertujuan untuk mendapatkan maklumat tentang kemahiran IT yang diperlukan oleh pembantu tadbir kesetiausahaan di organisasi tuan. Kami perlu mendapatkan maklumbalas daripada pembantu tadbir kesetiausahaan kerana merekalah yang dapat memberikan maklumat tentang tugas dan kemahiran mereka. Maklumbalas ini akan membantu kami untuk mengenalpasti peranan mereka serta latihan yang mereka perlukan. Seterusnya, maklumat ini akan membantu kami di dalam usaha yang berterusan untuk menawarkan latihan yang terbaik bagi mereka yang ingin memasuki dan berjaya di dalam kerjaya pengurusan dan pentadbiran pejabat.

Oleh itu kami sangat berharap agar tuan dapat membenarkan 5 – 10 orang pembantu tadbir kesetiausahaan yang memenuhi ciri-ciri berikut untuk turut serta di dalam kajiselidik ini:

1. Pembantu tadbir kesetiausahaan yang dikategorikan sebagai jurutrengkas, setiausaha, setiausaha eksekutif, atau pembantu eksekutif.
2. Enam (6) bulan atau lebih pengalaman bekerja di dalam bidang kesetiausahaan di dalam organisasi tuan.
3. Menggunakan 'networked PC' dan menyiapkan tugas dengan menggunakan perisian word processing, spreadsheet, database, presentation, desktop publishing/graphics, communications dan Internet/Intranet.

Untuk pengetahuan tuan segala jawapan soalselidik dianggap peribadi dan dihadkan kepada ahli kumpulan kajian sahaja. Sekiranya tuan mempunyai sebarang kemusykilan, sila hubungi saya di nombor telefon 03-55129375.

Kami sangat berharap tuan dapat membantu kami dengan membenarkan 5 – 10 orang kakitangan sokongan kesetiausahaannya untuk menjawab soal selidik kami. Sila berikan jawapan tuan dengan menggunakan borang dan sampul surat berselem yang dilampirkan sebelum (tarikh).

Segala kerjasama tuan di dalam menjayakan kajian ini sangat kami hargai dan kami dahului dengan ucapan terima kasih.

Yang benar,

Feridah Mohd. Nadzar

Calon

Program Ijazah Falsafah Kedoktoran Pendidikan

Lampiran: Borang Persetujuan

Sampul Surat beralamat sendiri dan berselem

**BORANG PERSETUJUAN UNTUK PENYERTAAN
KAKITANGAN SOKONGAN KESETIAUSAHAAN**

**KAJIAN "IT COMPETENCIES REQUIRED BY ADMINISTRATIVE SUPPORT
STAFF IN NETWORKED ORGANIZATIONS IN MALAYSIA"**

Oleh:

**Feridah Mohd. Nadzar, Calon
Program Ijazah Falsafah Kedoktoran Pendidikan, Universiti Malaya**

Nama: _____

Jawatan: _____

Organisasi: _____

Sila tandakan () yang berkaitan:

☐ Kami **BERSETUJU** untuk membenarkan _____ orang kakitangan sokongan kesetiausahaan kami untuk menjawab soalselidik di atas.

Komen:

☐ Kami **TIDAK BERSETUJU** untuk membenarkan kakitangan sokongan kesetiausahaan kami untuk menjawab soalselidik di atas

Komen:

Appendix B

Cover Letter for the Information Technology Competency Questionnaire (ITCQ)

Faculty of Education
University Malaya, Kuala Lumpur

Date

Dear :

**INFORMATION TECHNOLOGY COMPETENCIES REQUIRED OF
ADMINISTRATIVE SUPPORT STAFF IN NETWORKED ORGANIZATIONS**

The purpose of this survey is to gain information about information technology competencies required of administrative support staff employed in networked organizations. We request your response to this questionnaire because you are the best person to talk about your position and your skills. You will help us learn more about your job, training needs and preferences. The information you provide will assist us in our continuing effort to provide better training programs for those wishing to embark and succeed in an office career.

Your answers will be handled in the *strictest confidence*; only members of the research team will have access to the information you give. We have provided an identification number for each participant for the purpose of follow-up procedures. The numbers, names and questionnaires will not be made available to anyone other than the research team. If you have any queries, please do not hesitate to contact me at 03-55164827 or 03-55129375.

A summary of the results will be mailed to you after the data are analyzed. Thank you very much for your time and cooperation. I greatly appreciate your organization's and your help in furthering this research endeavor.

Please return the questionnaire in the enclosed, stamped envelope by (date).

Cordially,

Feridah Mohd. Nadzar
Doctoral Student

Enclosures

1. Questionnaire
2. Stamped, Self-Addressed Envelope

Appendix C

First Follow-Up Letter to Respondents

Faculty of Education
University Malaya
Kuala Lumpur

Date

Dear

INFORMATION TECHNOLOGY COMPETENCY QUESTIONNAIRE

If you have already returned the Information Technology Competency Questionnaire for administrative support staff, thank you. If you have not completed it or if you did not receive the questionnaire, please take a few minutes to complete the enclosed questionnaire and return it in the stamped addressed envelope by (date).

I know that this is a busy time of year for you. However, your expertise, experience and input will provide current as well as valid information for decisions on IT updating as well as curriculum and instructional needs of students planning an office career.

Thank you! Your response is greatly appreciated.

Feridah Mohd. Nadzar

Enclosures

Appendix D

Information Technology Competency Questionnaire (ITCQ)

**INFORMATION TECHNOLOGY COMPETENCY QUESTIONNAIRE
ADMINISTRATIVE SUPPORT STAFF IN NETWORKED ORGANIZATIONS
Faculty of Education, University Malaysia**

No. _____

SECTION ONE: RESPONDENT'S PROFILE

Instructions: Please tick or fill in the blanks where appropriate.

1. Highest Educational Level

- | | |
|---|--|
| <input type="checkbox"/> MCE/SPM | <input type="checkbox"/> Professional Qualification |
| <input type="checkbox"/> Certificate | <input type="checkbox"/> Bachelor's Degree |
| <input type="checkbox"/> Diploma | <input type="checkbox"/> Others, please specify: _____ |
| <input type="checkbox"/> College Advanced Diploma | |

2. Your organization's nature of business

- | | |
|---|---|
| <input type="checkbox"/> Construction | <input type="checkbox"/> Trade – Wholesale and Retail |
| <input type="checkbox"/> Petroleum and Gas | <input type="checkbox"/> Banking/Finance/Insurance |
| <input type="checkbox"/> Telecommunications | <input type="checkbox"/> Business and Professional Services |
| <input type="checkbox"/> Health | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Government | <input type="checkbox"/> Tourist and Leisure Services |
| <input type="checkbox"/> Education | <input type="checkbox"/> Others, please specify _____ |

3. Current job title

- | | |
|--|--|
| <input type="checkbox"/> Stenographer | <input type="checkbox"/> Administrative Assistant |
| <input type="checkbox"/> Secretary | <input type="checkbox"/> Executive Assistant |
| <input type="checkbox"/> Executive Secretary | <input type="checkbox"/> Others, please specify: _____ |

4. Age Group

- | | |
|----------------------------------|-------------------------------------|
| <input type="checkbox"/> 20 – 30 | <input type="checkbox"/> 41 – 50 |
| <input type="checkbox"/> 31 – 40 | <input type="checkbox"/> 51 or more |

5. Years in this current position

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Under 1 year | <input type="checkbox"/> 6 – 10 years |
| <input type="checkbox"/> 1 – 5 years | <input type="checkbox"/> 10 years or more |

6. Years of related work experience

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Under 1 year | <input type="checkbox"/> 6 – 10 years |
| <input type="checkbox"/> 1 – 5 years | <input type="checkbox"/> 10 years or more |

SECTION TWO: USE OF COMPUTERS IN THE WORKPLACE

7. What type of computer do you use?

- ☐ Standalone PC ☐ Client-Server (PCs linked to a Network)

8. How many years have you used a computer in a workplace setting?

- ☐ Under 1 year ☐ 3 – 5 years
☐ 1 – 3 years ☐ 5 years or more

SECTION THREE: INSERVICE INFORMATION TECHNOLOGY TRAINING NEEDS

9. Have you undergone any training dealing with information technologies this year?

- ☐ Yes ☐ No

10. How many courses/training sessions that dealt with information technologies have you attended in the past five (5) years?

- ☐ None ☐ 5 – 6
☐ 1 – 2 ☐ More than 6
☐ 3 – 4

11. How often would you prefer IT retraining and updating?

- ☐ Once a month ☐ Every 6 months
☐ Once every two months ☐ Others, please specify _____
☐ 3 – 4 times a year

12. Which of the following method best describes your preference to learn IT?

- ☐ Self-study computer-based learning
☐ Facilitated Learning (Computer-based training with Instructor)
☐ Distance Learning via the Internet or Corporate Intranet

13. Where have you learned most of your computer skills? (Tick one answer only)

- ☐ Formal Education
☐ Formal Training
☐ On-the-job
☐ On my own

SECTION FOUR: ABOUT YOUR JOB

INSTRUCTIONS: On the following pages will be a list of tasks with competency statements that may be related to your job as administrative support staff. We need you to tell us your response to three major questions:

Please read the instructions before proceeding to answer the questions on the next page. Answer the questions in Section Four by following these steps (see example below):

Tasks	How often do you perform this task?					How Important is this Task?					How Would You Rate Your Ability to Do This Task?				
	1 = Never	2 = Rarely	3 = Sometimes	4 = Often	5 = Very Often	1 = Not Important At All	2 = Little Importance	3 = Average Importance	4 = Important	5 = Extremely Important	1 = Unacceptable	2 = Marginal	3 = Acceptable	4 = Proficient	5 = Exceptional
Make online travel arrangement	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

1. *How often do you perform the task?*

For each task and competency statement, tell us how often you perform the task by circling the appropriate number

- 1 = Never
- 2 = Rarely
- 3 = Sometimes
- 4 = Often
- 5 = Very Often

2. *How important is this task for success in your work?*

For the question on "How important is this task?" Circle the number that indicates how important the task is for success in your work:

- 1 = Not Important At All = Skill is not required on the job
- 2 = Little Importance, = Lack of skill does not affect job performance
- 3 = Average Importance = Lack of skill affects job performance
- 4 = Important = Skill contributes to job performance
- 5 = Extremely Important) = Skill is critical for job performance

3. *How would you rate your ability to do this task?*

In order to rate your competency, circle an appropriate number in the "How Would You Rate Your Ability to do this Task" column using the following rating scale:

- 1 = Unacceptable = Cannot do at all.
- 2 = Marginal = Satisfactory but sometimes unacceptable.
- 3 = Acceptable = Meets job requirements.
- 4 = Proficient = Exceeds job requirements.
- 5 = Exceptional = Exceeds job requirements and can train others.

4. *You may now proceed to the next page to answer the questions in Section Four.*

SECTION FOUR

Please circle the appropriate answers for ALL questions:

KEY TO RATING SCALES			
Task Importance		Ability to Do Task	
Not Important At All	= Skill is not required on the job	Unacceptable	= Cannot do at all.
Little Importance	= Lack of skill does not affect job performance	Marginal	= Satisfactory but sometimes unacceptable.
Average Importance	= Lack of skill affects job performance	Acceptable	= Meets job requirements.
Important	= Skill contributes to job performance	Proficient	= Exceeds job requirements.
Extremely Important	= Skill is critical for job performance	Exceptional	= Exceeds job requirements and can train others

Tasks	How often do you perform this task?					How Important is this Task?					How Would You Rate Your Ability to Do This Task?				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	1 = Never					1 = Not Important At All					1 = Unacceptable				
	2 = Rarely					2 = Little Importance					2 = Marginal				
	3 = Sometimes					3 = Average Importance					3 = Acceptable				
	4 = Often					4 = Important					4 = Proficient				
	5 = Very Often					5 = Very Important					5 = Exceptional				
Word Processing															
14. Create documents (enter text, cut, copy, paste, save, print)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
15. Use formatting features (e.g. font size, spacing, margins)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
16. Advanced editing features (find, replace, paste special, macros to automate tasks)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
17. Create forms (insert and modify tables).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
18. Insert documents (e.g. files, graphics).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
19. Proofread documents (spell & grammar check)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
20. Keyboarding technique (at least 35 words per minute).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Communications															
21. Create e-mail messages (insert text, address, reply).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
22. Send e-mail (cc, forward, attach files).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
23. Organize e-mail addresses (add, edit, delete).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
24. Log on to a server.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
25. Join a listserver (e.g. discussion group)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

KEY TO RATING SCALES			
Task Importance		Ability to Do Task	
Not Important At All	= Skill is not required on the job	Unacceptable	= Cannot do at all.
Little Importance	= Lack of skill does not affect job performance	Marginal	= Satisfactory but sometimes unacceptable.
Average Importance	= Lack of skill affects job performance	Acceptable	= Meets job requirements.
Important	= Skill contributes to job performance	Proficient	= Exceeds job requirements.
Extremely Important	= Skill is critical for job performance	Exceptional	= Exceeds job requirements and can train others.

Tasks	How often do you perform this task?					How Important is this Task?					How Would You Rate Your Ability to Do This Task?				
	1 = Never	2 = Rarely	3 = Sometimes	4 = Often	5 = Very Often	1 = Not Important At All	2 = Little Importance	3 = Average Importance	4 = Important	5 = Very Important	1 = Unacceptable	2 = Marginal	3 = Acceptable	4 = Proficient	5 = Exceptional
Presentation															
26. Create slides (insert text, pictures, organization chart).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
27. Create slide shows (e.g. use layout, transition effects, timing sequence)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
28. Connect PC to Projector for slide show.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
29. Create multimedia show presentations (insert video, graphics, sound).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Manage Files and Records															
30. Manage files (create, copy, rename, delete).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
31. Make backup copies of files.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
32. Search database for specific information.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
33. Produce report from database.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
34. Create database.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
35. Scan documents.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Monitor Activities And Events															
36. Use electronic calendar to set appointments.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
37. Use electronic calendar to follow-up activities.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

KEY TO RATING SCALES			
Task Importance		Ability to Do Task	
Not Important At All	= Skill is not required on the job	Unacceptable	= Cannot do at all.
Little Importance	= Lack of skill does not affect job performance	Marginal	= Satisfactory but sometimes unacceptable
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Important	= Skill contributes to job performance	Proficient	= Exceeds job requirements.
Extremely Important	= Skill is critical for job performance	Exceptional	= Exceeds job requirements and can train others

Tasks	How often do you perform this task?					How Important is this Task?					How Would You Rate Your Ability to Do This Task?				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Perform Financial Functions															
38. Create spreadsheet (enter data, cut, copy, move, paste).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
39. Format cells (currency, date, percent, decimal)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
40. Use formulae (+, -, x, ÷)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
41. Create charts.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
42. Insert spreadsheet into word processing document.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Internet Research															
43. Access Web site (URL, address, links, home page).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
44. Use Bookmarks (create, save, organize).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
45. Online travel arrangement.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
46. Locate information (use search engines eg. Yahoo).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
47. Download from the Internet (files, pictures, graphics).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Basic Computer Maintenance, Security and Troubleshooting															
48. Perform basic maintenance (change printer cartridge, clean computer components, care for floppy disks).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
49. Protect PC against viruses.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
50. Customize desktop display setting (screen, sound, date).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

KEY TO RATING SCALES			
Task Importance		Ability to Do Task	
Not Important At All	= Skill is not required on the job	Unacceptable	= Cannot do at all.
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Average Importance	= Lack of skill affects job performance	Acceptable	= Meets job requirements.
Important	= Skill contributes to job performance	Proficient	= Exceeds job requirements.
Extremely Important	= Skill is critical for job performance	Exceptional	= Exceeds job requirements and can train others

Tasks	How often do you perform this task?					How Important is this Task?					How Would You Rate Your Ability to Do This Task?				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Basic Computer Maintenance, Security and Troubleshooting															
51. Use self-help resources to solve computer problems.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
52. Run operating system tools (scan disk, recycle)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
53. Use security features in PC (password to log off, control access to files and folders).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Train New Staff on Softwares															
54. Train new staff on the use of related softwares.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Desktop-Publishing															
55. Create newsletter (enter text)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
56. Use graphic files (paint, draw, scanned files, clip art).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Develop Web Page															
57. Create Web page (insert text, hyperlinks, graphics).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
58. Upload files to Web server.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

59. The questions in the survey may not have allowed you to report some things you may want to say about your work, training or yourself. Please make additional comments in the space provided.

I sincerely appreciate your patience and effort. Please check to make sure that you have not missed any questions, and then return the questionnaire. Thank you

Appendix E

Letter Inviting Subject Matter Experts to Participate in the Delphi Technique

Date

Dear :

Rapid changes in technology have made one thing constant—change. As educators, it is vitally important to be current with new trends and technologies and to incorporate those changes into a curriculum that will prepare students for entrance and advancement in office careers.

I am conducting a study to try to determine information technology (IT) competencies required of administrative support staff employed in networked environments. Though recent developments of organization restructure point to secretarial layoffs, there is a positive side to this scenario. The increased use of communication technologies and the layering of organizations are giving opportunities for administrative support staff to handle duties once relegated to managers. This is where your expertise is most valuable! I value your help because you and others like yourself with the experience and background can provide me and you with results that could never be obtained anywhere else.

As part of this study, a group of experts will be invited to participate in a three-round modified Delphi process for the purpose of producing group consensus on tasks and IT competencies required of administrative support staff in networked environments. The Delphi process is preferred in this study because it combines views from a diverse group yet eliminates problems of group dynamics and the costs associated with face-to-face meetings. Furthermore, anonymity of panel experts is maintained throughout the Delphi process. The consensus arrived at the Delphi process will then provide the IT competencies to be included in a survey questionnaire for administrative support staff employed in networked organizations in Klang Valley, Malaysia.

Your agreement to participate in this Delphi process is of utmost importance and will form the basis for a policy of core IT competencies required for all support staff. A stamped addressed postcard is enclosed for your reply and your nomination of someone you believe would assist us to serve in the Delphi panel of experts. I look forward to receive your response before (date).

Yours truly,

FERIDAH MOHD. NADZAR

Doctoral student

Enclosure: Stamped addressed postcard

**SEARCH FOR PANEL OF EXPERTS ON IT COMPETENCIES OF
ADMINISTRATIVE SUPPORT STAFF IN NETWORKED ORGANIZATIONS**

(Date)

☐ Yes, I am willing to participate in the study:

Signature

Name:

Designation:

☐ No, I am not able to participate in the study, however, I recommend:

Name:

Designation:

Contact Address:

Telephone:

Appendix F

Cover Letter Explaining the Delphi Technique and the Round 1 List of IT Competencies

Faculty of Education, University Malaya
Kuala Lumpur

Date

Dear:

Thank you for agreeing to participate in this Delphi study on Information Technology competencies required of administrative support staff employed in networked organizations. Rapidly changing technology in the workplace requires administrative and secretarial staff to assume new roles and responsibilities which, in turn, demands increased skills and knowledge. For this reason, I am very interested to find out your views on tasks and IT competencies required of administrative support staff working in networked environments.

You were nominated as a unique individual who is an expert by virtue of your training, experience, your knowledge of administrative support competencies and your ability to envision the IT competencies that will be needed in this millennium. With your qualifications, your input to refine the attached list of tasks and IT competencies for administrative support staff will be highly valuable. The attached list was developed from a review of previous research studies, articles, dissertations, competency standards and textbooks in the field of Administrative Support and Secretarial Services.

This study will employ a two-round Delphi process. Round one will consist of validating the enclosed list of tasks and IT competencies needed by administrative support staff. Upon receipt of your responses, a revised list of tasks and IT competencies will be developed for Round two where you will be requested to indicate if the tasks and IT competencies are required for employment of administrative support staff employed in the next five years.

Please examine the list to determine if there should be additions or deletions. Are these the tasks and IT competencies needed by administrative support staff in the next five years? Have some tasks and IT competencies been omitted from the list? I welcome your suggestions for refining and adding to the list.

Please return the list of competencies along with your comments by (date). Thank you for your time and effort to take part in Round One of this study. It is very much appreciated.

Sincerely,

Feridah Mohd. Nadzar
Doctoral Student

Enclosures: Stamped, self-addressed envelope
Competency List

LIST OF IT COMPETENCIES FOR ADMINISTRATIVE SUPPORT STAFF
IN NETWORKED ORGANIZATIONS

DELPHI ROUND ONE

Instructions:

This section lists the tasks and related IT competencies required of administrative support staff working with networked computers.

- a) For each task and its related IT competency please tick (✓) to indicate if the task/IT competency is required for employment in the next five years (1 = Not Required, 6 = Required).
- b) We welcome your suggestions to refine the list.
- c) Space is also provided for additional tasks and related IT competencies that you believe is important for administrative support staff to have for success in a networked environment.

	Not Required			Required			Comments
	1	2	3	4	5	6	
<u>Basic Computer Maintenance And Troubleshooting</u>							
1. Set up computers, printers and load application software							
2. Run operating system tools e.g. recycle, notepad, clock etc.							
3. Customize the desktop (display settings e.g. screen, sound, color)							
4. Install/Uninstall and Upgrade Applications							
5. Use self-help resources to solve hardware and printing problems							
6. Perform simple maintenance (disk defragmenter, cleanup disk, scandisk)							
7. Check for and remove computer viruses							
8. Additional Competencies							

	Not Required				Required		Comments
	1	2	3	4	5	6	
<u>Produce Desktop Publishing Documents</u>							
1. Integrate text, graphics, and layout to create cover designs, newsletters, manuals							

2. Additional Competencies

	Not Required				Required		Comments
	1	2	3	4	5	6	
<u>Word Processing</u>							
1. Use proper keyboarding technique (at least 35 words per minute).							
2. Create documents (input, save, print and revise documents using text editing features, cut, copy, paste, format, search/replace)							
3. Use formatting features such as paragraphs, page, tabs, margins, centering, fonts, drawing tool)							
4. Create documents by importing pictures, graphics, charts and other documents							

5. Additional Competencies

	Not Required				Required		Comments
	1	2	3	4	5	6	
<u>Calendaring And Scheduling</u>							
1. Create, modify and manage calendar, schedules and planners							
2. Use calendaring features to set appointments and reminders, schedule meeting time and place							
3. Additional Competencies							

	Not Required				Required		Comments
	1	2	3	4	5	6	
<u>Internet Research</u>							
1. Access the Web sites using URL to locate information							
2. Create, save and organize Bookmarks							
3. Access and download various media forms							
4. Access Web sites for online travel arrangements, banking and purchase							
5. Additional Competencies							

	Not Required			Required			Comments
	1	2	3	4	5	6	
Develop Web Pages							
Create a homepage or Web page using internet authoring tools							
Maintain or update Web pages							

I. Additional Competencies

	Not Required			Required			Comments
	1	2	3	4	5	6	
Presentation							
1. Create slides using text, pictures, charts/graphs, organizational charts							
2. Create and present slide shows (format, transition effects, slide show sequence, timing sequence)							
3. Use scanner to insert images and other documents into slide show.							
4. Create multimedia presentations (video, graphics and sound).							

5. Additional Competencies

	Not Required				Required		Comments
	1	2	3	4	5	6	
<u>Communications</u>							
1. Write and send e-mail messages with attachments.							
2. Retrieve and manage e-mail messages and addresses.							
3. Connect/Disconnect to a file server. Retrieve programs or documents; share files with others on a network.							
4. Subscribe and unsubscribe to a listserver.							
5. Transmit and receive fax documents.							
6. Additional Competencies							

	Not Required				Required		Comments
	1	2	3	4	5	6	
<u>Perform Financial Functions</u>							
1. Create reports using basic formulas (+, -, x, /) and copy/move functions							
2. Format cell as currency, date, time, percent, and fixed decimal							
3. Create simple graphs/charts from spreadsheet							
4. Export spreadsheet charts/portions into other applications							
5. Additional Competencies							

	Not Required		Required				Comments
	1	2	3	4	5	6	
Manage Files And Records							
1. Manage computer-related files, folders and directories (create, copy, delete, rename, convert)							
2. Back up hard disk files to floppy disks							
3. Create simple database (add/delete fields and records)							
4. Sort, search and query a database for information to produce reports							

5. Additional Competencies

The list may not have allowed you to report other tasks and related IT competencies that you believe are important. Please include them in the space below:

1.0 _____

1.1 _____

1.2 _____

2.0 _____

2.1 _____

2.2 _____

I sincerely appreciate your time and cooperation. Thank you.

Appendix G

Additional Tasks and IT Competencies Generated from Round One Delphi Technique

Basic Computer Maintenance & Troubleshooting

- 38 Knowledge of hardware
- 39 Knowledge of the roles of System Administrator

Word Processing

- 40 Use mailmerge and boilerplates
- 41 Create forms for internal use (e.g. petty cash vouchers, leave forms)
- 42 Create tables, manipulations and modifications
- 43 Use Spell & Grammar check and Templates.

Internet Research

- 44 Use different types of search engines to locate information
- 45 Access Web sites to conduct business of buying and selling
- 46 Awareness and knowledge of various aspects of internet security
- 47 Save pictures/graphics on existing Web page
- 48 Use a scanner to scan pictures and insert into Web pages

Presentation

- 49 Set up and connections to operate computer and projector
- 50 Use and manage computer conferencing

Communications

- 51 Soft skill competencies for human interactions (Able to understand and relay correct messages)

Perform Financial Functions

- 52 Use accounting software
- 53 Solve statistical problems using statistical software
- 54 Use scanners and software to convert hardcopy documents into electronic documents.
- 55 Manage online inventory and stock.

Security Of Data

- 56 Create backup files and use passwords, codes, write-protect tags
- 57 Use windows security features available in PCs
- 58 Understand security requirements of the organization
- 59 Awareness of Data Protection Act

Analysis of Statistical Data

- 60 Input data for analysis using statistical software (e.g. SPSS, SAS, and EXCEL).
- 61 Use statistical software to solve statistical problems

Train Newly Recruited Staff On The Use Of Computers

- 62 Knowledge of software application packages relating to work

Appendix H

Cover Letter and the Round 2 List of IT Competencies

Faculty of Education, University Malaya
Kuala Lumpur

Date

Dear Sir:

DELPHI TECHNIQUE – ROUND TWO IT COMPETENCIES OF ADMINISTRATIVE SUPPORT STAFF IN NETWORKED ORGANIZATIONS

Thank you for your participation in Round One of the Delphi process. Based on the Expert Panel input, thirty-four (34) IT competencies from Round One received high or moderate consensus while three (3) IT competencies received no consensus. At the same time, the Expert Panel proposed three (3) new categories and twenty-five (25) IT competencies to the Round One list.

Round two of this process is to further refine the consensus of the Expert Panel. You will note that the median ratings for all the IT competencies are indicated. The majority response of the Expert Panel is highlighted and your individual response is placed above the rating scale. Please rate the IT competencies again using the same six-point scale (1 = Not Required, 6 = Required). If your second rating falls outside the majority response of the Expert Panel please indicate your reasons in the space provided.

You will be rating twenty-five new IT competencies (Section B) obtained from Round 1 for the first time. Please indicate if the new IT competencies are required for employment in the next five years using the same six-point scale (1 = Not Required, 6 = Required).

Your ratings and comments will provide valuable direction in the development of the questionnaire for administrative support staff employed in networked environments and ultimately provide guidance for the design of staff re-education programs. Please return the Round Two list by (date). I sincerely appreciate your valuable time and effort in this study.

Sincerely,

FERIDAH MOHD. NADZAR

Doctoral Student

Enclosures: Competency List Round Two

LIST OF IT COMPETENCIES FOR ADMINISTRATIVE SUPPORT STAFF
IN NETWORKED ORGANIZATIONS – DELPHI ROUND TWO

In Round 1 of the Delphi Technique, 34 IT competencies received high or moderate consensus while three (3) IT competencies received no consensus. At the same time, 3 new categories and 25 IT competencies were added to the Round One list

SECTION A

Instructions:

- a) In Round 2 of the Delphi Technique all IT competencies from Round 1 are relisted for you to confirm your rating.
- b) The majority responses of the Expert Panel are highlighted while your individual response is marked with a tick above the ratings. The median rating is indicated. Please rate the IT competencies using the same six-point scale (1 = Not Required, 6 = Required) by entering the appropriate number in the rating space provided.
- c) If your second rating falls outside the majority response of the Expert Panel please indicate your reasons in the space provided.

Basic Computer Maintenance And Troubleshooting

1. Set up computers, printers and load application software

1 2 3 4 5 6

✓

Median Second
 Rating

4.50 _____

Reason for Minority Rating

IT department handles this.

A few individuals in organization to handle this should suffice.

2. Run operating system tools e.g. recycle, notepad, clock etc.

1 2 3 4 5 6

✓

Median Second
 Rating

4.0 _____

Reason for Minority Rating

Basic Computer Maintenance And Troubleshooting (contd.)

3. Customize the desktop (display settings e.g. screen, sound, color)



Median Second
Rating

5.0 _____

Reason for Minority Rating

Only done by IT personnel and need to follow company standard.

4. Install/Uninstall and Upgrade Applications



Median Second
Rating

5.0 _____

Reason for Minority Rating

Follow the company standard in installing applications.
Done only by IT personnel.

5. Use self-help resources to solve hardware and printing problems



Median Second
Rating

5.0 _____

Reason for Minority Rating

Refer major problems to IT department

Basic Computer Maintenance And Troubleshooting (contd.)

6. Perform simple maintenance (defragment disk, cleanup disk and scandisk)



Median Second
Rating
5.5 _____

Reason for Minority Rating

-
7. Check for and Remove computer viruses.



Median Second
Rating
6.0 _____

Reason for Minority Rating

Problems are referred to IT personnel and helpdesk.

Desktop Publishing

8. Create cover designs, newsletters, manuals, and product brochures (integrate text, graphics and layout).



Median Second
Rating
5.0 _____

Reason for Minority Rating

Use of these individually is important.

Follow standard approved design and layout.

Word Processing

9. Use proper keyboarding technique (at least 35 words per minute).

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

10. Create documents (input, save, print and revise documents using text-editing features, cut, copy, paste, format, search/replace)

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

11. Use formatting features such as paragraphs, page, tabs, margins, centering, font, drawing tool).

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

12. Create documents by Importing Pictures Graphics, charts and other documents.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

Calendaring and Scheduling

13. Manage calendar, schedules and planners (create, modify).

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

Not required for all staff. Depends on job specification.

14. Use calendaring features to set appointments and reminders, schedule meeting time and place.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

Not required for all staff. Depends on job specification.

Internet Research

15. Access the Web sites using URL to locate information.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

This skill is required of managers and executives because it involves not only access but also evaluation of content and intellectual analysis of Web sites.

Relevant for information on company profiles.

Internet Research (continued)

16. Create, save and organize Bookmarks.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

This skill is required of managers and executives because it involves not only access but also evaluation of content and intellectual analysis of Web sites.

17. Access and download various media forms.

1 2 3 4 5 6 ✓

Median Second
 Rating

5.0 _____

Reason for Minority Rating

18. Access Web sites for online travel arrangements, banking and purchase.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

Relevant skill as there is a future trend to accommodate time management.

Develop Web Pages

19. Create a homepage or Web page using internet authoring tools.

1 2 3[✓] 4 5 6

Median Second
 Rating
4.0 _____

Reason for Minority Rating
*Job done by Webmaster with team/representatives from users.
A few interested administrative staff may be involved.
Skill is required for executive level.*

20. Maintain or update Web pages

1 2 3[✓] 4 5 6

Median Second
 Rating
4.0 _____

Reason for Minority Rating
Skill limited to input of information as instructed by executives.

Presentation

21. Create slides using text, pictures, charts/graphs, organization charts.

1 2 3 4 5 6[✓]

Median Second
 Rating
6.0 _____

Reason for Minority Rating
*Reduces expenditure of engaging professionals.
Need assistance of executives regarding content.*

22. Create and present slide shows (format, transition effects, slide show sequence, timing sequence).

1 2 3 4 5 6[✓]

Median Second
 Rating
6.0 _____

Reason for Minority Rating
Need assistance of executives regarding content.

Presentation (continued)

23. Use scanner to insert images and other documents into slide show.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

Assistance of executives regarding content.

24. Create multimedia slide show presentations (video, graphics and sound).

1 2 3 4 5 6 ✓

Median Second
 Rating

5.5 _____

Reason for Minority Rating

Only required to assisting executives in development of media presentations.

Communications

25. Write and send e-mail messages with attachments.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

26. Retrieve and Manage e-mail messages and addresses.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

Communications (continued)

27. Connect/Disconnect to a file server. Retrieve programs or documents;
share files with others on a network.

1 2 3 4 5 ☒ 6

Median Second
 Rating
6.0 _____

Reason for Minority Rating

28. Subscribe/unsubscribe to a listserve.

1 2 3 4 ☒ 5 6

Median Second
 Rating
6.0 _____

Reason for Minority Rating

29. Transmit and Receive Fax documents.

1 2 3 4 5 ☒ 6

Median Second
 Rating
6.0 _____

Reason for Minority Rating

Perform Financial Functions

30. Create reports using basic formulas (+, -, x, /) and copy, move
functions.

1 2 3 4 ☒ 5 6

Median Second
 Rating
6.0 _____

Reason for Minority Rating

Perform Financial Functions (continued)

31. Format cell as currency, date, time, percent, and fixed decimal.

1 2 3 4 5 6 ✓

Median Second
 Rating
6.0 _____

Reason for Minority Rating

32. Create simple graphs or charts from spreadsheet.

1 2 3 4 5 6 ✓

Median Second
 Rating
6.0 _____

Reason for Minority Rating
With assistance of executives.

33. Export spreadsheet charts/portions to other applications.

1 2 3 4 5 6 ✓

Median Second
 Rating
6.0 _____

Reason for Minority Rating
With assistance of executives

Manage Files and Records

34. Manage computer-related files, folders and directories (create, copy, delete, rename, and convert files).

1 2 3 4 5 6 ✓

Median Second
 Rating
6.0 _____

Reason for Minority Rating

Manage Files and Records (continued)

35. Back up Hard disk files to Floppy Disks.

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0 _____

Reason for Minority Rating

36. Create a simple database (Add/Delete fields and records).

1 2 3 4 ✓ 5 6

Median Second
 Rating

6.0 _____

Reason for Minority Rating

37. Sort, search and query a database for information to produce reports.
Create a simple database (Add/Delete fields and records).

1 2 3 4 5 6 ✓

Median Second
 Rating

6.0

Reason for Minority Rating

SECTION B

Instructions

- a) Please note that you will be rating the new IT competencies obtained from the Round 1 Panel of Experts for the first time.
- b) Please circle a number to indicate if the task/competency is required for employment in the next five years using the six-point scale: 1 = Not Required, 6 = Required).

Basic Computer Maintenance And Troubleshooting

38. Knowledge of hardware

Not Required					Required
1	2	3	4	5	6

Reason for Rating

39. Knowledge of the roles of System Administrator

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Word Processing

40. Create documents by using mailmerge and boilerplates.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Word Processing (continued)

41. Create forms for internal use (e.g. *vouchers, leave forms*).

Not Required						Required
1	2	3	4	5		6

Reason for Rating

42. Create tables, manipulations and modifications.

Not Required						Required
1	2	3	4	5		6

Reason for Rating

43. Use Spell & Grammar check and Templates.

Not Required						Required
1	2	3	4	5		6

Reason for Rating

Internet Research

44. Use different types of search engines to locate information

Not Required						Required
1	2	3	4	5		6

Reason for Rating

Internet Research (continued)

45. Access Web sites to conduct business of buying and selling

Not Required					Required
1	2	3	4	5	6

Reason for Rating

46. Awareness and knowledge of various aspects of internet security

Not Required					Required
1	2	3	4	5	6

Reason for Rating

47. Access online databases for basic business information (company information, share prices, exchange rates)

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Develop Web Pages

48. Save pictures/graphics on existing Web page

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Develop Web Pages (continued)

49. Use a scanner to scan pictures and insert into Web pages

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Presentation

50. Set up connections to operate computer and projector.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Communications

51. Use and manage computer conferencing.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

52. Soft skill competencies (able to understand and relay correct messages)

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Perform Financial Functions

53. Use accounting software

Not Required						Required
1	2	3	4	5		6

Reason for Rating

Manage Files And Records

54. Use scanners and software to convert hardcopy documents into electronic documents.

Not Required						Required
1	2	3	4	5		6

Reason for Rating

55. Manage online inventory and stock.

Not Required						Required
1	2	3	4	5		6

Reason for Rating

Data Protection And Security

56. Use of passwords, codes, and write-protect tags.

Not Required						Required
1	2	3	4	5		6

Reason for Rating

Data Protection And Security

57. Use windows security features available in PCs.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

58. Understand security requirements of the organization.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

59. Aware of Data Protection Act

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Analysis of Statistical Data

60. Input statistical data for analysis using SPSS and SAS.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Analysis of Statistical Data

61. Use statistical software to solve statistical problems

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Train Newly Recruited Staff On The Use Of Computers

62. Knowledge of software application packages relating to work.

Not Required					Required
1	2	3	4	5	6

Reason for Rating

Thank you for your help and patience!

Appendix I

Cover Letter and the Round 3 List of IT Competencies

Faculty of Education, University Malaya
Kuala Lumpur

Date

Dear:

DELPHI TECHNIQUE – FINAL ROUND

This is the third and **FINAL** round of the Delphi Technique. Your participation in the past two rounds has definitely provided invaluable direction for IT competencies required of administrative support staff in the next five years. The results of the previous two rounds can be summarized as follows:

As a result of your input, the competencies required for employment of administrative support staff in the next five years can be categorized as either critically required, required or moderately required. No IT competencies were categorized as not required or slightly required.

Level of Requirement	No. of Competencies
Critically required	38
Required	14
Moderately Required	10
Somewhat required	
Slightly required	
Not required	
TOTAL	62

Although the Panel of Experts are of the opinion that all 62 competencies are required for administrative support staff, the level of consensus (agreement) among experts varied for several competencies:

Level of Consensus (Agreement)	Round 1 (Original list of 37 items)	Round 2 (Original list and new items)
High	22	30
Moderate	8	20
No Consensus	7	12
TOTAL	37	62

Your comments were also analyzed and several observations were made. A final analysis will be made upon completion of the third round.

The third and final round is used to confirm your rating of the 25 new competencies suggested by the Panel of Experts. It is necessary to carry out the Delphi Round 3 as it provides:

1. Feedback from the second round regarding the majority responses and comments made.
2. Opportunity for each expert to re-rate the new items, if desired
3. Opportunity to justify the rating if it deviated from the majority responses

You will note that we have relisted the 25 new competencies for your second rating. The majority response is shaded and your individual response is marked as an X. The median for all the computer competencies is also provided.

Please confirm your first rating of new competencies using the six-point scale (1 = Not Required, 6 = Required) in the rating space provided. If you do not mark anything in the rating column, we will assume that you wish to retain your earlier rating. If your first rating is outside the majority range, please indicate your reasons for not conforming to the majority responses in the space provided.

Your ratings and comments will provide valuable directions in the development of the questionnaire that will be distributed to administrative support staff and will provide guidance for the design of staff development programs. Please return the Round Three questionnaire by (date). If we do not receive your reply, we will retain your ratings from Delphi 2.

I would like to thank you from the bottom of my heart for your valuable comments, generous effort, and patience in this study. If I can be of assistance in your future researches or collaborative projects please do not hesitate to contact me. A brief summary of the Delphi result will be posted to you as soon as the Delphi 3 data is computed.

It has been a wonderful and great experience for me to be able to work with you. Again I sincerely thank you.

Sincerely,

FERIDAH MOHD. NADZAR

Doctoral Student

Enclosures: Competency List Round Three
Stamped self-addressed Envelope

**LIST OF IT COMPETENCIES FOR ADMINISTRATIVE SUPPORT STAFF
IN NETWORKED ORGANIZATIONS**

DELPHI ROUND THREE (FINAL ROUND)

Instructions:

- a) In this third and final round only the new IT competencies suggested by the Panel of Experts from Round 1 are relisted for you to confirm your rating.
- b) The majority responses of the Expert Panel are highlighted while your individual response is marked with an X above the ratings. The median rating is also indicated. Please confirm your first rating using the same six-point scale (1 = Not Required, 6 = Required) by circling the appropriate number in the rating space provided.
- c) If your second rating falls outside the majority response of the Expert Panel please indicate your reasons in the space provided.

**IT Competencies Proposed by Panel of Experts
Confirmation Round**

Competencies	Median	Second Rating
<p>1. Demonstrate working knowledge of hardware components (CPU, monitor, hard drive, floppy drive, keyboard, printer, keyboard, mouse)</p> <p style="text-align: center;">X</p> <p style="text-align: center;">1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	5.0	<p style="text-align: center;">1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>2. Knowledge of the roles of System Administrator</p> <p style="text-align: center;">X</p> <p style="text-align: center;">1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	4.0	<p style="text-align: center;">1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>3. Create documents by using mailmerge and boilerplates.</p> <p style="text-align: center;">X</p> <p style="text-align: center;">1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	6.0	<p style="text-align: center;">1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>

Competencies	Median	Second Rating
<p>4. Create forms for internal use (e.g. vouchers, leave forms).</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><i>Comments made by Panel</i></p>	5.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>5. Create tables, manipulations and modifications.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><i>Comments made by Panel</i></p>	6.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>6. Use Spell & Grammar check and Templates.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><i>Comments made by Panel</i></p>	6.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>7. Use different types of search engines to locate information</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><i>Comments made by Panel</i></p>	6.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>

Competencies	Median	Second Rating
<p>8. Access Web sites to conduct business of buying and selling</p> <p style="text-align: right;">X</p> <p>1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	4.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>9. Awareness and knowledge of various aspects of Internet security</p> <p style="text-align: right;">X</p> <p>1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	5.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>10. Save pictures/graphics on existing Web page</p> <p style="text-align: right;">X</p> <p>1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	5.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>11. Use a scanner to scan pictures and insert into Web pages</p> <p style="text-align: right;">X</p> <p>1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	5.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>

Competencies	Median	Second Rating
<p>12. Set up connections to operate computer and projector.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	6.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>13. Use and manage computer conferencing.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	4.5	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>14. Soft skill competencies (able to understand and relay correct messages)</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	6.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>15. Use accounting software</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	4.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>

Competencies	Median	Second Rating
<p>16. Use scanners and software to convert hardcopy documents into electronic documents</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	5.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>17. Manage online inventory and stock.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	4.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>18. Use of passwords, codes, and write-protect tags.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	6.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>19. Use windows security features available in PCs.</p> <p style="text-align: center;">X 1 2 3 4 5 6</p> <p><u>Comments made by Panel</u></p>	5.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>

Competencies	Median	Second Rating
<p>20. Understand security requirements of the organization.</p> <p>1 2 3 4 5 6</p> <p>X</p> <p>Comments made by Panel</p>	5.5	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>21. Aware of Data Protection Act</p> <p>1 2 3 4 5 6</p> <p>X</p> <p>Comments made by Panel</p>	5.5	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>22. Input data for analysis using statistical software (e.g. SPSS, SAS, and EXCEL).</p> <p>1 2 3 4 5 6</p> <p>X</p> <p>Comments made by Panel</p>	3.5	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>
<p>23. Use statistical software to solve statistical problems</p> <p>1 2 3 4 5 6</p> <p>X</p> <p>Comments made by Panel</p>	4.0	<p>1 2 3 4 5 6</p> <p>Reason for rating outside majority range</p>

Competencies	Median	Second Rating
<p>24. Train newly recruited staff on application packages relating to work.</p> <p style="text-align: center;"> 1 2 3 4 X 5 6 </p> <p><i>Comments made by Panel</i></p>	5.5	<p> 1 2 3 4 5 6 </p> <p>Reason for rating outside majority range</p>

Appendix J

Table J1

Results for Delphi Technique Rounds 1, 2 and 3

		ROUND 1			ROUND 2			ROUND 3		
Task/IT Competency		IQ* Range	QD*	Median	IQ* Range	QD*	Median	IQ* Range	QD*	Median
Basic Computer Maintenance & Troubleshooting										
1	Demonstrate working knowledge of hardware components (CPU, monitor, hard drive, floppy drive, keyboard, printer, keyboard, mouse)	3.5	1.75	4.5	3.0	1.50	5	3.0	1.5	5
2	Run operating system tools e.g. recycle, notepad, clock etc.	3.0	1.50	4.0	1.25	0.63	4.5	1.25	.63	4.5
3	Customize the desktop (display settings e.g. screen, sound, color)	2.25	1.13	5.0	1.25	0.63	5.0	1.25	.63	5.0
4	Install/Uninstall and Upgrade Applications.	5.0	2.50	4.0	2.25	1.13	4.0	2.25	1.13	4.0
5	Use self-help resources (solve hardware and printing problems).	2.25	1.13	5.0	1.25	0.63	5.0	1.25	0.63	5.0
6	Perform simple maintenance (defragment disk, cleanup disk and scandisk)	1.25	0.63	5.5	1.00	0.50	6.0	1.00	0.50	6.0
7	Check for and Remove computer viruses.	1.00	0.50	6.0	1.00	0.50	5.5	1.00	0.50	5.5
Desktop Publishing										
8	Create cover designs, newsletters, manuals, product brochures (integrate text, graphics, and layout).	2.00	1.00	5.0	1.25	0.63	5.0	1.25	0.63	5.0

Note: *IQ Range = Interquartile Range,
 *QD = Quartile Deviation

(table continues)

Task/IT Competency		ROUND 1			ROUND 2			ROUND 3		
		IQ* Range	QD* Range	Median	IQ* Range	QD* Range	Median	IQ* Range	QD* Range	Median
Word Processing										
9	Use proper keyboarding technique (at least 35 words per minute).	1	0.5	6.0	0	0	6.0	0	0	6.0
10	Create documents (input, save, print and revise documents using text-editing features, cut, copy, paste, format, search/replace)	0	0	6.0	0	0	6.0	0	0	6.0
11	Use formatting features (paragraphs, page, tabs, margins, centering, font, drawing tool).	0.25	0.13	6.0	0	0	6.0	0	0	6.0
12	Create documents by importing pictures graphics, charts and other documents.	1.00	0.50	6.0	0	0	6.0	0	0	6.0
Calendaring & Scheduling										
13	Manage calendar, schedules and planners (create, modify).	1.00	0.50	6.0	0.25	0.13	6.0	0.25	0.13	6.0
14	Use calendaring features (set appointments and reminders, schedule meeting time and place).	0.25	0.13	6.0	0.25	0.13	6.0	0.25	0.13	6.0
Internet Research										
15	Access Web sites using URL to locate information.	1.0	0.5	6.0	1.0	0.50	6.0	1.0	0.50	6.0
16	Use bookmarks (create, save, delete and organize).	1.25	0.63	6.0	1.0	0.50	6.0	1.0	0.50	6.0
17	Use various media forms (access and download).	1.25	0.63	5.0	1.0	0.50	5.0	1.0	0.50	5.0
18	Access Web sites for online travel arrangements, banking and purchase.	1.0	0.50	6.0	1.0	0.50	6.0	1.0	0.50	6.0
Develop Web Pages										
19	Create a homepage or Web page (use internet authoring tools).	2.25	1.13	4.0	2.0	1.0	4.0	2.0	1.0	4.0
20	Maintain or update Web pages	2.25	1.13	4.0	2.0	1.0	4.0	2.0	1.0	4.0

Note: IQ Range = Interquartile Range,
QD = Quartile Deviation

(table continues)

Task/IT Competency	ROUND 1			ROUND 2			ROUND 3		
	IQ* Range	QD* Range	Median	IQ* Range	QD* Range	Median	IQ* Range	QD* Range	Median
Presentation									
21 Create slides (text, pictures, charts/graphs, organization charts).	0	0	6.0	0	0	6.0	0	0	6.0
22 Create slide shows (format, transition effects, slide show sequence, timing sequence).	0.25	0.13	6.0	0	0	6.0	0	0	6.0
23 Use scanner to insert images and other documents into slide show.	1.00	0.50	6.0	0	0	6.0	0	0	6.0
24 Create multimedia slide show presentations (video, graphics and sound).	2.00	1.00	5.5	1.00	0.50	5.5	1.00	0.50	5.5
Communications									
25 Create e-mail messages (write and send messages with attachments).	0	0	6.0	0	0	6.0	0	0	6.0
26 Manage e-mail messages and addresses (retrieve, delete and organize).	0	0	6.0	0	0	6.0	0	0	6.0
27 Connect/Disconnect to a file server. (retrieve programs or documents; share files with others on a network).	1.00	0.50	6.0	0.25	0.13	6.0	0.25	0.13	6.0
28 Subscribe/unsubscribe to a listserv.	2.0	1.0	6.0	1.25	0.63	6.0	1.25	0.63	6.0
29 Transmit and Receive Fax documents.	0	0	6.0	0	0	6.0	0	0	6.0
Perform Financial Functions									
30 Create reports using basic formulas (+, -, x, /) and copy, move functions.	1.0	0.5	6.0	1.0	0.5	6.0	1.0	0.5	6.0
31 Format cell (currency, date, time, percent, and fixed decimal).	0.25	0.13	6.0	0.25	0.13	6.0	0.25	0.13	6.0
32 Create simple graphs or charts from spreadsheet.	1.0	0.5	6.0	1.0	0.5	6.0	1.0	0.5	6.0
33 Export spreadsheet charts/portions to other applications.	1.0	0.5	6.0	1.0	0.5	6.0	1.0	0.5	6.0

Note: *IQ Range = Interquartile Range,
*QD = Quartile Deviation

(table continues)

Task/IT Competency	ROUND 1			ROUND 2			ROUND 3		
	IQ* Range	QD*	Median	IQ* Range	QD*	Median	IQ* Range	QD*	Median
Manage Files And Records									
34 Manage computer-related files, folders and directories (create, copy, delete, rename, and convert files).	0	0	6.0	0	0	6.0	0	0	6.0
35 Back up hard disk files to floppy disks.	0	0	6.0	0	0	6.0	0	0	6.0
36 Create a simple database (Add/delete fields and records).	2.0	1.00	6.0	1.25	0.63	5.5	1.25	0.63	5.5
37 Produce reports (sort, search and query a database).	2.0	1.00	6.0	1.0	0.5	6.0	1.0	0.5	6.0

ADDITIONAL COMPETENCIES

Basic Computer Maintenance & Troubleshooting

38 Knowledge of hardware				2.25	1.13	5.0	2.0	1.0	5.0
39 Knowledge of the roles of System Administrator				3.25	1.63	4.0	3.0	1.5	4.0

Word Processing

40 Use mailmerge and boilerplates				2.0	1.0	6.0	2.0	1.0	5.0
41 Create forms for internal use (e.g. petty cash vouchers, leave forms)				2.0	1.0	5.0	2.0	1.0	5.0
42 Create tables, manipulations and modifications				1.25	0.63	6.0	1.0	0.5	6.0
43 Use spell & grammar check and templates.				0	0	6.0	0	0	6.0

Note: *IQ Range = Interquartile Range,
 *QD = Quartile Deviation

(table continues)

Task/IT Competency	ROUND 1			ROUND 2			ROUND 3		
	IQ* Range	QD*	Median	IQ* Range	QD*	Median	IQ* Range	QD*	Median
Internet Research									
44 Use different types of search engines to locate information				1.0	0.5	6.0	1.0	0.5	6.0
45 Access Web sites to conduct business of buying and selling				2.25	1.13	4.0	2.0	1.0	3.5
46 Awareness and knowledge of various aspects of internet security				2.0	1.0	5.0	2.0	1.0	5.0
47 Save pictures/graphics on existing Web page				2.0	1.0	5.0	2.0	1.0	5.0
48 Use a scanner to scan pictures and insert into Web pages				2.25	1.13	5.0	2.0	1.0	5.0
Presentation									
49 Set up and connections to operate computer and projector				2.25	1.13	5.0	2.0	1.0	5.0
50 Use and manage computer conferencing				1.0	0.5	6.0	1.0	0.5	6.0
Communications									
51 Soft skill competencies for human interactions (Able to understand and relay correct messages)				2.25	1.13	4.5	2.0	1.0	5.0
Perform Financial Functions									
52 Use accounting software				1.25	0.63	6.0	1.0	0.5	6.0
53 Solve statistical problems using statistical software				3.25	1.63	4.0	3.0	1.5	4.0
54 Use scanners and software to convert hardcopy documents into electronic documents.				1.25	0.63	5.0	1.0	0.5	5.0
55 Manage online inventory and stock.				2.25	1.13	4.0	2.25	1.13	4.0

Note: *IQ Range = Interquartile Range,
 *QD = Quartile Deviation

(table continues)

Task/IT Competency	ROUND 1			ROUND 2			ROUND 3		
	IQ* Range	QD*	Median	IQ* Range	QD*	Median	IQ* Range	QD*	Median
Security Of Data									
56 Create backup files and use passwords, codes, write-protect tags				1.25	0.63	6.0	1.0	0.5	6.0
57 Use windows security features available in PCs				2.0	1.0	5.0	1.25	0.63	5.0
58 Understand security requirements of the organization				1.25	0.63	5.5	1.0	0.5	5.5
59 Awareness of Data Protection Act				2.0	1.0	5.5	2.0	1.0	5.5
Analysis of Statistical Data									
60 Input data for analysis using statistical software (e.g. SPSS, SAS, and EXCEL).				4.0	2.0	3.5	3.25	1.63	4.0
61 Use statistical software to solve statistical problems				3.0	1.5	4.0	3.0	1.5	4.0
Train Newly Recruited Staff On The Use Of Computers									
62 Knowledge of software application packages relating to work				1.25	0.63	5.5	1.25	0.63	5.5

Note: IQ Range = Interquartile Range,
QD = Quartile Deviation

Appendix K

Table L1

Reasons for Rating outside Majority Response Delphi Panel of Experts

No	IT Competency	Reason for Rating outside Majority Response
1	Set up computers, printers and load application software	Set up computers and printers should be done by IT department. Leave it to IT personnel.
5	Use self-help resources	Depending on the problem—may need help from specialists for major problems
6	Perform basic maintenance (cleanup, scan disk, change printer toner/cartridge)	Done by IT support staff.
7	Protect against computer viruses	Minor problems should be handled independently except if problems cannot be rectified. Problems are referred to IT personnel and helpdesk.
8	Create newsletters (integrate text, graphics and layout)	Cannot be done by support staff alone. May need help from designers. Done by the relevant people—IT and administrative staff.
13	Manage calendar schedules (create, modify)	Not required for all staff as it depends on job specification
19	Create a homepage or Web page using internet authoring tools	Administrative support staff may be interested but no time to do. Job done by Web master with team/representatives from users. A few interested administrative staff may be involved.

(table continues)

No	IT Competency	Reason for Rating outside Majority Response
24	Create multimedia slide show presentations (video, graphics and sound)	Only required to assisting executives in development of media presentations. Need assistance of executives regarding content.
27	Connect to a server (log on/off, retrieve programs and file sharing)	There are risks involved in sharing files. One might have access to confidential files.
28	Subscribe to a listserver	Important but can be time consuming.
32	Create charts	Need assistance of executives.
33	Export spreadsheet to other applications	Need assistance of executives.
36	Create a database (multiple fields and records, use layout)	No time to carry out this task.
37	Produce reports (sort, search and query a database)	No time to carry out this task.
38	Demonstrate working knowledge of hardware components (CPU, monitor, hard drive, floppy drive, keyboard, printer, keyboard, mouse)	Leave it to IT personnel. The detailed working knowledge on the hardware components shall be left to the MIS personnel.
60	Input statistical data for analysis using statistical software (SPSS, SAS)	Depends on job functions. Required for certain professions and tasks.
61	Use statistical software to solve statistical problems	Depends on job functions. Required for certain professions and tasks.
62	Train others to use software related to work.	Trainers should train new staff. Occasional help to solve difficulties is acceptable but not to fully train new staff. Should be done by trainers.

Appendix L

Permission to Use and Adapt Questionnaire from Dr. Brenda Erickson

From: brenda.erickson@jal.cc.il.us on 05/15/2000 10:16 PM

To: Hjh Feridah Mohd Nadzar/FSS/ITM
cc:

Subject: Re: Analysis of Office Automation Competencies
Needed by Office Managers

Ms. Feridah

I am pleased you are interested in using my survey instrument. By all means do so. Thank you for asking, and may I have a copy of the results of your study.

Brenda Erickson

hferidah@salam.itm.edu.my wrote:

> Dear Dr. Erickson, I am a doctoral student in University Malaya where my > area of
interest is in IT competencies of administrative support staff. I > read your thesis and found
some similarities with what I propose to do.
> Therefore, I would like to obtain your permission to use the questionnaire > as well as the
competencies that you had developed for the study. I hope > to hear from you soon.
> Feridah

Appendix M

Table M1

Ranking of Mean Weighted Discrepancy Scores for IT competencies needed by respondents (N = 307)

	IT Competencies	Mean WDS	SD
1	Create documents	1.7329	3.6151
2	Create multimedia show	.7579	1.6084
3	Create Web page	.7378	1.8221
4	Access Web sites	.7050	3.0238
5	Protect PC from viruses	.6742	1.0925
6	Connect PC to projector	.6672	1.4233
7	Upload to Web server	.6581	1.6892
8	Use self-help resources to solve computer problems	.6071	1.1071
9	Create database	.5469	1.2044
10	Run operating system tools	.5134	1.0834
11	Use PC security features	.4981	.9351
12	Proofread documents (spell & grammar check)	.4644	.8379
13	Produce report from database	.4339	.9652
14	Create slideshow	.4096	1.1571
15	Search database for specific information	.4039	.9534
16	Create chart	.4011	.9734
17	Use electronic calender to make appointments	.3786	1.0716
18	Scan documents	.3617	1.0616
19	Use formulae	.3578	.9456
20	Create newsletter	.3549	1.1179
21	Use formatting features	.3543	.7828
22	Insert spreadsheet into word processing documents	.3536	.9839
23	Log on to server	.3530	.8583
24	Online travel arrangement	.3498	1.3601
25	Train new staff on related softwares	.3488	1.1630
26	Create slide	.3319	.9282
27	Use electronic calendar to follow-up activities	.3273	1.0796
28	Make back-up copies of files	.3219	.7565
29	Format cells (decimal, percent, date)	.2978	.8678
30	Manage files	.2850	.7156
31	Basic maintenance	.2808	.8615
32	Create spreadsheet	.2783	.7904
33	Create e-mail	.2712	.7346
34	Use advanced editing features	.2672	.8157

(table continues)

	IT Competencies	Mean WDS	SD
35	Create forms (insert & modify tables)	.2665	.7547
36	Use bookmarks	.2604	1.0974
37	Graphic files	.2589	1.0119
38	Join a listserver	.2525	.9817
39	Insert documents (files & graphics)	.2458	.8081
40	Send e-mail	.2396	.6988
41	Keyboarding	.2198	.6234
42	Locate information using search engines	.2064	.8975
43	Organize e-mail addresses	.2036	.7958
44	Download from the Internet	.1828	1.0390
45	Customize desktop display setting	2.083E-02	.8319

Appendix N

Table N1

Means and Standard Deviations for Performance of Task Competency Categories Across Age Group of Respondents

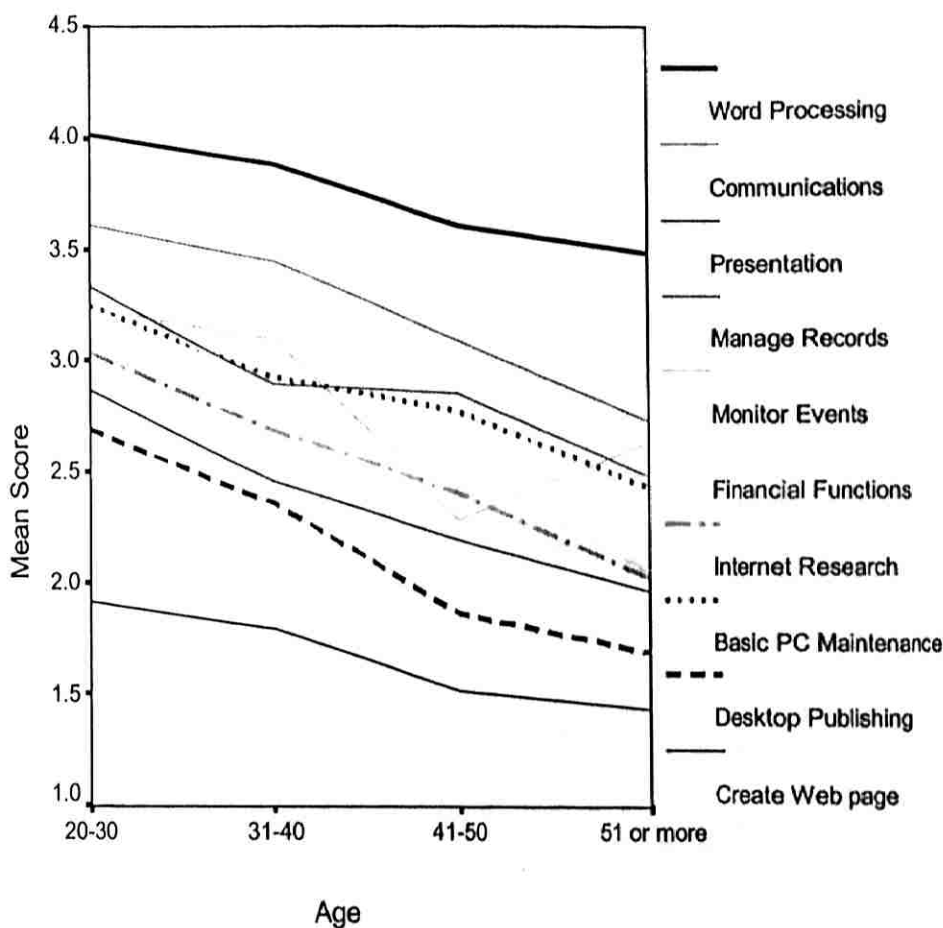
Categories	Age			
	20 – 30	31 - 40	41 – 50	51 or more
	N = 155	N = 116	N = 42	N = 8
	Mean	Mean	Mean	Mean
Word Processing	4.30 (.63)	4.13 (.72)	4.00 (.80)	3.88 (.35)
Communications	3.67 (.88)	3.56 (.97)	3.32 (.96)	2.88 (1.13)
Presentation	2.32 (1.05)	2.08 (1.06)	2.00 (1.06)	1.50 (.76)
Manage files and records	3.21 (.76)	2.72 (.92)	2.65 (1.09)	2.63 (.92)
Manage events and activities	2.74 (1.46)	2.83 (1.55)	2.12 (1.18)	2.5 (1.75)
Perform financial functions	3.30 (.96)	2.68 (1.12)	2.49 (1.12)	1.88 (.99)
Internet research	2.71 (1.05)	2.51 (1.06)	2.44 (1.18)	2.00 (1.20)
Basic computer maintenance, security & troubleshooting	3.26 (.93)	2.86 (.88)	2.88 (.96)	2.50 (.93)
Desktop publishing	2.30 (1.06)	1.91 (1.00)	1.63 (.86)	1.38 (1.06)
Create Web page	1.48 (.85)	1.40 (.80)	1.23 (.53)	1.25 (.46)

Note: Standard deviations appear in parentheses

Appendix O

Means Plot: Mean Score Task Ability According to Age Group of Respondents

Figure O1



Appendix P

Other Comments made by Respondents in the Survey

1. A secretary should know more instead of basic IT.
2. Ability to use graphics/programs/Internet Software
3. Able to make presentation material or proposal for company, assist colleagues learn basic computer needs, connect all the equipment attached to a computer (mouse, keyboard, monitor)
4. Administrative support staff should be given the opportunity to go for ITC training at least once a year to make us aware & can be all the way with the ITC fast moving technology. In addition MSC will be a success.
5. Although I have learned several IT application softwares during my working years still I do not have the opportunity to fully apply the application I have learned.
6. As the computer is very important in job performance nowadays, I suggest that IT should be taught in more details.
7. At my work office, I am not provided Internet services except e-mail. Even though my work doesn't need me to use the Internet, I should learn in order to improve my IT knowledge towards the challenging career world.
8. Being in a management office, the use of PC is only for typing letters and e-mail. Our IT department provides support services.
9. Computer training is very important to increase knowledge and to upgrade skill of workers.
10. Concentration too long with your works on PC will affect your eyesight.
11. Few jobs with regards to IT is handled by IT dept. Accessibility of few things is controlled by IT dept.
12. I do believe most of the secretaries nowadays are very up to date on any IT new features since IT really helps them to produce a better quality & quantity of work as well as time-saving.

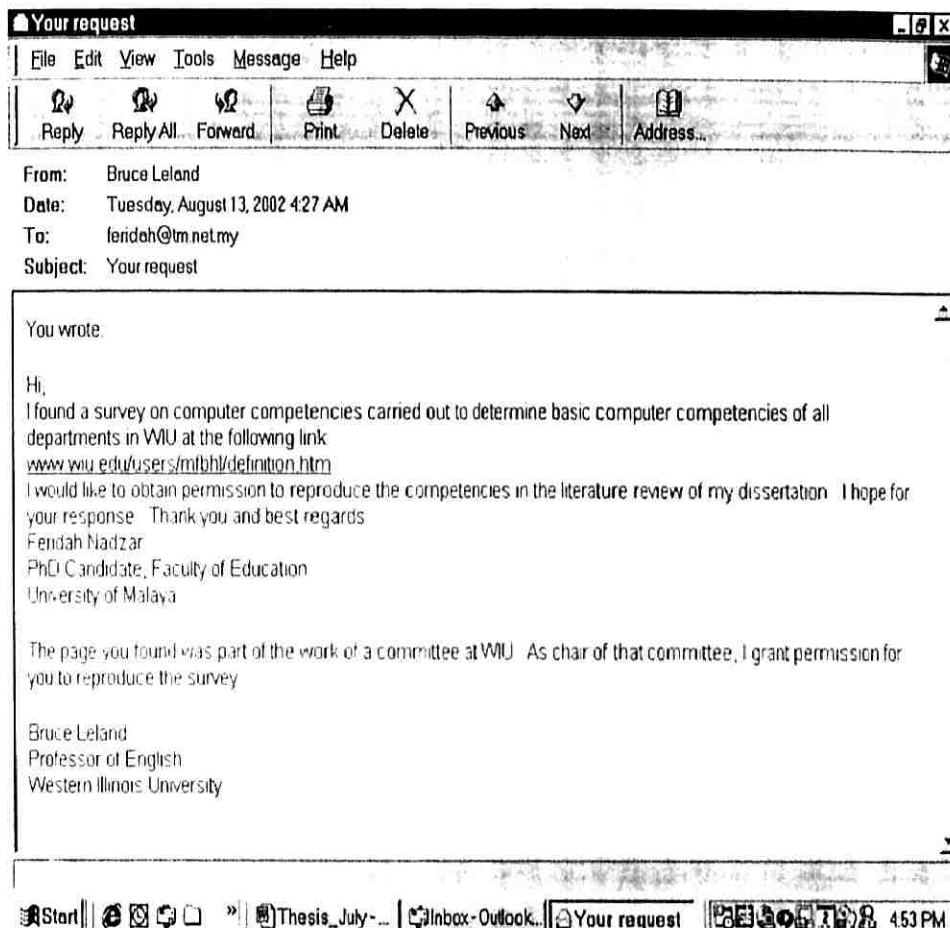
13. I lead a very simple job functions of a secretary. Most of the time I only involves in typing of documents and filing.
14. I like what I'm doing right now.
15. In an organization where an IS Manager basically handles any flaws in server-based IT ware, the end-user is often left the task of 'user only'. Most graphic work is handled by a graphics designer.
16. In my opinion knowledge in IT is important to make sure that we can get along with the development of technology. It is very good to have knowledge in IT so that we can upgrade the orgn. & can improve ourselves.
17. In my view knowledge of IT is utmost important cause you can explore your credibility and ideas or even study more new things.
18. In the organization that I work for each division will have their IT officer/IT manager in charge of computer problems. Secretaries only go to courses on Basic IT/Multimedia (e.g. Windows 98).
19. Information technologies is changed from time to time. For me, it is the individual's effort whether to improve themselves or not.
20. Information technology is important for executives and civil service.
21. Ingin tingkatan lagi kemahiran IT.
22. IT changes fast. Need a lot of practise and training.
23. IT for search info, source through internet, graphic, image, text, print, cut paste & scan info
24. It is an undisputed fact that computer knowledge is essential in our current modern IT world. However in an organization the computer skills of a secretary is limited depending on the nature of the job as well as the person he/she reports to.
25. It is indeed essential for every employee to embark on training & development and the tasks stated earlier in the questionnaire are critical for administration in order to enhance working performance & productivity.
26. It is recommended that every staff should be given on-the-job training frequently as information technology is growing faster these days.

27. Job scope covers job specs as administrator, trainer, recruiter, office manager, financial consultant, insurance agent marketing executive.
28. Kurang komputer lanjutan diperlukan untuk memajukan kerjaya. Unit IT hanya memberikan latihan asas komputer sahaja.
29. More training is good for helping employees to be professional in providing reports, assignments and other documents related in work.
30. Most of the skills I learned on the job.
31. Most of the tasks not applicable to my job function.
32. My company has its own IT Dept, therefore, tasks like developing Web page, desktop publishing, computer maintenance and other relating to Web sites are done by them. However, secretaries may at their own initiative do these tasks on their own.
33. My job at present doesn't really require me at times to use Microsoft Word, Excel & PowerPoint on a higher level. I often use these programs on a more moderate level. However, want to know how to use programs at advanced level.
34. My job scope does not require me to liase with database, generate reports & systems. We do not have direct Internet access to gauge related information from Web. Therefore, our computer skills in work environment is very limited to wp & charts only.
35. Nature of work in Internal Audit Division is related more to typing of confidential internal audit reports which requires proper typing skills & presentation.
36. Require advance training example "Workshop in IT"
37. Selain daripada penggunaan komputer di pejabat seorang setiausaha memerlukan kemahiran untuk "public speaking" bagaimana untuk berurusan dgn orang ramai.
38. Skill obtained from on job training therefore you would notice that I master only on specific area and IS department controlling the programming/computer presentation and other confidential tasks.
39. Some of the questions is not relevant in our daily work.
40. Some skills may not be a very important in daily routine for secretary but it will be an advantage to have it in order to meet job requirements at least.

41. Staff not in IT line need to improve themselves by attending the IT seminar, IT training (latest technology), improve their IT knowledge and IT skills to meet the organization needs.
42. The importance of IT enhances the person's capability in his work and more creative in managing his work provided that reasonable chances given.
43. The worker should have a thorough knowledge of career-related capabilities, skills and preference and should have developed career plans and goals.
44. Though I never had formal education in computer science, my curiosity to explore the computer really helps me in my work. They even refer their PC problems to me rather than telling the IT technician.
45. Training and skills development will improve job improvement and performance to the individual.
46. Upgrading knowledge and skills in IT is crucial in meeting with future job expectations. High knowledge in IT would extremely affect our performance & productivity.
47. Very often prepare transparencies and very often use symbols (scientific).
48. We have IT people to help us if we have problems with our PC or system. Some of the skills are not required at all for job performance.

Appendix Q

Permission to reproduce computer competencies from Western Illinois University



Appendix R

Permission to adapt competencies

Hi Ms. Nadzar:

I am pleased to learn that my research will help you with **your doctoral dissertation**. You have my permission to use the **material**. Good luck with **your studies**.

Dr. Beryl McEwen
Professor and Chairperson
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----- Original Message -----

From: feridah

To: mcewenb@ncat.edu

Sent: Monday, July 01, 2002 10:29 PM

Subject: Permission to Adapt Research Findings

Dear Dr. McEwen,

I am currently working on a dissertation on **IT competencies of administrative support staff in networked organizations in Malaysia**. I read **your research** entitled, "**The Impact of Selected Variables on Office Roles and Responsibilities**" (1996) and wish to adapt the competencies generated from your research into the **questionnaire** in my study. I hope for **your permission in this matter**. Thank you.

Best regards

Feridah Nadzar

Appendix S

Permission to reproduce and adapt the SCID model



Appendix T

Permission to reproduce figure

