

Student Evaluation of Research Training Experience (SERTE)



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Graduate
School

Background

- ▶ Substantial increase in **Research Postgraduate (RPg) students**
- ▶ Quality of research supervision is of utmost important to tertiary institutions
- ▶ Some approaches to evaluate research supervision:
 - **Reflection;**
 - **Interview;**
 - **Outcomes of the research; and**
 - **Questionnaire**

Background

- ▶ HKIEd recruited the first cohort of RPg students in 2010
- ▶ Increasing number of RPg students starting their research project ahead
- ▶ Quite a number of **Doctor of Education (EdD) students** are also in their thesis stage
- ▶ Some **Master of Education (MEd) students** have chosen the research project option as part of their programme

Aims

The major aims of the current project are to:

- ▶ 1) adapt, and revise if necessary, the **Student Research Experience Questionnaire (SREQ)** for use in HKIEd to evaluate the quality of research supervision in the RPg and EdD programmes;
- ▶ 2) translate SREQ into Chinese and perform a comprehensive validation of the instrument using Item Response Theory for use in universities in Taiwan and Mainland China.

This project is in line with the strategic development of the Institute:

- ▶ 1) Research supervision is a core part of teaching and learning in higher degree by research
- ▶ 2) The results will have significant impact on quality assurance of research degrees, which is consistent with the mission of developing research training in the Institute
- ▶ 3) The collaboration with colleagues in Taiwan and Mainland China is consistent with the Institute's strategic linkage with institutions in the Greater China Region

Adaptation of SREQ and PREQ

- ▶ The Student Research Experience Questionnaire (SREQ) has been widely used in the UK and Australia
- ▶ It is for evaluating the quality of research supervision and is one of the very few existing instruments with robust psychometric properties

- ▶ The SREQ was developed from an existing questionnaire known as the Postgraduate Research Experience Questionnaire (PREQ) which focuses on evaluating the supervision experience of RPg students each year
- ▶ One major limitation of PREQ is that it only gathers RPg students ' supervision experience where there are only relatively few numbers of graduates each year
- ▶ To address such a limitation, the SREQ was modified for use with currently enrolled students

Phases of the research

Phase I July- October 2011 Preparation	<ul style="list-style-type: none">➤ Hiring research assistant➤ Continued literature review➤ Form “Expert Team” for the English to Chinese translation➤ Seek permission / copyright to translate SREQ➤ Ethics clearance
Phase II October 2011 - January 2012 Revision of SREQ and translation	<ul style="list-style-type: none">➤ Initial translation of SREQ into Chinese by “Expert Team” (C-SREQ)➤ Student and supervisor focus groups to consider whether some items in SREQ need revision for adaptation in HK➤ Revision and adaptation of SREQ
Phase III February -March 2012 Data collection and data analysis	<ul style="list-style-type: none">➤ Collect data using “revised” SREQ in HK➤ Coding, data entry, ... etc➤ Comprehensive data analysis using Item Response Theory
Phase IV April-May 2012 Write up and dissemination of findings	<ul style="list-style-type: none">➤ Disseminate findings: Workshop on Research Supervision➤ Write manuscripts for submission to prestige journals➤ Prepare a final project report to HKIED

Ethics Clearance and Copyright

- ▶ Ethics approval from HKIEd Human Research Ethics Committee and copyright permission from the original researchers who developed the SREQ to revise and use the instrument at HKIEd
- ▶ Ethics approval and copyright permission from Dr Paul Ginns were both granted in October 2011

Focus Groups

- ▶ Two focus groups were conducted in with students and supervisors to discuss how suitable the SREQ is in evaluating our doctoral degree supervision
- ▶ The student and supervisor focus groups were conducted in October and November 2011 respectively and lasted for around 1 hour
- ▶ All participants were provided with an information sheet and were requested to fill in a consent form.

Revising the SREQ

- ▶ Comments and feedback gathered from the student and supervisor focus groups were collated for the revision of the SREQ
- ▶ An external member who is an active researcher and not a part of the main research team was recruited to provide objective feedback on the final version of the revised SREQ

Revising the SREQ

In designing and adapting the questionnaire of use at HKIEd, the following main processes were taken:

- 1) Some items from both the original SREQ and PREQ were used without changes
- 2) Some items were revised
- 3) Some new items added were added

Supervision

SREQ (7)	PREQ (6)	Revised SREQ RPg (11)	Revised SREQ EdD (11)	Revised SREQ MEd (11)
1. Supervision is available when I need it.	1. Supervision was available when I needed it.	1. Supervision is readily available .	1. Supervision is readily available .	1. Supervision is readily available .
5. My supervisor(s) make(s) a real effort to understand difficulties I face.	7. My supervisor(s) made a real effort to understand difficulties I faced.	2. My supervisor makes a real effort to understand difficulties I face.	2. My supervisor makes a real effort to understand difficulties I face.	2. My supervisor makes a real effort to understand difficulties I face.
13. My supervisor(s) provide(s) me with additional information relevant to my topic.	13. My supervisor(s) provided additional information relevant to my topic.	3. My supervisor provides me with information relevant to my topic.	3. My supervisor provides me with information relevant to my topic.	3. My supervisor provides me with information relevant to my topic.
18. I am given good guidance in topic selection and refinement.	17. I was given good guidance in topic selection and refinement.	4. I am given clear guidance in topic selection and refinement.	4. I am given clear guidance in topic selection and refinement.	4. I am given clear guidance in topic selection and refinement.
22. My supervisor(s) provide(s) helpful feedback on my progress.	21. My supervisor(s) provided helpful feedback on my progress.	5. My supervisor provides helpful feedback on my progress.	5. My supervisor provides helpful feedback on my progress.	5. My supervisor provides helpful feedback on my progress.
26. I have received good guidance in my literature search.	24. I received good guidance in my literature search.	6. I am given clear guidance in my literature review .	6. I am given clear guidance in my literature review .	6. I am given clear guidance in my literature review .

		7. My supervisor provides me with good emotional support.	7. My supervisor provides me with good emotional support.	7. My supervisor provides me with good emotional support.
		8. I am given helpful feedback on my written work.	8. I am given helpful feedback on my written work.	8. I am given helpful feedback on my written work.
		9. I am given clear guidance in my research design.	9. I am given clear guidance in my research design.	9. I am given clear guidance in my research design.
		10. My supervisor is sensitive to intercultural differences.	10. My supervisor is sensitive to intercultural differences.	10. My supervisor is sensitive to intercultural differences.
36. Overall, I am satisfied with the quality of my supervision.		11. Overall, I am satisfied with the quality of my supervision.	11. Overall, I am satisfied with the quality of my supervision.	11. Overall, I am satisfied with the quality of my supervision.



Infrastructure

SREQ (7)	PREQ (5)	Revised SREQ PhD (10)	Revised SREQ EdD (9)	Revised SREQ MEd (10)
2. I have access to a suitable working space.	3. I had access to a suitable working space.	12. I have access to a suitable working space.	12. I have access to a suitable working space.	12. I have access to a suitable working space.
6. I have good access to the technical support I need.	8. I had good access to the technical support I needed.	13. I have good access to the technical support I need.	13. I have good access to the technical support I need.	13. I have good access to the technical support I need.
10. I have access to a common room or a similar type of meeting place.		14. I have access to a common room or a similar type of meeting place.	14. I have access to a common room or a similar type of meeting place.	14. I have access to a common room or a similar type of meeting place.
12. I am able to organize good access to necessary equipment.	12. I was able to organize good access to necessary equipment.	15. I have good access to necessary equipment.	15. I have good access to necessary equipment.	15. I have good access to necessary equipment.
19. I have good access to computing facilities and services.	18. I had good access to computing facilities and services.	16. I have good access to computing facilities and services.	16. I have good access to computing facilities and services.	16. I have good access to computing facilities and services.
28. There is appropriate financial support for research activities.	27. There was appropriate financial support for research activities.	19. There is appropriate financial support for research activities.		



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		17. The library offers good resources on literature relevant to my research.	17. The library offers good resources on literature relevant to my research.	17. The library offers good resources on literature relevant to my research.
		18. The library offers good research related training workshops and services relevant to my research.	18. The library offers good research related training workshops and services relevant to my research.	18. The library offers good research related training workshops and services relevant to my research.
		20. The institute provides me with access to quality student accommodation.	19. The institute provides me with access to quality student accommodation.	19. The institute provides me with access to quality student accommodation.
35. Overall, I am satisfied with the quality of the services and facilities.		21. Overall, I am satisfied with the quality of the services and facilities.	20. Overall, I am satisfied with the quality of the services and facilities.	21. Overall, I am satisfied with the quality of the services and facilities.
				20. The institute as a whole provides research seminars for postgraduate studies.



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Intellectual and Social Climate

SREQ (10)	PREQ (5)	Revised SREQ RPg (10)	Revised SREQ EdD (10)	Revised SREQ MED
3. The department/school provides opportunities for social contact with other postgraduate students.	5. The department provided opportunities for social contact with other postgraduate students.	22. My affiliated academic unit provides opportunities for social contact with other postgraduate students.	21. My affiliated academic unit provides opportunities for social contact with other postgraduate students.	
8. I feel integrated into the department's/school's community.	9. I was integrated into the department's community.	23. I feel integrated into the community of the academic unit that I am affiliated with.	22. I feel integrated into the community of the academic unit that I am affiliated with.	
15. The department/school provides opportunities for me to become involved in the broader research culture.	16. The department provided opportunities for me to become involved in the broader research culture.	24. My affiliated academic unit provides opportunities for me to become involved in the broader research culture.	23. My affiliated academic unit provides opportunities for me to become involved in the broader research culture.	

16. I feel that other postgraduate students in my department/school are supportive.		25. I feel that other postgraduate students in my affiliated academic unit are supportive.	24. I feel that other postgraduate students in my affiliated academic unit are supportive.	
20. I tend to feel isolated within this department/school. (reversed)		26. I tend to feel isolated within my affiliated academic unit.	25. I tend to feel isolated within my affiliated academic unit.	
23 Interaction with other postgraduate students is actively encouraged in this department/school.		27. Interaction with other postgraduate students is actively encouraged in my affiliated academic unit.	26. Interaction with other postgraduate students is actively encouraged in my affiliated academic unit.	
24. A good seminar programme for postgraduate students is provided.	22. A good seminar program for postgraduate students was provided .	33. The institute as a whole provides research seminars for postgraduate studies.	30. The institute as a whole provides research seminars for postgraduate studies.	

25. The research ambience in the department/school or faculty stimulates my work.	23. The research ambience in the department or faculty stimulated my work .	28. The research ambience in my affiliated academic unit stimulates my work.	27. The research ambience in my affiliated academic unit stimulates my work.	
29. I feel that this department/school provides a supportive working environment.		29. I feel that my affiliated academic unit provides a supportive working environment.	28. I feel that my affiliated academic unit provides a supportive working environment.	
31. I feel respected as a fellow researcher within my department/school.		30. I feel respected as a fellow researcher within my affiliated academic unit.	29. I feel respected as a fellow researcher within my affiliated academic unit.	



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Generic Skills

SREQ (7)	PREQ (5)	Revised SREQ PhD (10)	Revised SREQ EdD (10)	Revised SREQ MEd (10)
4. My research has further developed my problem-solving skills.	6. My research further developed my problem-solving skills.	32. My research training has further developed my problem-solving skills.	31. My research training has further developed my problem-solving skills.	22. My research training has further developed my problem-solving skills.
7. Doing my research has helped to develop my written communication skills.	20. Doing my research helped me to develop my ability to plan my own work.	33. Doing my research has helped to develop my written communication skills.	32. Doing my research has helped to develop my written communication skills.	23. Doing my research has helped to develop my written communication skills.
9. I have learned to develop my ideas and present them in my written work.	10. I learned to develop my ideas and present them in my written work.	34. I have learned to develop my ideas and present them in my written work.	33. I have learned to develop my ideas and present them in my written work.	24. I have learned to develop my ideas and present them in my written work.
14. My research has sharpened my analytical skills.	14. My research sharpened my analytical skills.	38. My research training has sharpened my analytical skills.	37. My research training has sharpened my analytical skills.	28. My research training has sharpened my analytical skills.

21. Doing my research has developed my ability to plan my own work.		33. Doing my research has developed my ability to plan my own work.	34. Doing my research has developed my ability to plan my own work.	25. Doing my research has developed my ability to plan my own work.
27. As a result of my research I feel confident about tackling unfamiliar problems.	26. As a result of my research, I feel confident about tackling unfamiliar problems.	39. As a result of my research training I feel confident about tackling unfamiliar problems.	38. As a result of my research training I feel confident about tackling unfamiliar problems.	29. As a result of my research training I feel confident about tackling unfamiliar problems.
30. As a result of my research I have developed the ability to learn independently.		40. As a result of my research training I have developed the ability to learn independently.	39. As a result of my research training I have developed the ability to learn independently.	30. As a result of my research training I have developed the ability to learn independently.



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		36. My research training has developed my critical and reflective thinking skills.	35. My research training has developed my critical and reflective thinking skills.	26. My research training has developed my critical and reflective thinking skills.
		37. My research training has developed my decision making skills.	36. My research training has developed my decision making skills.	27. My research training has developed my decision making skills.
		41.As a result of my research training, my awareness on research ethics has increased.	40.As a result of my research training, my awareness on research ethics has increased.	31.As a result of my research training, my awareness on research ethics has increased.



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Overall satisfaction

SREQ (1)	PREQ (1)	Revised SREQ PhD (1)	Revised SREQ EdD (1)	Revised SREQ MEd (1)
37. Overall, I am satisfied with the quality of my RHD experience.	28. Overall, I am satisfied with the quality of my RHD experience.	42. Overall, I am satisfied with the quality of my research higher degree experience.	41. Overall, I am satisfied with the quality of my research higher degree experience.	32. Overall, I am satisfied with the quality of my research higher degree experience.



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Goals and Expectations

SREQ	PREQ (3)	Revised SREQ PhD (2)	Revised SREQ EdD (2)	Revised SREQ MEd (2)
	4. I developed an understanding of the standard of work expected.	43. I developed an understanding of the standard of work expected.	42. I developed an understanding of the standard of work expected.	33. I developed an understanding of the standard of work expected.
	11. I understood the required standard for the thesis.	44. I understood the required standard for the thesis.	43. I understood the required standard for the thesis.	34. I understood the required standard for the thesis.
	19. I was satisfied with the thesis examination process.			



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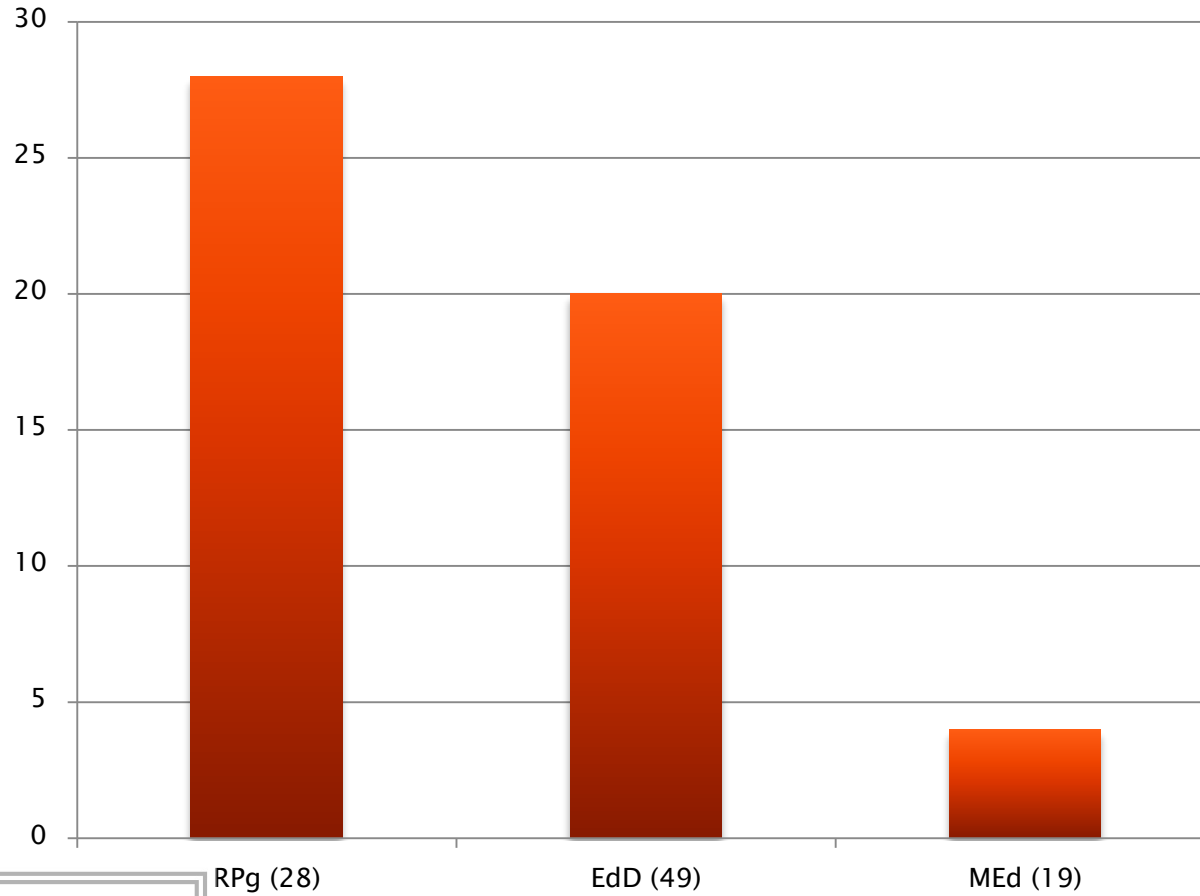
Thesis examination

SREQ (0)	PREQ (3)	Revised SREQ PhD (3)	Revised SREQ EdD (3)	Revised SREQ MEd (3)
	2. The thesis examination process was fair.	45. I was satisfied with the thesis examination process.	44. I was satisfied with the thesis examination process.	35. I was satisfied with the thesis examination process.
	11. I understood the requirements of thesis examination.	46. I understood the requirements of thesis examination.	45. I understood the requirements of thesis examination.	36. I understood the requirements of thesis examination.
	19. The examination of my thesis was completed in a reasonable time.	47. The examination of my thesis was completed in a reasonable time.	46. The examination of my thesis was completed in a reasonable time.	37. The examination of my thesis was completed in a reasonable time.

Samples

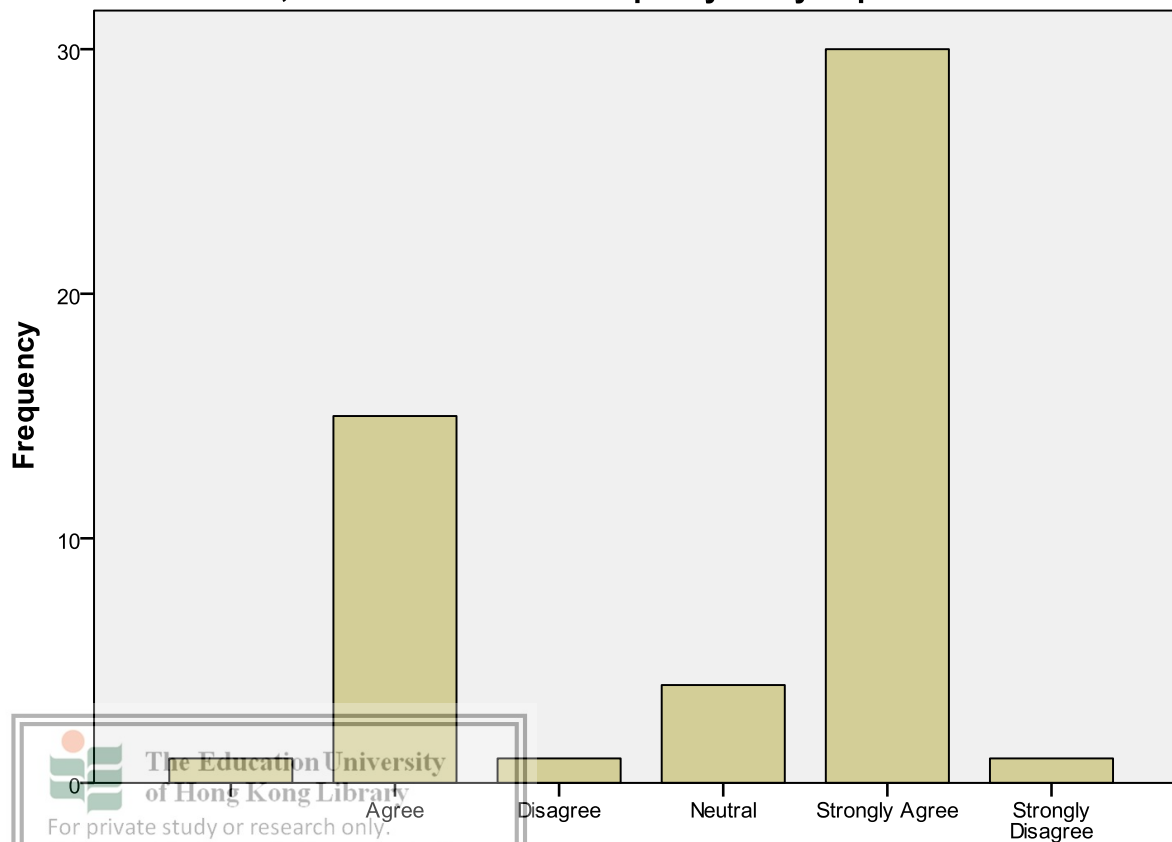
	RPg (28)	EdD (49)	MEd (19)
Count	28	20	4

Program		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	EdD	20	38.5	38.5	38.5
	MEd	4	7.7	7.7	46.2
	Rpg	28	53.8	53.8	100
	Total	52	100	100	



		Overall, I am satisfied with the quality of my supervision.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.9	1.9	1.9
	Agree	15	28.8	28.8	30.8
	Disagree	1	1.9	1.9	32.7
	Neutral	4	7.7	7.7	40.4
	Strongly Agree	30	57.7	57.7	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	

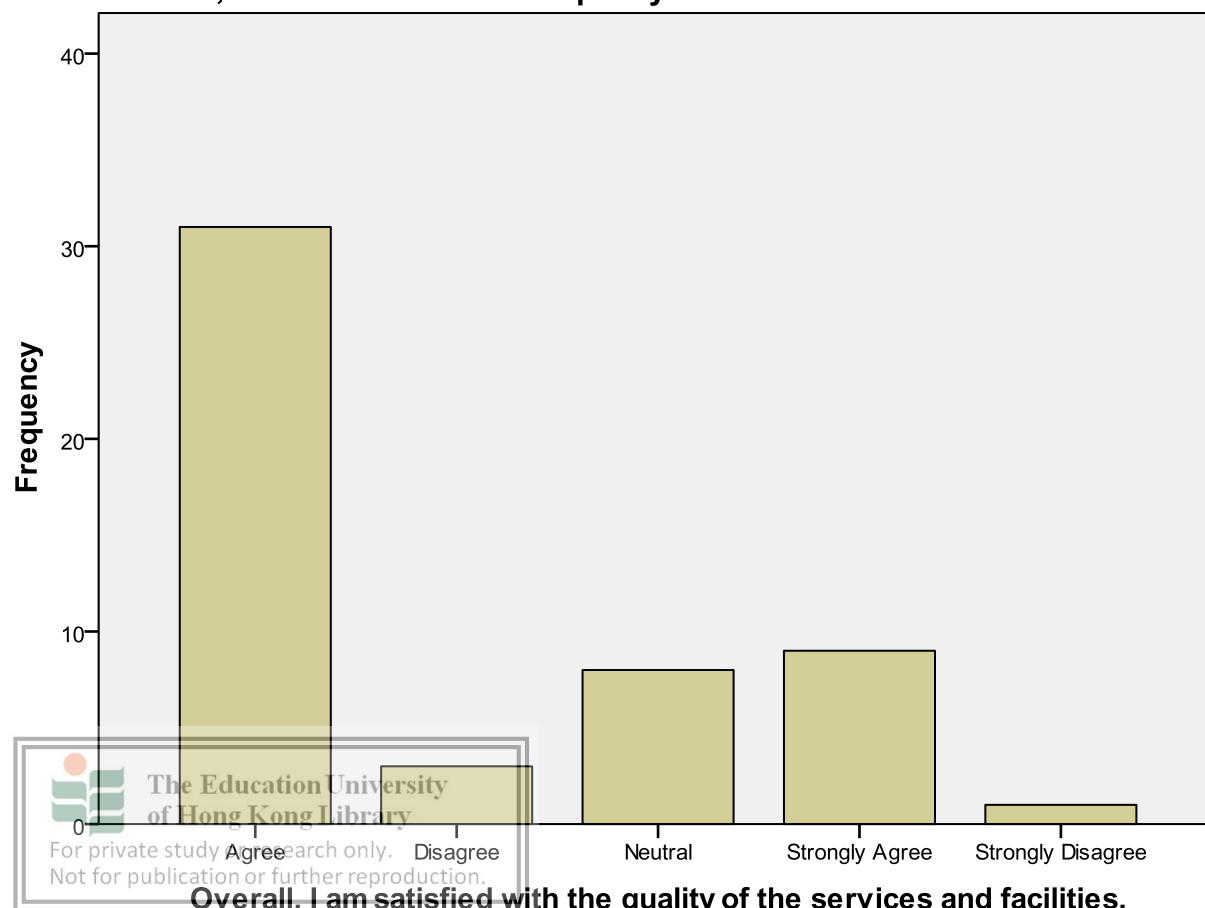
Overall, I am satisfied with the quality of my supervision.



Overall, I am satisfied with the quality of my supervision.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	31	59.6	59.6	59.6
	Disagree	3	5.8	5.8	65.4
	Neutral	8	15.4	15.4	80.8
	Strongly Agree	9	17.3	17.3	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	

Overall, I am satisfied with the quality of the services and facilities.



Intellectual and Social Climate

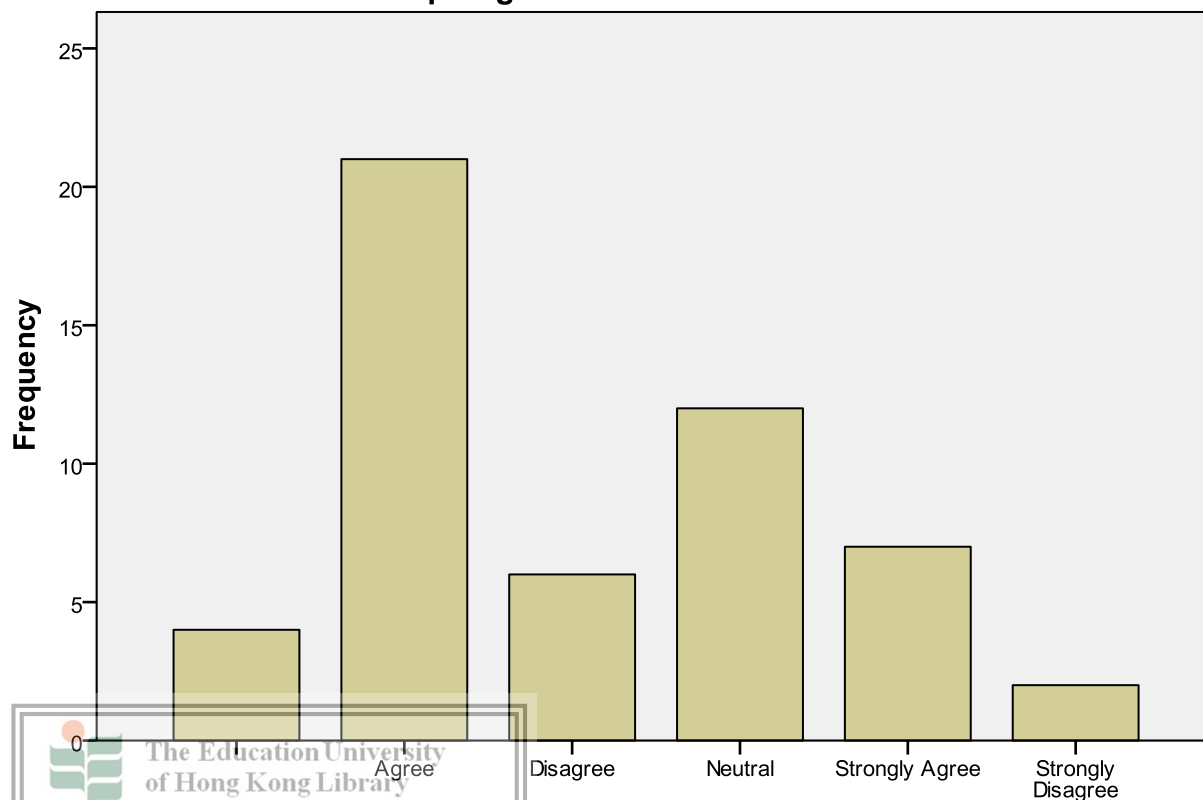


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		My affiliated academic unit provides opportunities for social contact with other postgraduate students.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	7.7	7.7	7.7
	Agree	21	40.4	40.4	48.1
	Disagree	6	11.5	11.5	59.6
	Neutral	12	23.1	23.1	82.7
	Strongly Agree	7	13.5	13.5	96.2
	Strongly Disagree	2	3.8	3.8	100
	Total	52	100	100	

My affiliated academic unit provides opportunities for social contact with other postgraduate students.



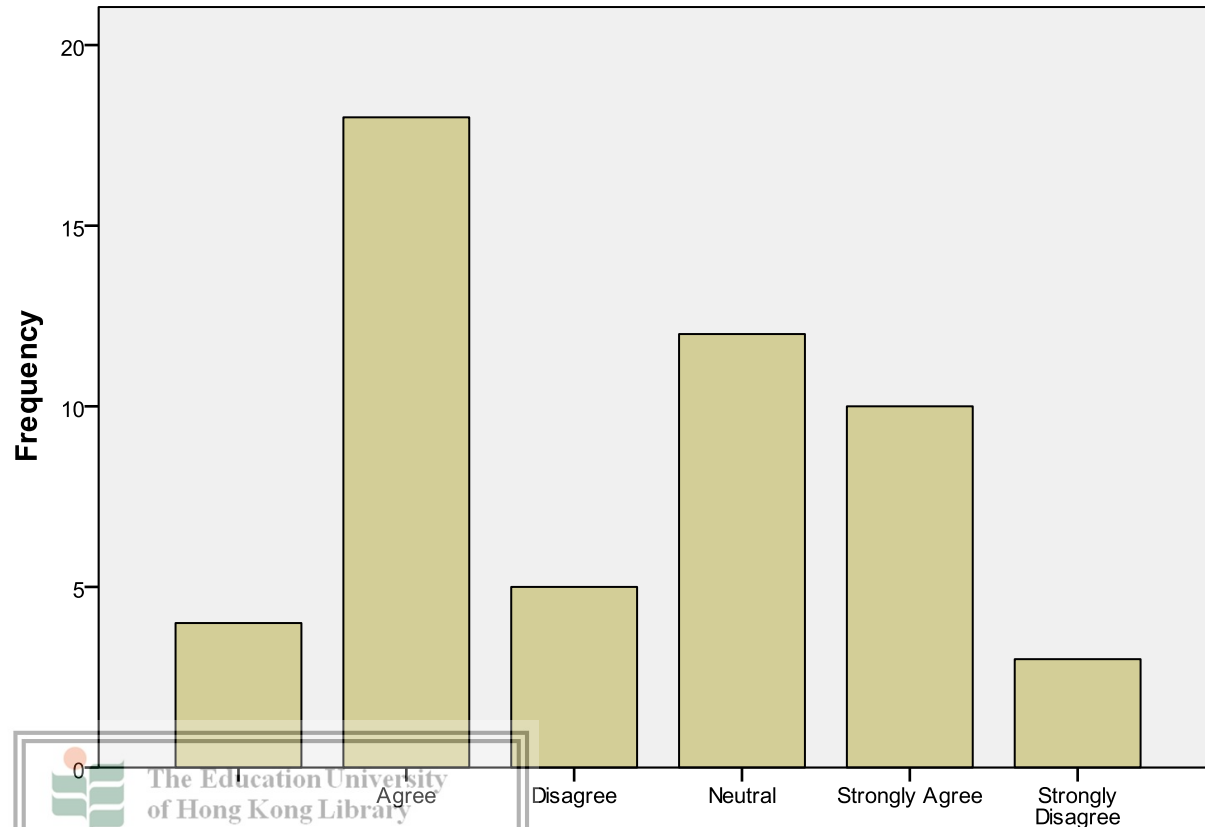
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My affiliated academic unit provides opportunities for social contact with other postgraduate students.

I feel integrated into the community of the academic unit that I am affiliated with.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	7.7	7.7	7.7
	Agree	18	34.6	34.6	42.3
	Disagree	5	9.6	9.6	51.9
	Neutral	12	23.1	23.1	75
	Strongly Agree	10	19.2	19.2	94.2
	Strongly Disagree	3	5.8	5.8	100
	Total	52	100	100	

I feel integrated into the community of the academic unit that I am affiliated with.



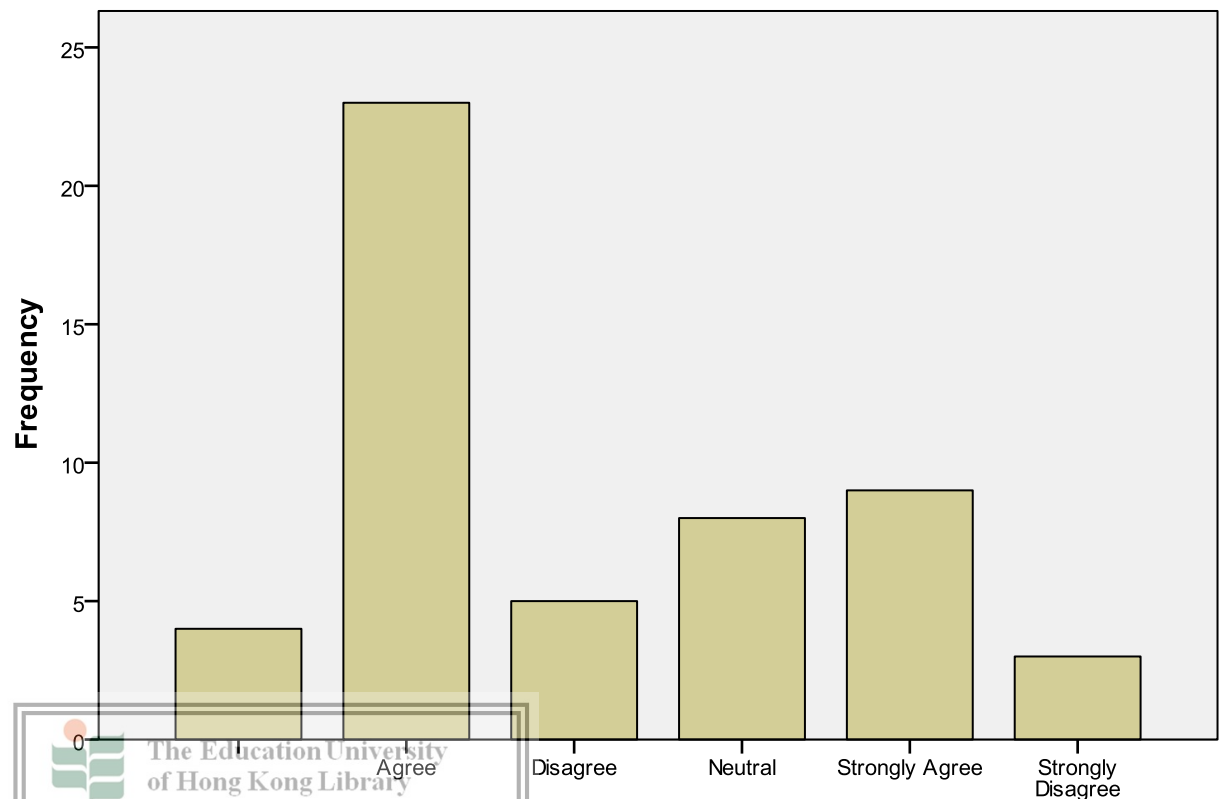
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I feel integrated into the community of the academic unit that I am affiliated with.

	My affiliated academic unit provides opportunities for me to become involved in the broader research culture.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	7.7	7.7	7.7
	Agree	23	44.2	44.2	51.9
	Disagree	5	9.6	9.6	61.5
	Neutral	8	15.4	15.4	76.9
	Strongly Agree	9	17.3	17.3	94.2
	Strongly Disagree	3	5.8	5.8	100
	Total	52	100	100	

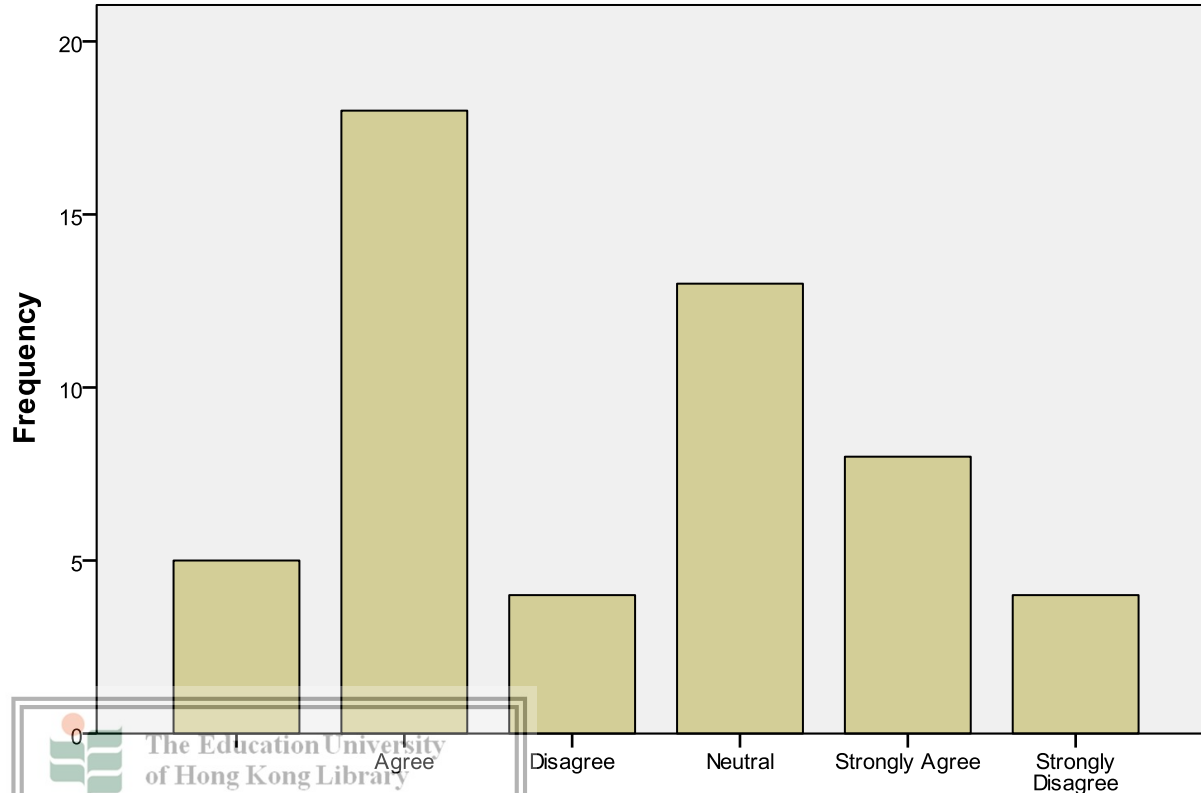
My affiliated academic unit provides opportunities for me to become involved in the broader research culture.



I feel that other postgraduate students in my affiliated academic unit are supportive.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	9.6	9.6	9.6
	Agree	18	34.6	34.6	44.2
	Disagree	4	7.7	7.7	51.9
	Neutral	13	25	25	76.9
	Strongly Agree	8	15.4	15.4	92.3
	Strongly Disagree	4	7.7	7.7	100
	Total	52	100	100	

I feel that other postgraduate students in my affiliated academic unit are supportive.



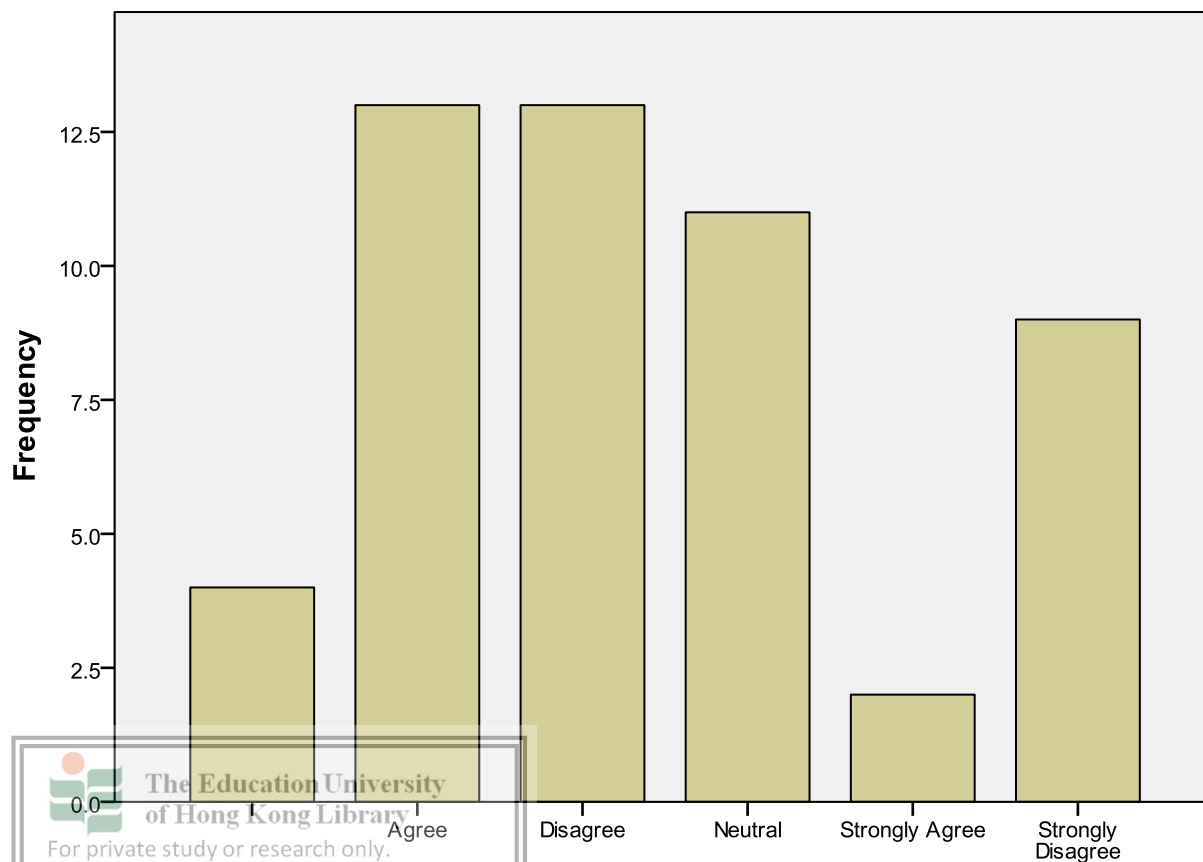
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I feel that other postgraduate students in my affiliated academic unit are supportive.

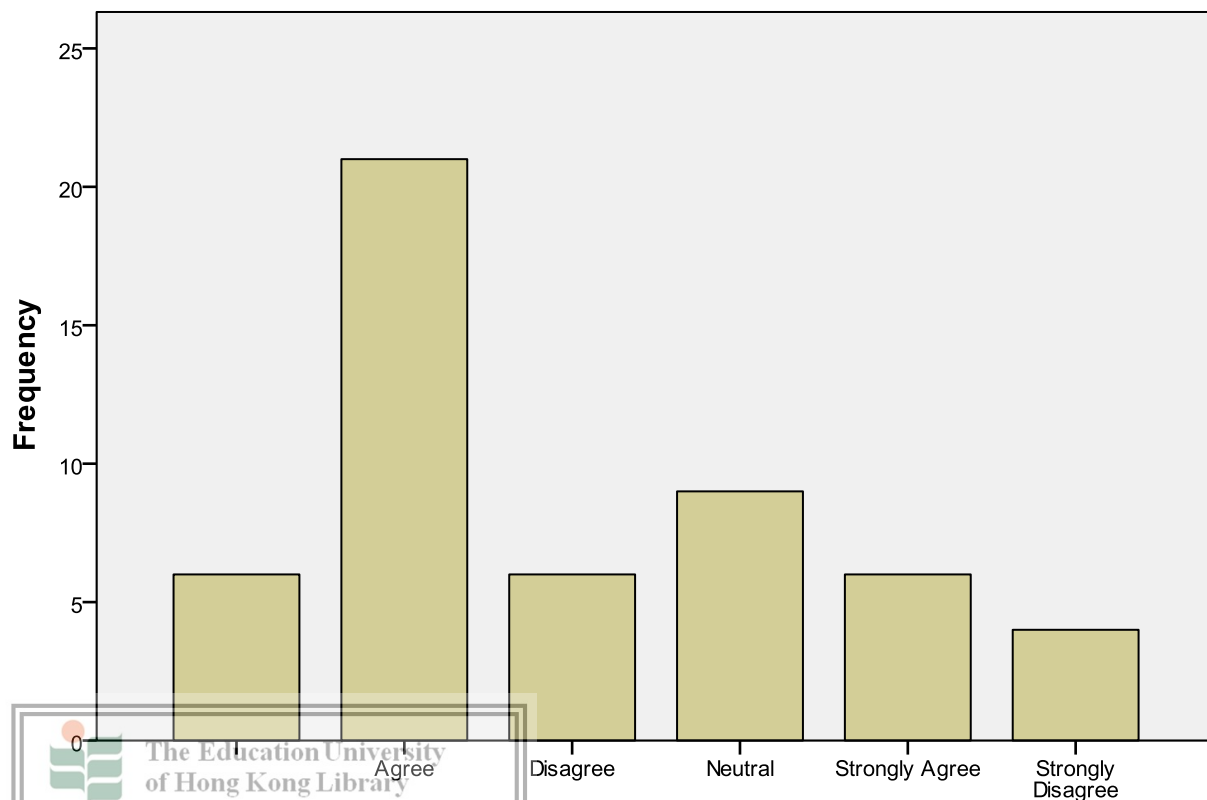
I tend to feel isolated within this affiliated academic unit.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	7.7	7.7	7.7
	Agree	13	25	25	32.7
	Disagree	13	25	25	57.7
	Neutral	11	21.2	21.2	78.8
	Strongly Agree	2	3.8	3.8	82.7
	Strongly Disagree	9	17.3	17.3	100
	Total	52	100	100	

I tend to feel isolated within this affiliated academic unit.



I tend to feel isolated within this affiliated academic unit.

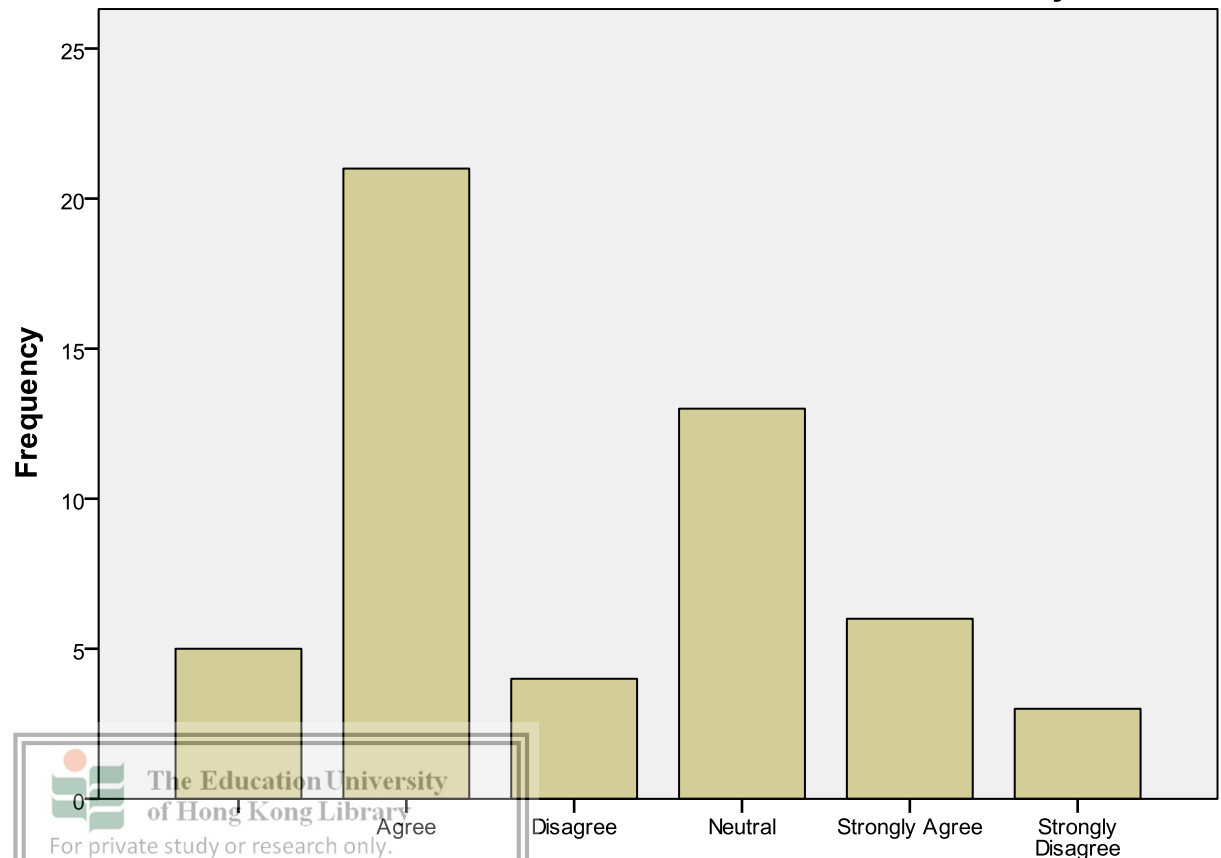
Interaction with other postgraduate students is actively encouraged in my affiliated academic unit.



Interaction with other postgraduate students is actively encouraged in my affiliated academic unit.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	11.5	11.5	11.5
	Agree	21	40.4	40.4	51.9
	Disagree	6	11.5	11.5	63.5
	Neutral	9	17.3	17.3	80.8
	Strongly Agree	6	11.5	11.5	92.3
	Strongly Disagree	4	7.7	7.7	100
	Total	52	100	100	

		The research ambience in the affiliated academic unit stimulates my work.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	9.6	9.6	9.6
	Agree	21	40.4	40.4	50
	Disagree	4	7.7	7.7	57.7
	Neutral	13	25	25	82.7
	Strongly Agree	6	11.5	11.5	94.2
	Strongly Disagree	3	5.8	5.8	100
	Total	52	100	100	

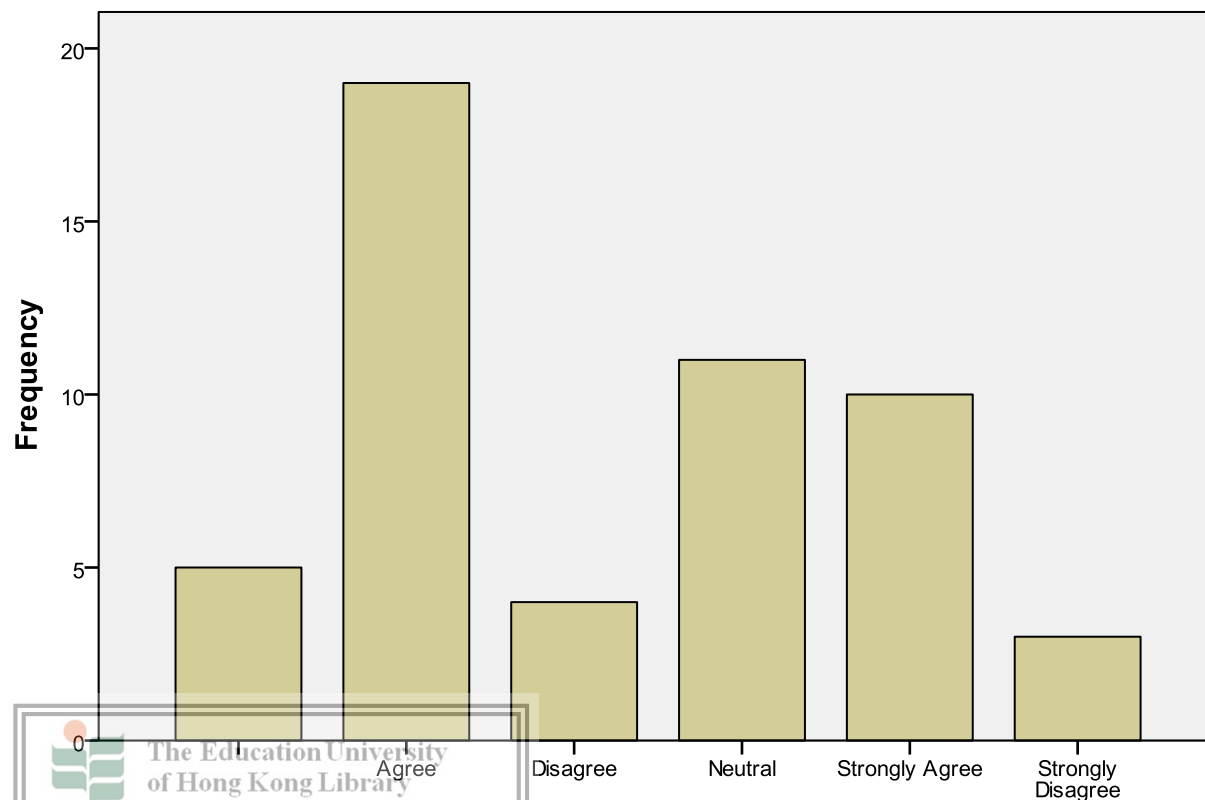
The research ambience in the affiliated academic unit stimulates my work.



The research ambience in the affiliated academic unit stimulates my work.

I feel that this affiliated academic unit provides a supportive working environment.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	9.6	9.6	9.6
	Agree	19	36.5	36.5	46.2
	Disagree	4	7.7	7.7	53.8
	Neutral	11	21.2	21.2	75
	Strongly Agree	10	19.2	19.2	94.2
	Strongly Disagree	3	5.8	5.8	100
	Total	52	100	100	

I feel that this affiliated academic unit provides a supportive working environment.



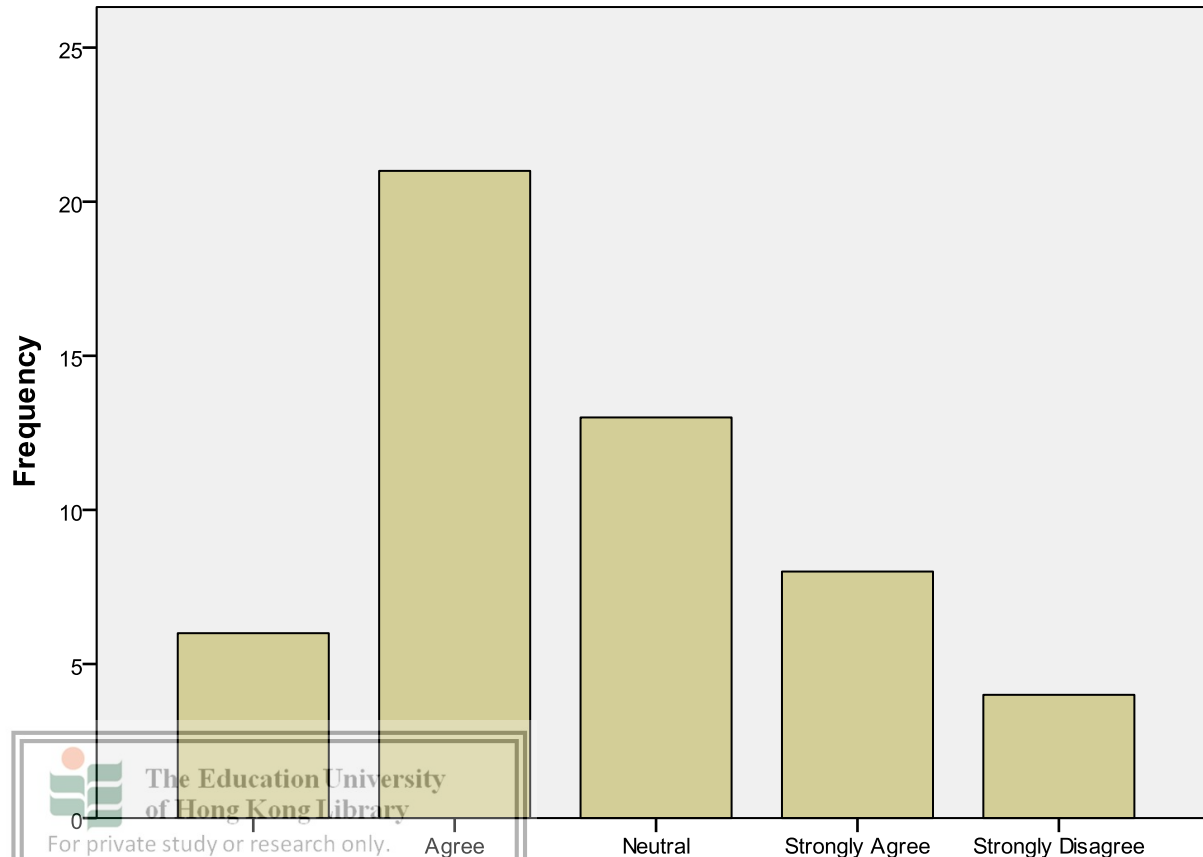
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I feel that this affiliated academic unit provides a supportive working environment.

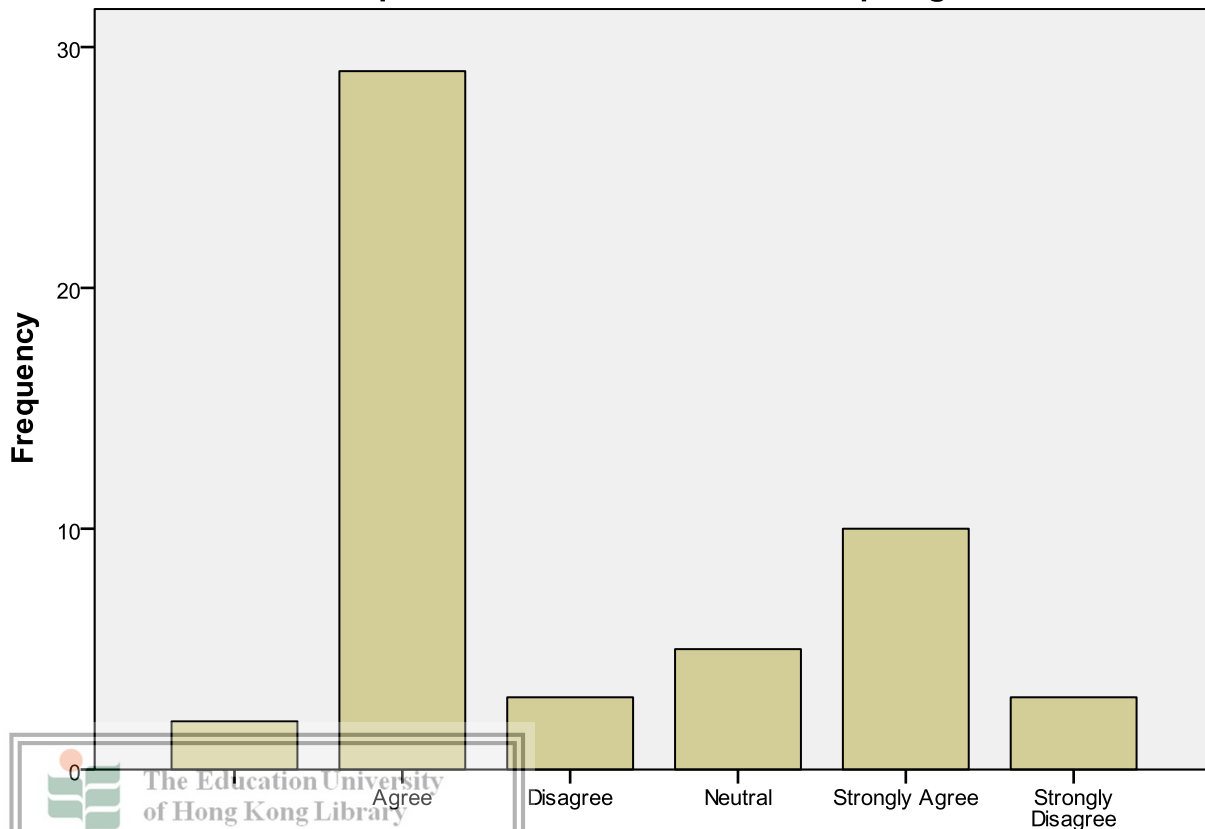
		I feel respected as a fellow researcher within my affiliated academic unit.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	11.5	11.5	11.5
	Agree	21	40.4	40.4	51.9
	Neutral	13	25	25	76.9
	Strongly Agree	8	15.4	15.4	92.3
	Strongly Disagree	4	7.7	7.7	100
	Total	52	100	100	

I feel respected as a fellow researcher within my affiliated academic unit.



I feel respected as a fellow researcher within my affiliated academic unit.

The institute as a whole provides research seminars for postgraduate studies.



		The institute as a whole provides research seminars for postgraduate studies.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	3.8	3.8	3.8
	Agree	29	55.8	55.8	59.6
	Disagree	3	5.8	5.8	65.4
	Neutral	5	9.6	9.6	75
	Strongly Agree	10	19.2	19.2	94.2
	Strongly Disagree	3	5.8	5.8	100
	Total	52	100	100	

Generic Skills

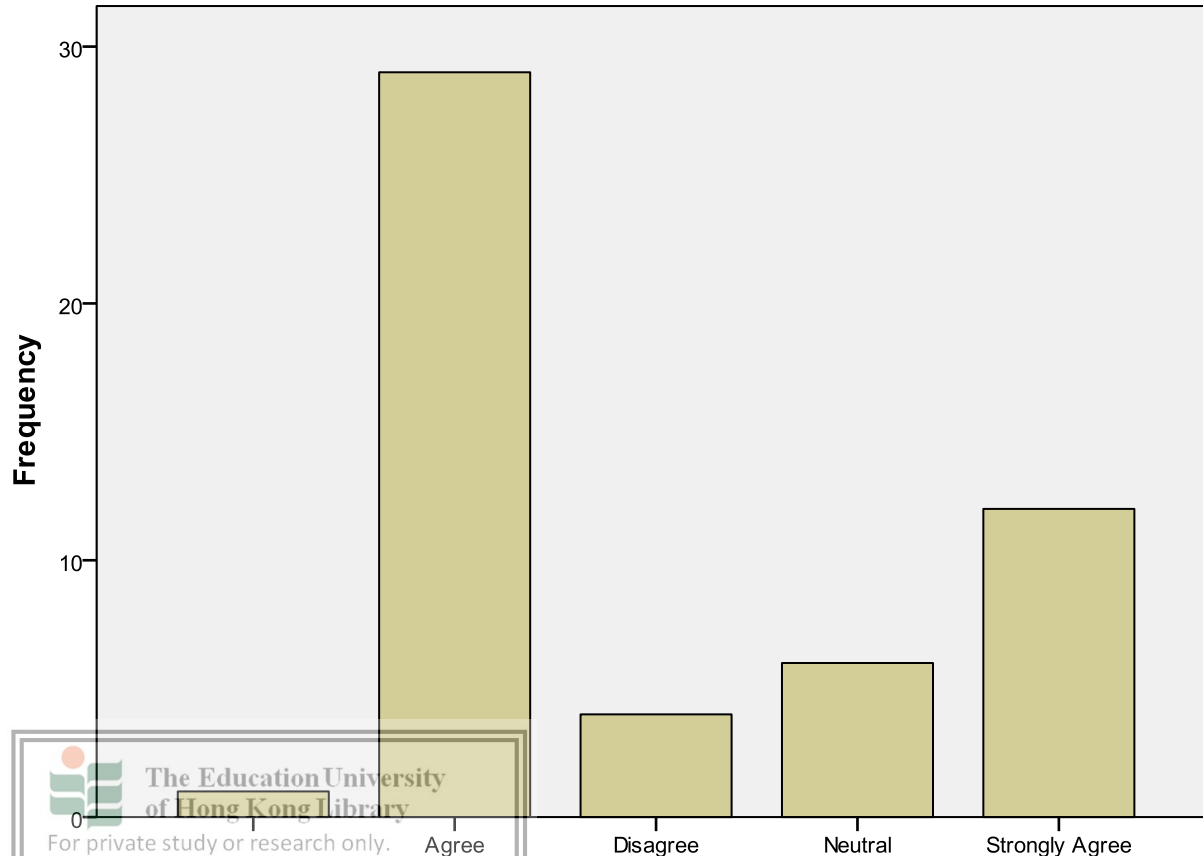


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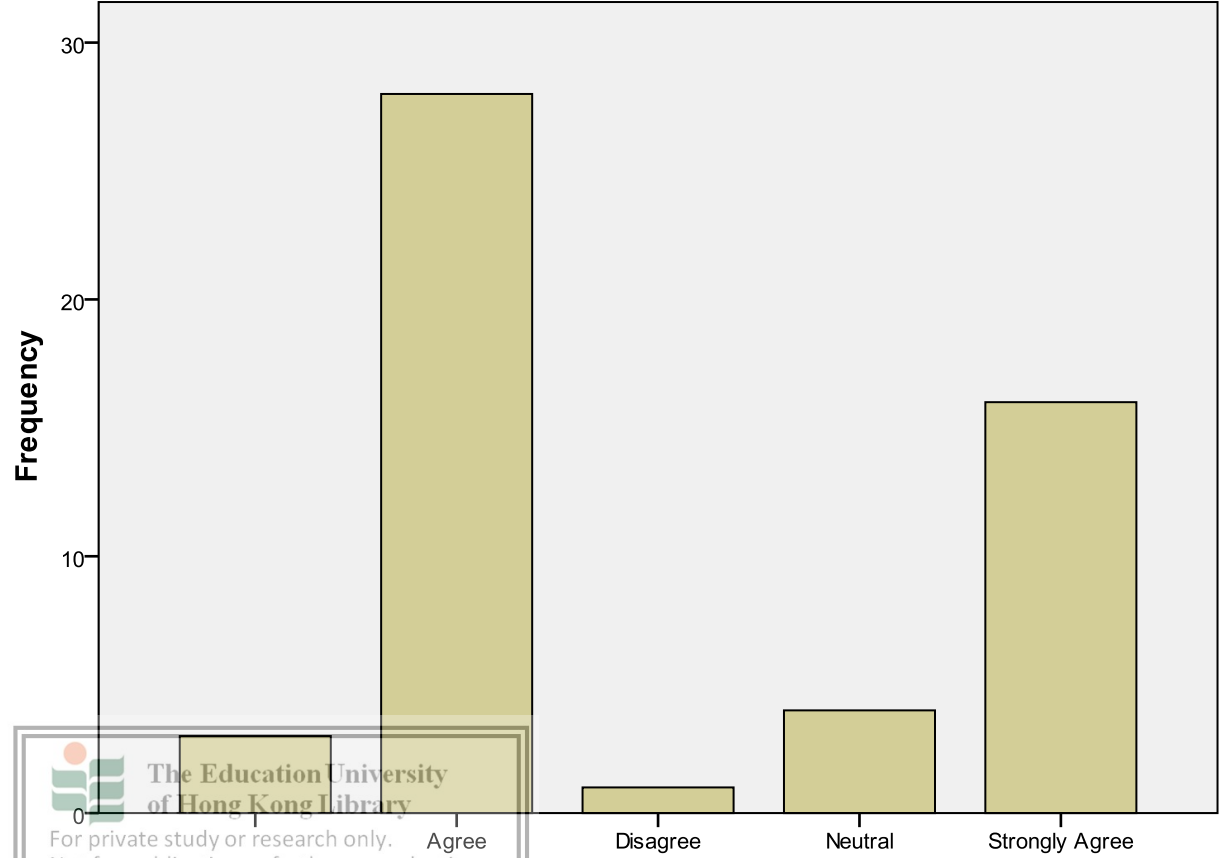
		My research training has further developed my problem-solving skills.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.9	1.9	1.9
	Agree	29	55.8	55.8	57.7
	Disagree	4	7.7	7.7	65.4
	Neutral	6	11.5	11.5	76.9
	Strongly Agree	12	23.1	23.1	100
	Total	52	100	100	

My research training has further developed my problem-solving skills.



Doing my research has helped to develop my written communication skills.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	5.8	5.8	5.8
	Agree	28	53.8	53.8	59.6
	Disagree	1	1.9	1.9	61.5
	Neutral	4	7.7	7.7	69.2
	Strongly Agree	16	30.8	30.8	100
	Total	52	100	100	

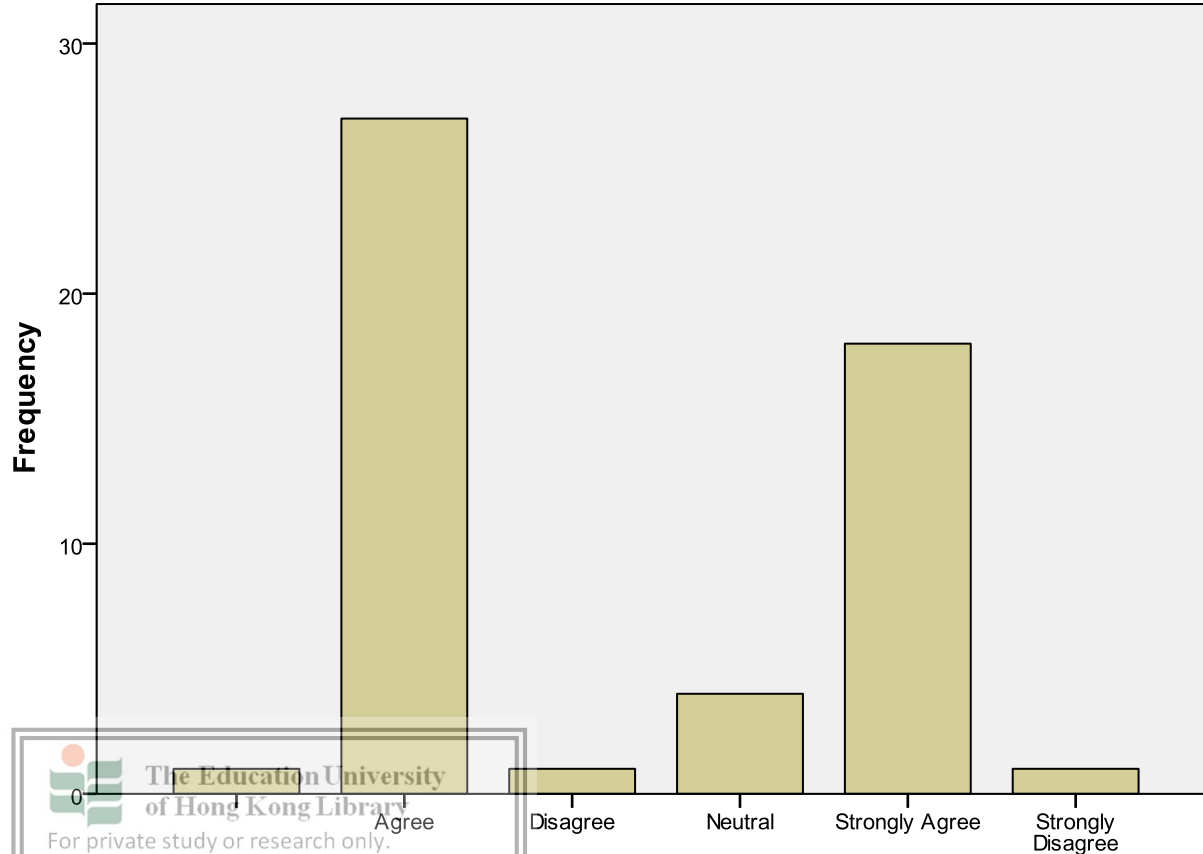
Doing my research has helped to develop my written communication



I have learned to develop my ideas and present them in my written work.

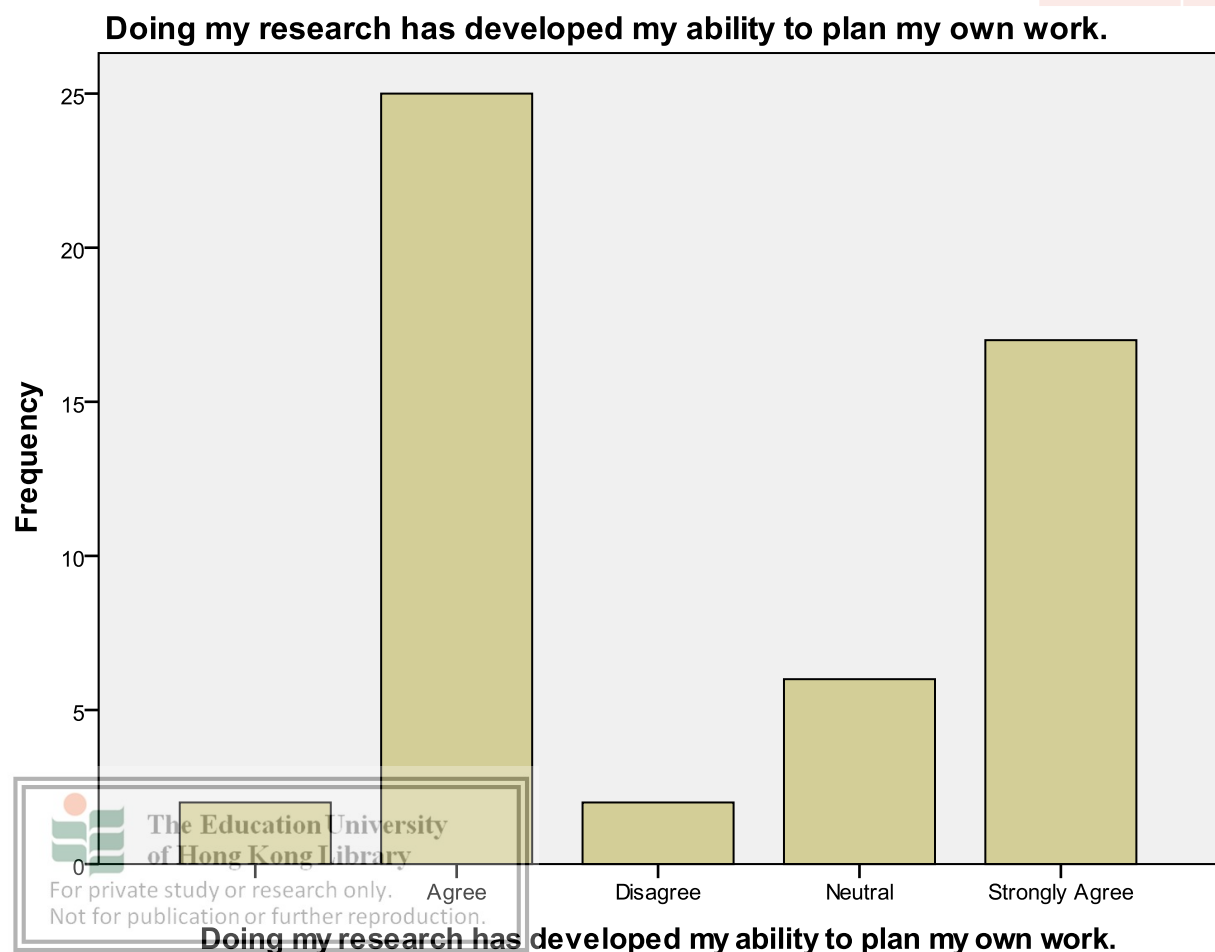
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.9	1.9	1.9
	Agree	27	51.9	51.9	53.8
	Disagree	1	1.9	1.9	55.8
	Neutral	4	7.7	7.7	63.5
	Strongly Agree	18	34.6	34.6	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	

I have learned to develop my ideas and present them in my written work.



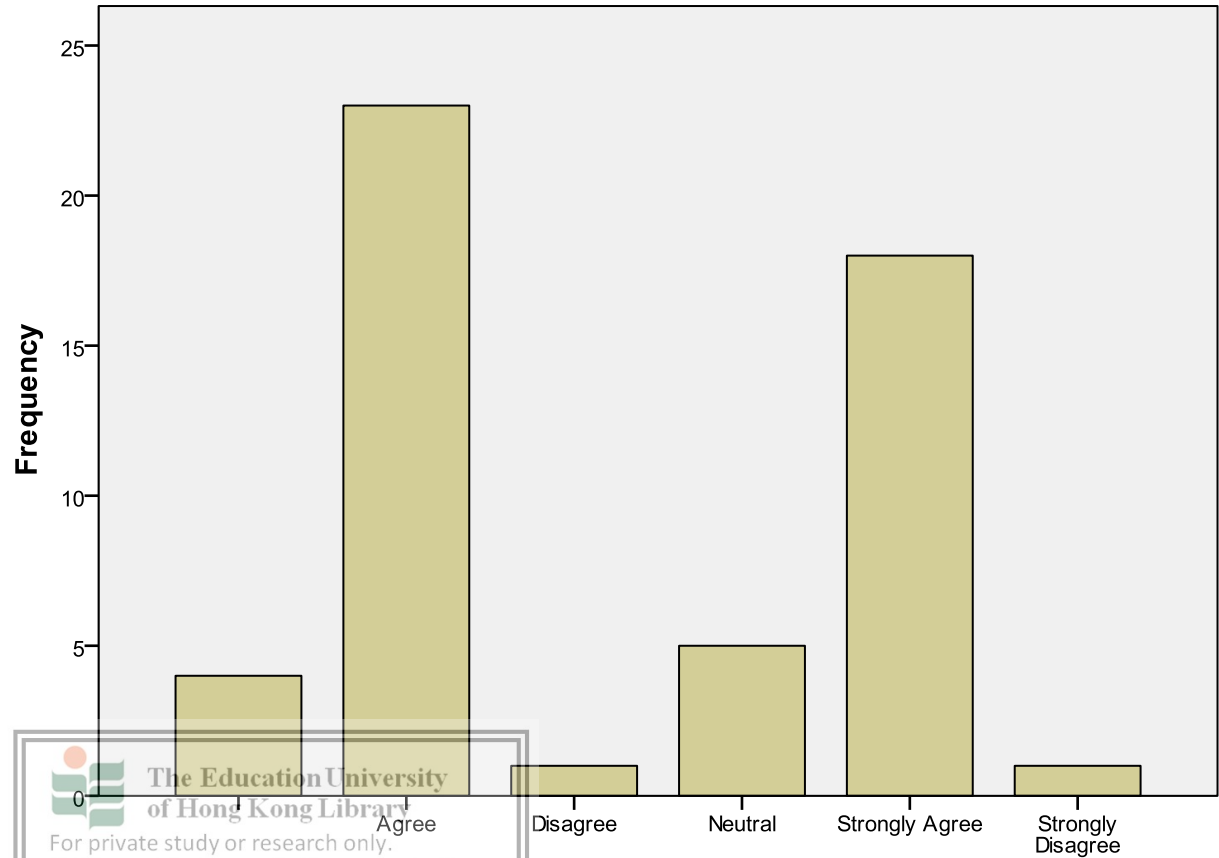
I have learned to develop my ideas and present them in my written work.

		Doing my research has developed my ability to plan my own work.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	3.8	3.8	3.8
	Agree	25	48.1	48.1	51.9
	Disagree	2	3.8	3.8	55.8
	Neutral	6	11.5	11.5	67.3
	Strongly Agree	17	32.7	32.7	100
	Total	52	100	100	



		My research training has developed my critical and reflective thinking skills.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	7.7	7.7	7.7
	Agree	23	44.2	44.2	51.9
	Disagree	1	1.9	1.9	53.8
	Neutral	5	9.6	9.6	63.5
	Strongly Agree	18	34.6	34.6	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	

My research training has developed my critical and reflective thinking skills.

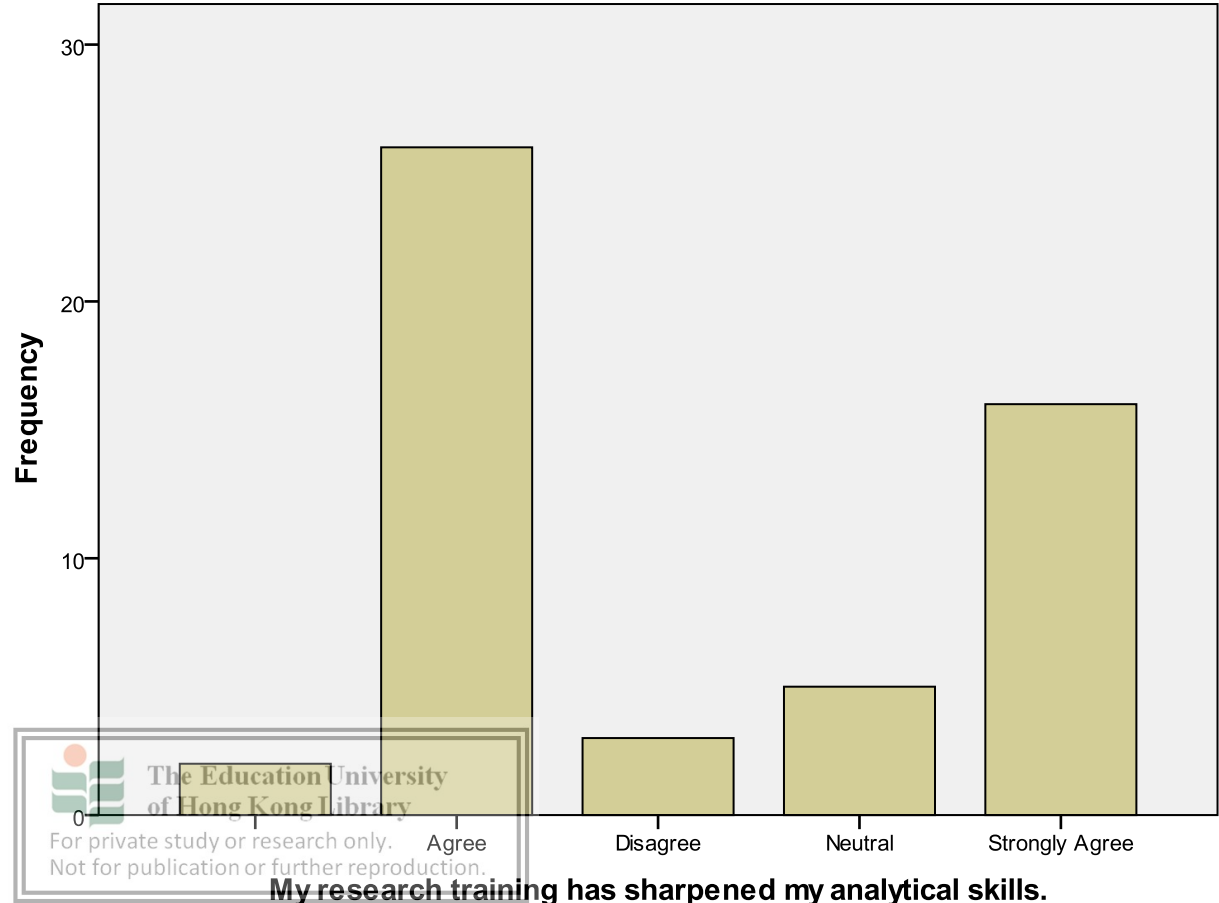


My research training has developed my decision making skills.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.9	1.9	1.9
	Agree	26	50	50	51.9
	Disagree	3	5.8	5.8	57.7
	Neutral	6	11.5	11.5	69.2
	Strongly Agree	15	28.8	28.8	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	



My research training has sharpened my analytical skills.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	3.8	3.8	3.8
	Agree	26	50	50	53.8
	Disagree	3	5.8	5.8	59.6
	Neutral	5	9.6	9.6	69.2
	Strongly Agree	16	30.8	30.8	100
	Total	52	100	100	

My research training has sharpened my analytical skills.

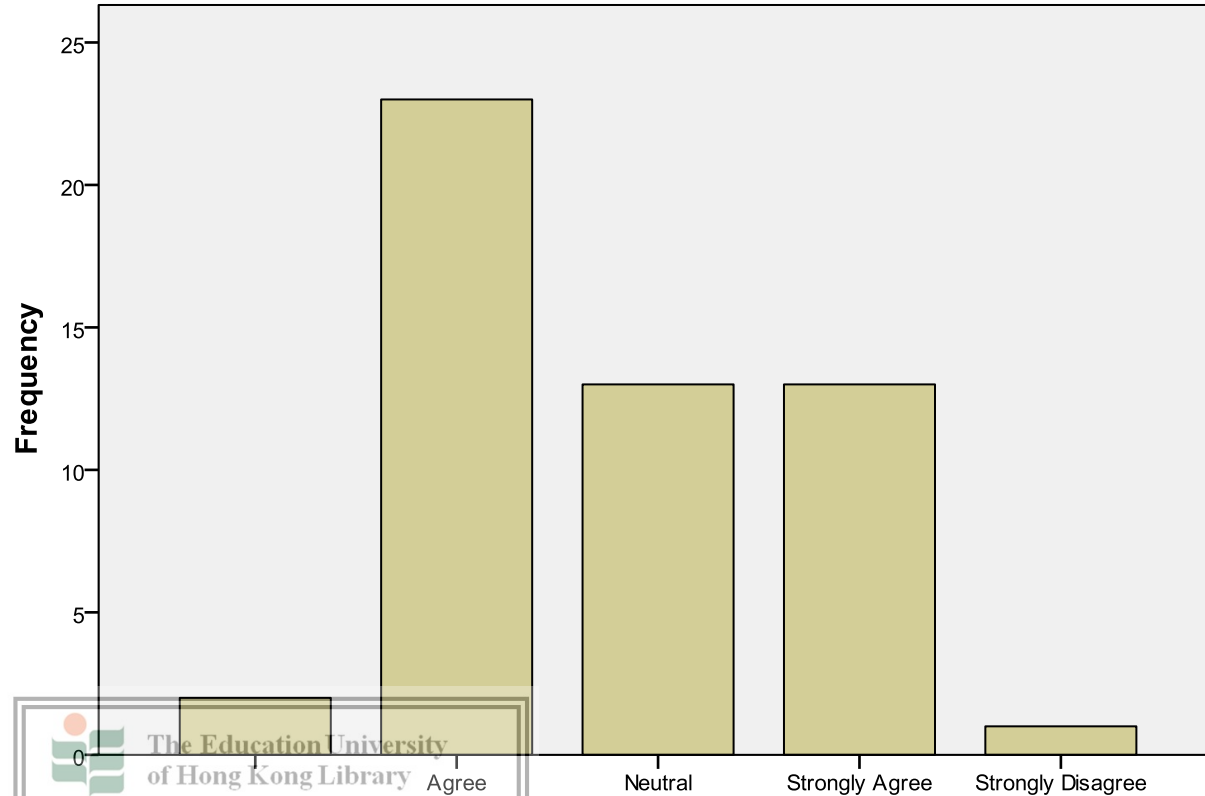


My research training has sharpened my analytical skills.

As a result of my research training I feel confident about tackling unfamiliar problems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	3.8	3.8	3.8
	Agree	23	44.2	44.2	48.1
	Neutral	13	25	25	73.1
	Strongly Agree	13	25	25	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	

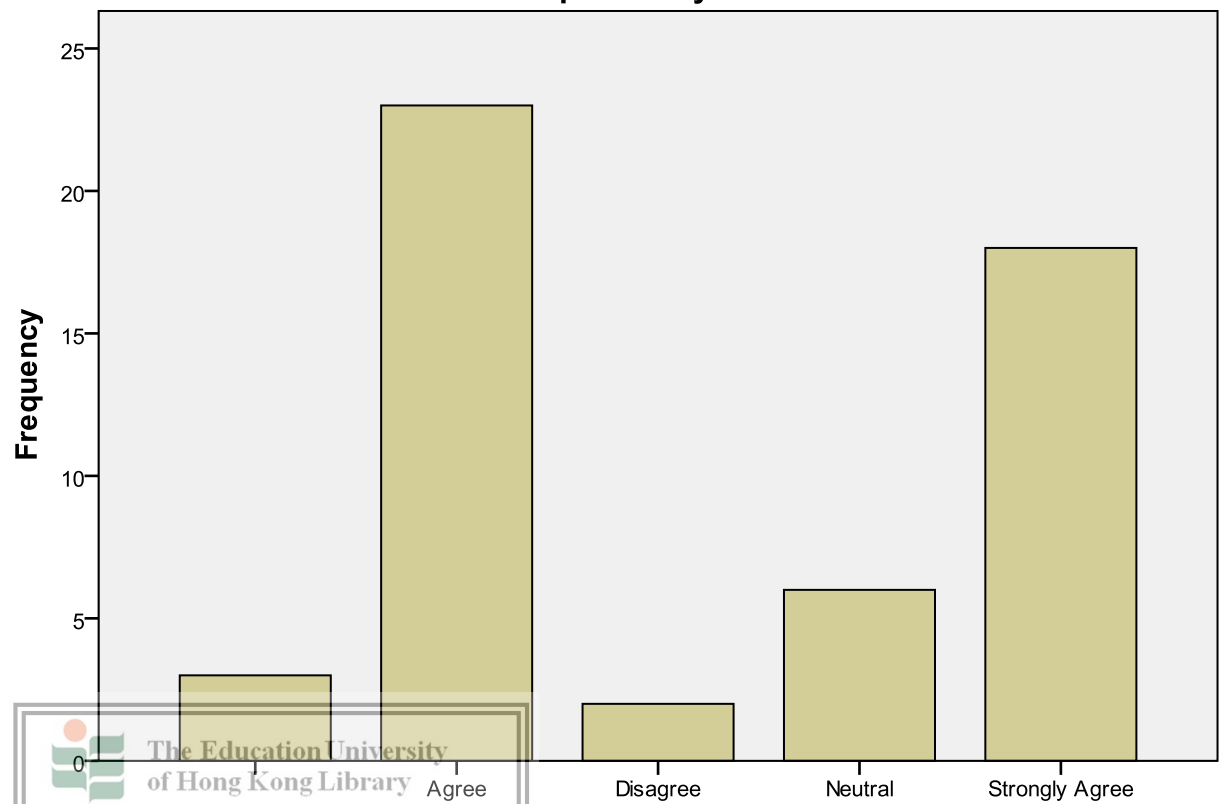
As a result of my research training I feel confident about tackling unfamiliar problems.



As a result of my research training I feel confident about tackling unfamiliar problems.

As a result of my research training I have developed the ability to learn independently.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	5.8	5.8	5.8
	Agree	23	44.2	44.2	50
	Disagree	2	3.8	3.8	53.8
	Neutral	6	11.5	11.5	65.4
	Strongly Agree	18	34.6	34.6	100
	Total	52	100	100	

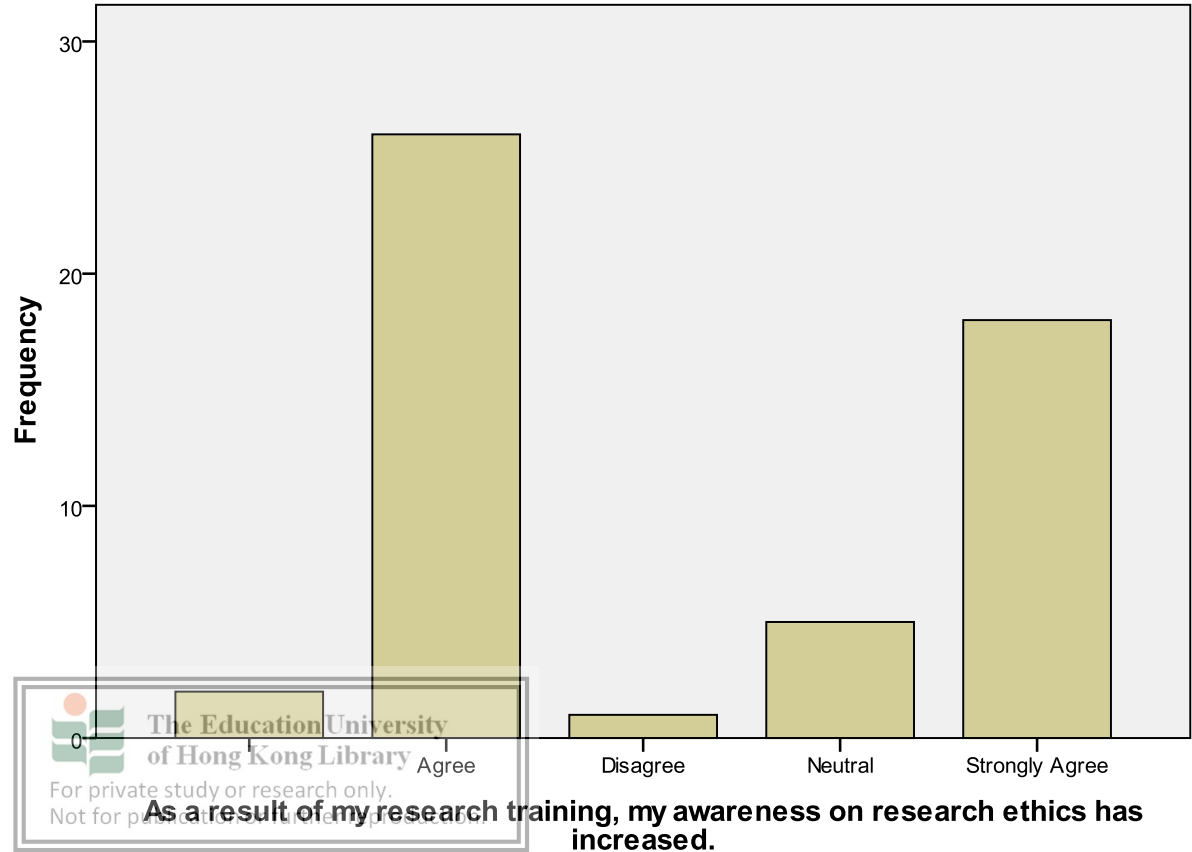
As a result of my research training I have developed the ability to independently.



As a result of my research training I have developed the ability to learn independently.

		As a result of my research training, my awareness on research ethics has increased.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	3.8	3.8	3.8
	Agree	26	50	50	53.8
	Disagree	1	1.9	1.9	55.8
	Neutral	5	9.6	9.6	65.4
	Strongly Agree	18	34.6	34.6	100
	Total	52	100	100	

As a result of my research training, my awareness on research ethics has increased.



Overall Satisfaction with Research Higher Degree Quality

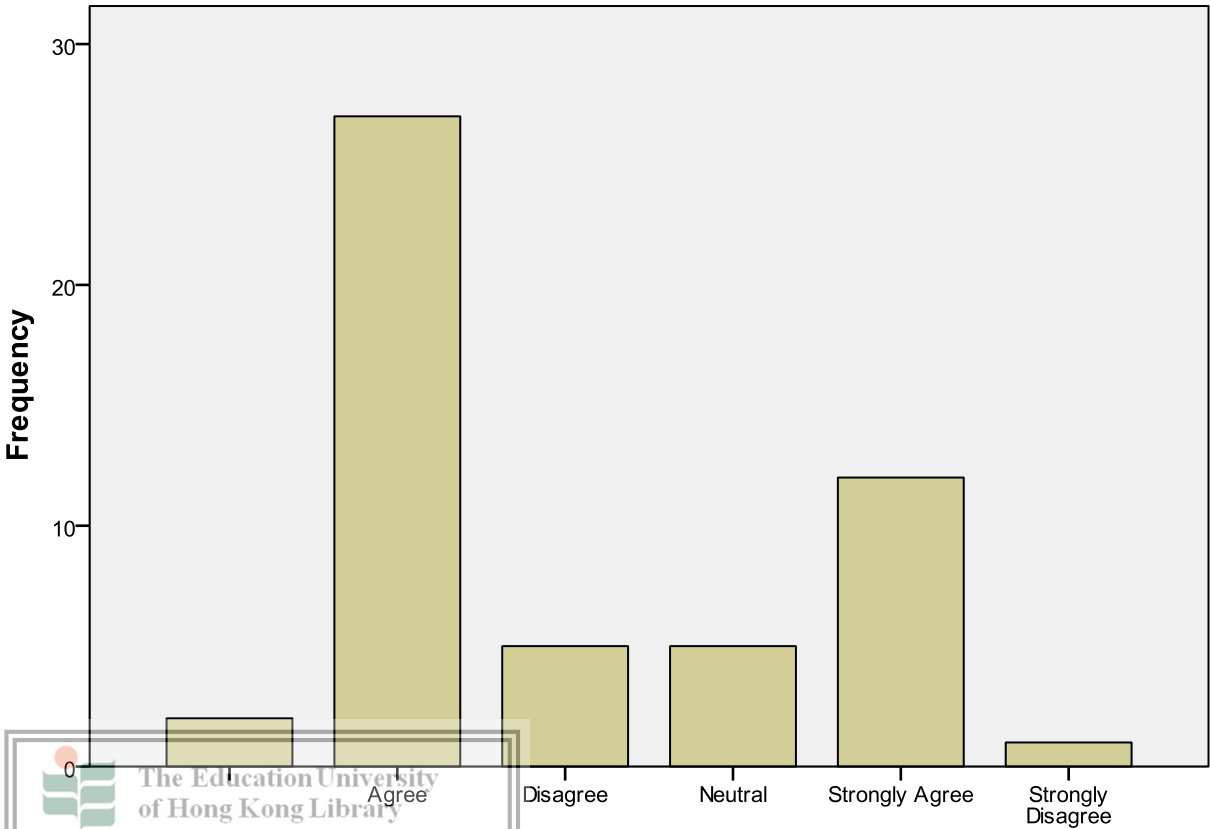


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		Overall, I am satisfied with the quality of my research higher degree experience.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	3.8	3.8	3.8
	Agree	27	51.9	51.9	55.8
	Disagree	5	9.6	9.6	65.4
	Neutral	5	9.6	9.6	75
	Strongly Agree	12	23.1	23.1	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	

Overall, I am satisfied with the quality of my research higher degree experience.



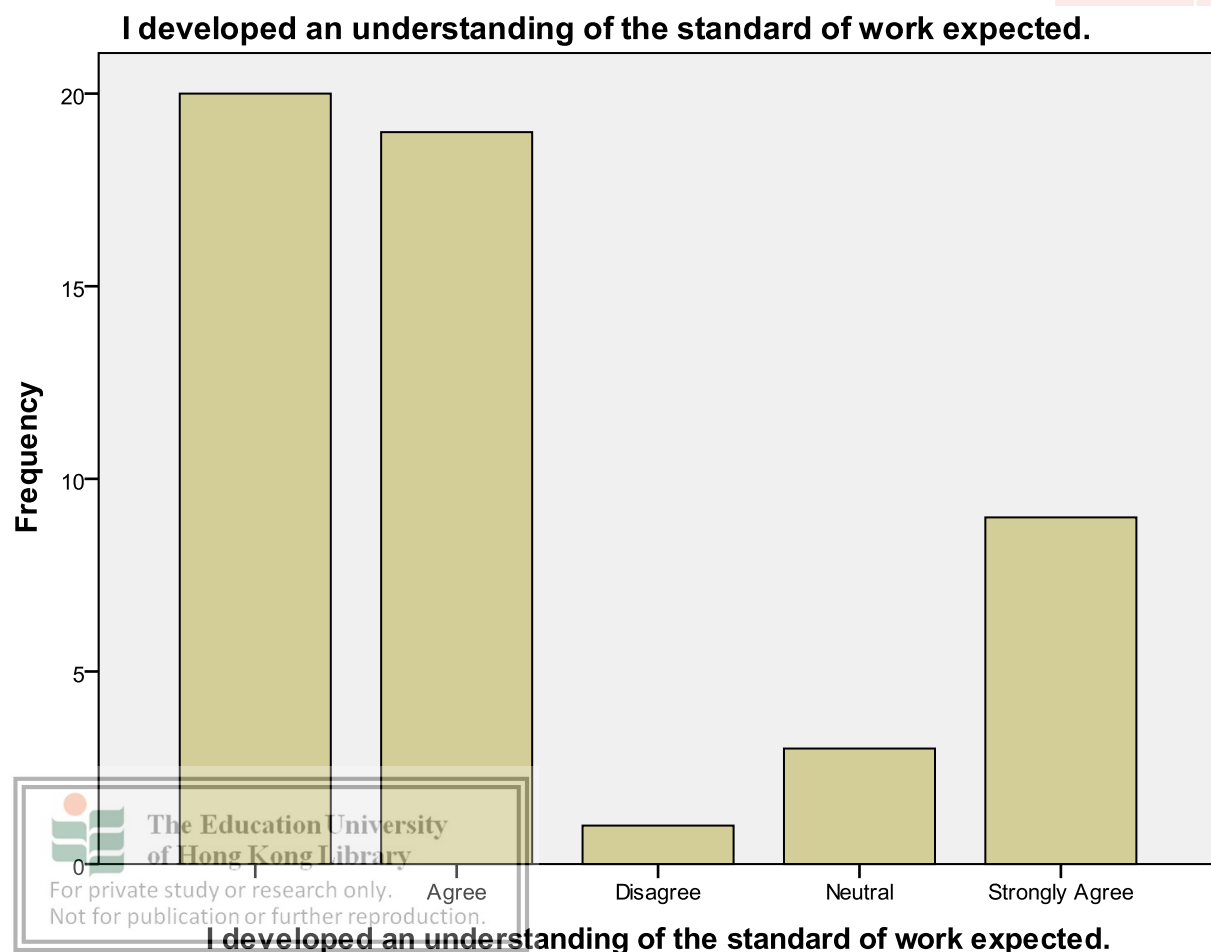
Goals and Expectations



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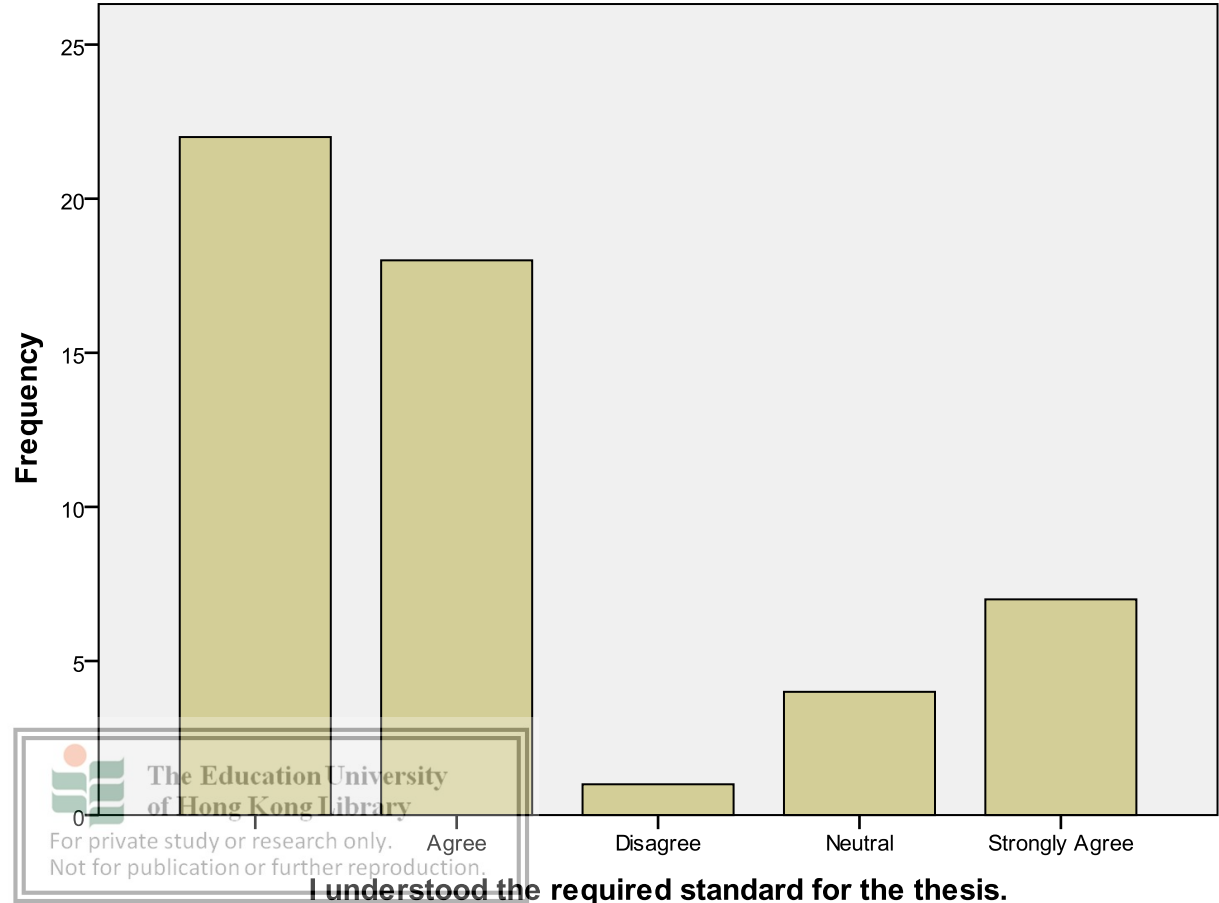
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		I developed an understanding of the standard of work expected.			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		20	38.5	38.5	38.5
	Agree	19	36.5	36.5	75
	Disagree	1	1.9	1.9	76.9
	Neutral	3	5.8	5.8	82.7
	Strongly Agree	9	17.3	17.3	100
	Total	52	100	100	



I understood the required standard for the thesis.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		22	42.3	42.3	42.3
	Agree	18	34.6	34.6	76.9
	Disagree	1	1.9	1.9	78.8
	Neutral	4	7.7	7.7	86.5
	Strongly Agree	7	13.5	13.5	100
	Total	52	100	100	

I understood the required standard for the thesis.



Thesis Examination

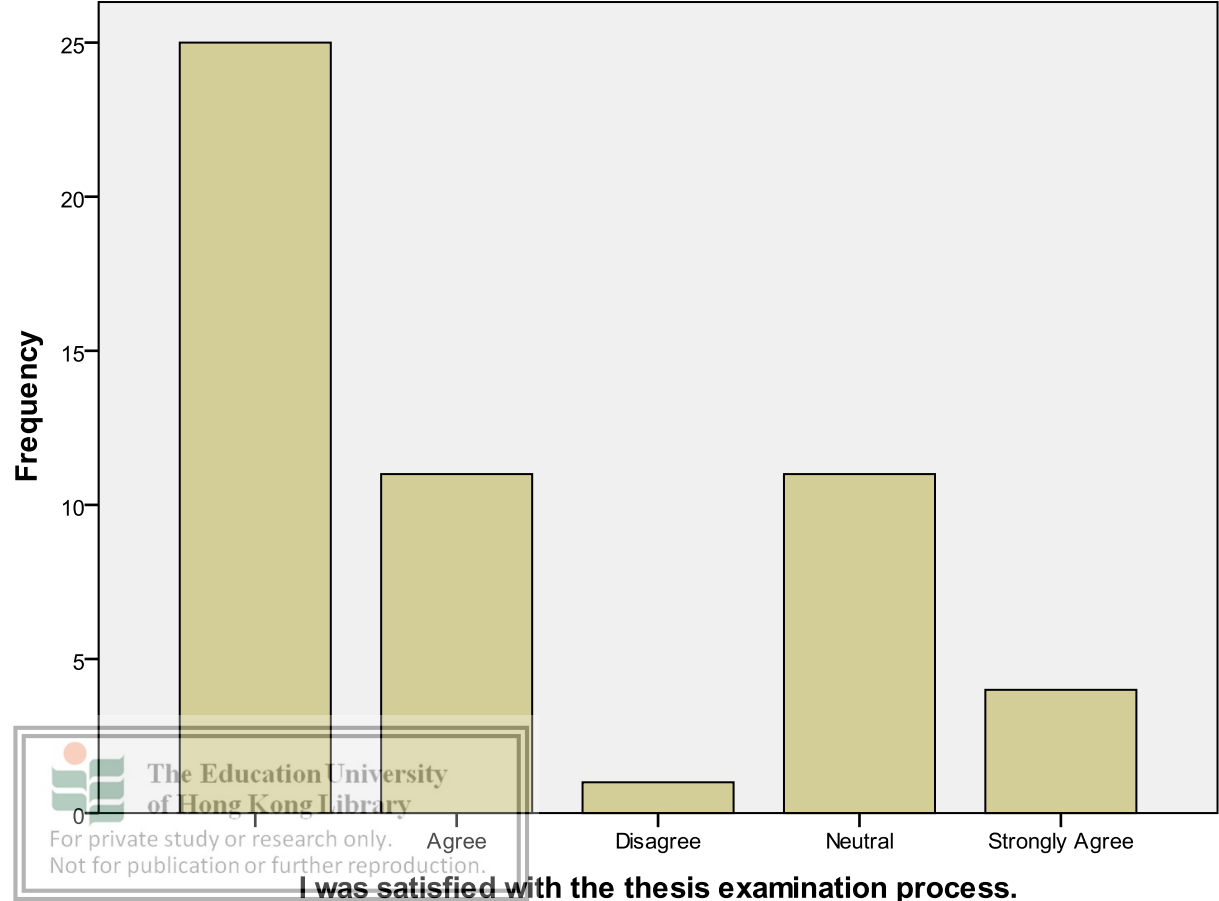


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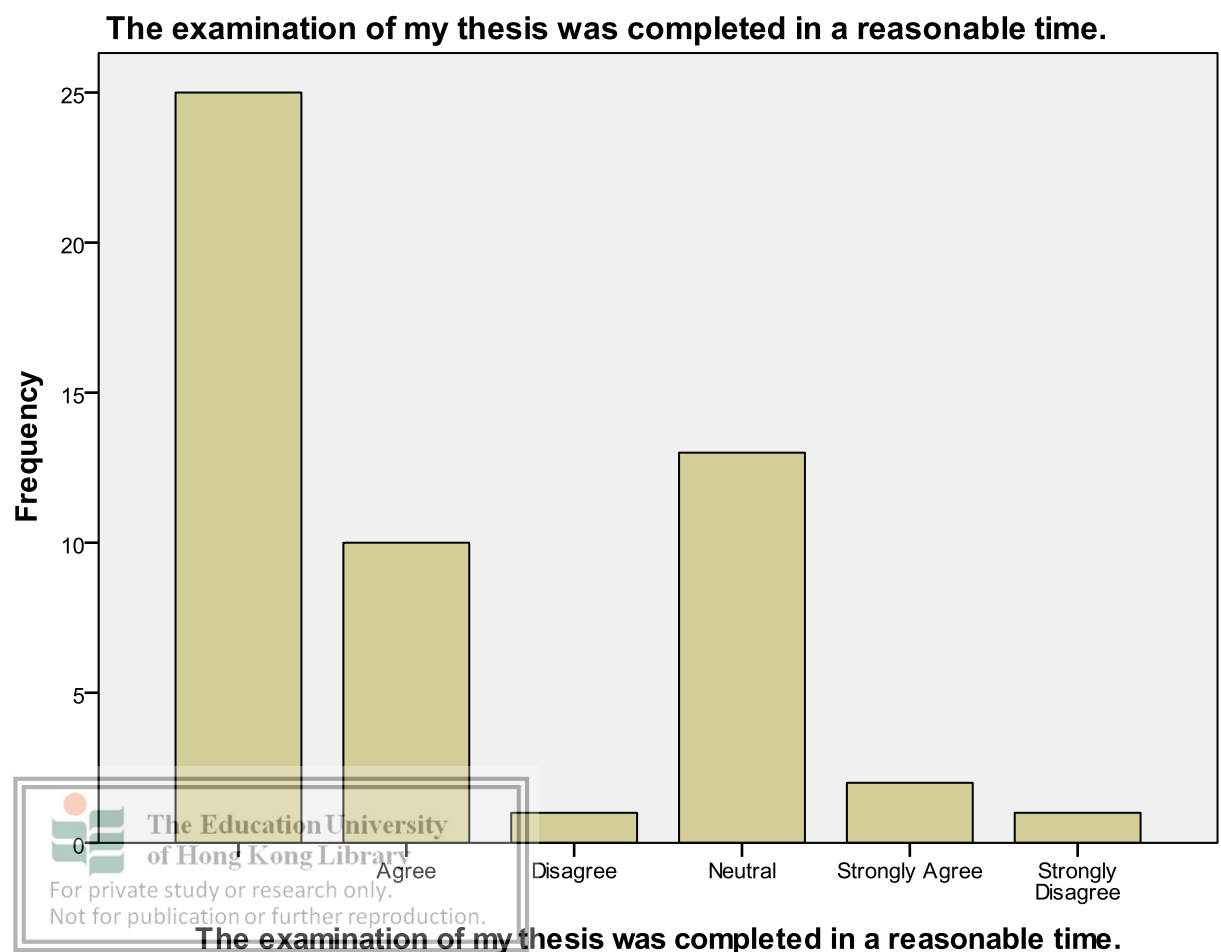
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I was satisfied with the thesis examination process.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		25	48.1	48.1	48.1
	Agree	11	21.2	21.2	69.2
	Disagree	1	1.9	1.9	71.2
	Neutral	11	21.2	21.2	92.3
	Strongly Agree	4	7.7	7.7	100
	Total	52	100	100	

I was satisfied with the thesis examination process.



The examination of my thesis was completed in a reasonable time.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		25	48.1	48.1	48.1
	Agree	10	19.2	19.2	67.3
	Disagree	1	1.9	1.9	69.2
	Neutral	13	25	25	94.2
	Strongly Agree	2	3.8	3.8	98.1
	Strongly Disagree	1	1.9	1.9	100
	Total	52	100	100	



Rasch Analysis



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SUMMARY OF 47 MEASURED ITEM

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	220.6	56.1	.00	.21	1.00	.0	1.01	-.1
S.D.	42.2	8.4	.54	.04	.28	1.2	.48	1.4
MAX.	267.0	62.0	1.15	.31	1.81	2.9	3.20	3.5
MIN.	92.0	28.0	-.91	.17	.49	-3.0	.46	-3.0
REAL RMSE	.22	TRUE SD	.49	SEPARATION	2.20	ITEM	RELIABILITY	.83
MODEL RMSE	.21	TRUE SD	.49	SEPARATION	2.33	ITEM	RELIABILITY	.84
S.E. OF ITEM MEAN = .08								

UMEAN=.0000 USCALE=1.0000

ITEM RAW SCORE-TO-MEASURE CORRELATION = -.81 (approximate due to missing data)

2636 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 4574.59 with 2397 d.f. p=.0000

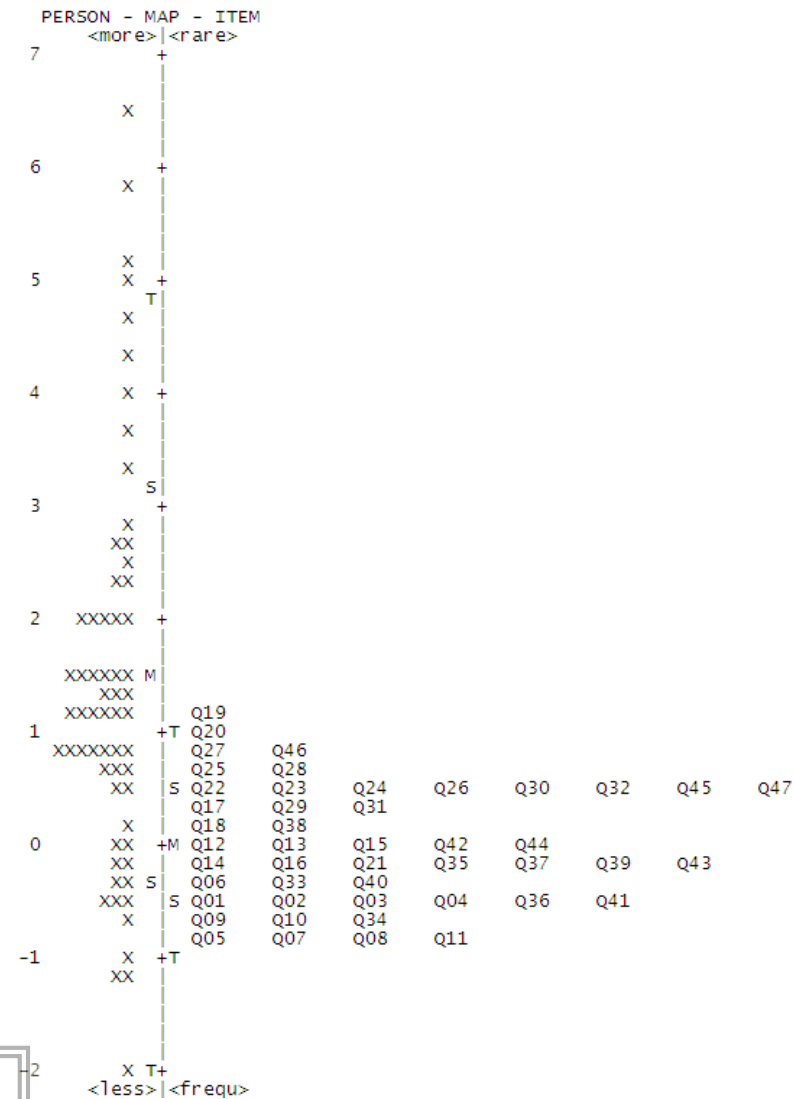
Global Root-Mean-Square Residual (excluding extreme scores): .6641



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INPUT: 62 PERSON 47 ITEM MEASURED: 62 PERSON 47 ITEM 225 CATS WINSTEPS 3.70.1.1



PERSON: REAL SEP.: 5.04 REL.: .96 ... ITEM: REAL SEP.: 2.20 REL.: .83

ITEM STATISTICS: MEASURE ORDER

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ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT OBS%	MATCH EXP%	ITEM	G
19	92	28	1.15	.26	1.71	2.4	2.01	3.1	.43	.69	17.9	51.3	Q19	0
20	151	46	1.00	.20	1.56	2.4	1.49	2.0	.62	.74	41.3	50.9	Q20	0
46	137	37	.87	.28	.80	-.9	.77	-1.0	.76	.69	70.3	60.3	Q46	0
27	185	55	.86	.19	.96	-.1	.98	.0	.71	.71	50.9	54.2	Q27	0
28	195	56	.69	.19	.49	-3.0	.46	-3.0	.83	.69	75.0	56.5	Q28	0
25	193	56	.59	.18	.94	-.3	.87	-.5	.73	.71	53.6	51.4	Q25	0
26	188	57	.58	.18	1.41	2.0	1.87	3.3	.58	.72	40.4	52.0	Q26	0
45	129	35	.58	.30	.87	-.5	.76	-.9	.75	.68	60.0	61.8	Q45	0
47	127	36	.55	.27	1.00	.1	1.10	.5	.66	.70	50.0	58.4	Q47	0
30	200	55	.54	.18	.71	-1.5	.73	-1.1	.71	.66	60.0	51.5	Q30	0
23	192	55	.51	.18	.78	-1.1	.72	-1.2	.76	.71	52.7	50.8	Q23	0
24	205	57	.47	.18	.64	-1.9	.59	-1.9	.77	.68	64.9	57.5	Q24	0
22	200	57	.44	.19	.91	-.4	.86	-.6	.72	.69	56.1	54.7	Q22	0
32	242	61	.43	.22	1.03	.2	.87	-.5	.66	.65	65.6	66.1	Q32	0
17	232	62	.39	.17	1.39	1.7	1.42	1.5	.60	.68	46.8	55.4	Q17	0
29	202	56	.34	.19	.67	-1.8	.61	-1.8	.78	.69	67.9	55.2	Q29	0
31	224	59	.33	.19	1.12	.6	1.53	1.7	.60	.66	61.0	64.5	Q31	0
18	226	61	.22	.19	1.32	1.5	1.32	1.4	.61	.69	54.1	58.3	Q18	0
38	241	59	.21	.22	.81	-.9	.69	-1.2	.70	.64	66.1	64.5	Q38	0
42	233	60	.02	.19	.66	-1.6	.61	-1.6	.76	.66	73.3	63.9	Q42	0
44	159	39	-.01	.31	.70	-1.2	.59	-1.6	.79	.65	69.2	70.5	Q44	0
13	239	62	-.04	.18	1.20	1.0	1.36	1.3	.60	.67	50.0	56.5	Q13	0
12	245	62	-.07	.17	.94	-.2	1.93	2.4	.63	.66	50.0	55.4	Q12	0
15	210	53	-.08	.19	.73	-1.3	.94	-.1	.69	.66	54.7	56.3	Q15	0
16	244	61	-.10	.18	.98	.0	1.24	.9	.59	.64	57.4	59.5	Q16	0
39	237	60	-.12	.21	.88	-.5	.80	-.8	.69	.64	75.0	63.6	Q39	0
14	245	61	-.13	.18	.92	-.3	.99	.1	.63	.64	62.3	59.4	Q14	0
37	243	61	-.13	.20	.74	-1.2	.59	-1.7	.72	.64	68.9	62.9	Q37	0
21	240	62	-.14	.21	.81	-.8	.77	-1.0	.71	.65	67.7	64.8	Q21	0
35	249	60	-.16	.24	.79	-1.0	.69	-1.2	.71	.63	71.7	67.0	Q35	0
43	171	41	-.23	.31	.83	-.6	.74	-.8	.69	.63	68.3	71.2	Q43	0
40	246	58	-.35	.23	1.53	2.3	1.25	.8	.47	.61	58.6	63.2	Q40	0
6	256	62	-.37	.20	1.16	.7	.82	-.5	.64	.61	71.0	64.5	Q06	0
33	245	59	-.41	.25	.95	-.2	.86	-.5	.62	.61	69.5	69.3	Q33	0
36	243	58	-.44	.21	.96	-.1	.83	-.5	.62	.59	70.7	63.1	Q36	0
41	252	60	-.49	.25	1.11	.6	.98	.0	.59	.62	75.0	68.0	Q41	0
3	261	62	-.49	.19	1.29	1.2	1.16	.5	.57	.60	58.1	58.0	Q03	0
1	263	62	-.53	.18	1.81	2.9	3.20	3.5	.42	.60	59.7	58.4	Q01	0
4	263	62	-.53	.19	1.02	.1	.76	-.5	.62	.60	61.3	57.9	Q04	0
2	265	62	-.57	.19	.90	-.3	.66	-.7	.62	.59	58.1	59.2	Q02	0
10	245	59	-.65	.20	1.13	.7	1.15	.5	.60	.63	64.4	58.1	Q10	0
34	248	59	-.67	.22	.94	-.2	.70	-1.0	.65	.60	72.9	66.9	Q34	0
9	258	61	-.70	.20	.99	.0	.86	-.2	.63	.61	67.2	58.0	Q09	0
7	262	61	-.80	.19	.94	-.2	.97	.1	.61	.60	70.5	61.0	Q07	0
8	263	61	-.82	.20	1.19	.9	.79	-.4	.58	.59	67.2	60.7	Q08	0
5	254	59	-.82	.20	.89	-.4	.68	-.6	.63	.59	66.1	60.6	Q05	0
11	267	61	-.91	.21	.91	-.3	.74	-.5	.61	.57	68.9	63.8	Q11	0
MEAN	220.6	56.1	.00	.21	1.00	.0	1.01	-.1			61.3	59.9		
S.D.	42.2	8.4	.54	.04	.28	1.2	.48	1.4			10.9	5.3		



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ITEM STATISTICS: MISFIT ORDER

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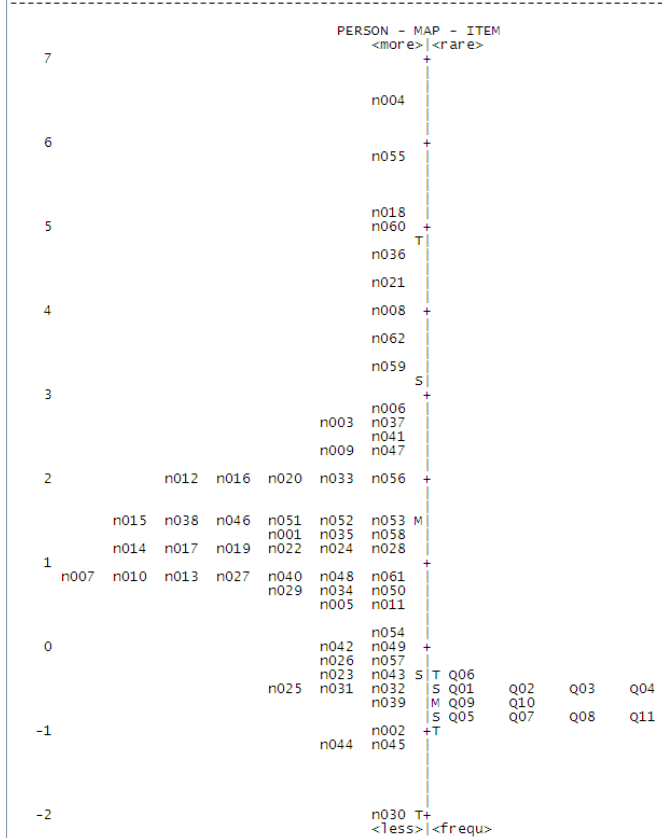
ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ ZSTD	OUTFIT MNSQ ZSTD	PT-MEASURE CORR. EXP.	EXACT OBS%	MATCH EXP%	ITEM	G			
1	263	62	-.53	.18	1.81	2.9	3.20	3.5	A .42	.60	59.7	58.4	Q01	0
19	92	28	1.15	.26	1.71	2.4	2.01	3.1	B .43	.69	17.9	51.3	Q19	0
12	245	62	-.07	.17	.94	-.2	1.93	2.4	C .63	.66	50.0	55.4	Q12	0
26	188	57	.58	.18	1.41	2.0	1.87	3.3	D .58	.72	40.4	52.0	Q26	0
20	151	46	1.00	.20	1.56	2.4	1.49	2.0	E .62	.74	41.3	50.9	Q20	0
40	246	58	-.35	.23	1.53	2.3	1.25	.8	F .47	.61	58.6	63.2	Q40	0
31	224	59	.33	.19	1.12	.6	1.53	1.7	G .60	.66	61.0	64.5	Q31	0
17	232	62	.39	.17	1.39	1.7	1.42	1.5	H .60	.68	46.8	55.4	Q17	0
13	239	62	-.04	.18	1.20	1.0	1.36	1.3	I .60	.67	50.0	56.5	Q13	0
18	226	61	.22	.19	1.32	1.5	1.32	1.4	J .61	.69	54.1	58.3	Q18	0
3	261	62	-.49	.19	1.29	1.2	1.16	.5	K .57	.60	58.1	58.0	Q03	0
16	244	61	-.10	.18	.98	.0	1.24	.9	L .59	.64	57.4	59.5	Q16	0
8	263	61	-.82	.20	1.19	.9	.79	-.4	M .58	.59	67.2	60.7	Q08	0
6	256	62	-.37	.20	1.16	.7	.82	-.5	N .64	.61	71.0	64.5	Q06	0
10	245	59	-.65	.20	1.13	.7	1.15	.5	O .60	.63	64.4	58.1	Q10	0
41	252	60	-.49	.25	1.11	.6	.98	.0	P .59	.62	75.0	68.0	Q41	0
47	127	36	.55	.27	1.00	.1	1.10	.5	Q .66	.70	50.0	58.4	Q47	0
32	242	61	.43	.22	1.03	.2	.87	-.5	R .66	.65	65.6	66.1	Q32	0
4	263	62	-.53	.19	1.02	.1	.76	-.5	S .62	.60	61.3	57.9	Q04	0
9	258	61	-.70	.20	.99	.0	.86	-.2	T .63	.61	67.2	58.0	Q09	0
14	245	61	-.13	.18	.92	-.3	.99	.1	U .63	.64	62.3	59.4	Q14	0
27	185	55	.86	.19	.96	-.1	.98	.0	V .71	.71	50.9	54.2	Q27	0
7	262	61	-.80	.19	.94	-.2	.97	.1	W .61	.60	70.5	61.0	Q07	0
36	243	58	-.44	.21	.96	-.1	.83	-.5	X .62	.59	70.7	63.1	Q36	0
33	245	59	-.41	.25	.95	-.2	.86	-.5	Y .62	.61	69.5	69.3	Q33	0
25	193	56	.59	.18	.94	-.3	.87	-.5	Z .73	.71	53.6	51.4	Q25	0
34	248	59	-.67	.22	.94	-.2	.70	-1.0	aa .65	.60	72.9	66.9	Q34	0
15	210	53	-.08	.19	.73	-1.3	.94	-.1	t .69	.66	54.7	56.3	Q15	0
22	200	57	.44	.19	.91	-.4	.86	-.6	s .72	.69	56.1	54.7	Q22	0
11	267	61	-.91	.21	.91	-.3	.74	-.5	r .61	.57	68.9	63.8	Q11	0
2	265	62	-.57	.19	.90	-.3	.66	-.7	q .62	.59	58.1	59.2	Q02	0
5	254	59	-.82	.20	.89	-.4	.68	-.6	p .63	.59	66.1	60.6	Q05	0
39	237	60	-.12	.21	.88	-.5	.80	-.8	o .69	.64	75.0	63.6	Q39	0
45	129	35	.58	.30	.87	-.5	.76	-.9	n .75	.68	60.0	61.8	Q45	0
43	171	41	-.23	.31	.83	-.6	.74	-.8	m .69	.63	68.3	71.2	Q43	0
21	240	62	-.14	.21	.81	-.8	.77	-1.0	l .71	.65	67.7	64.8	Q21	0
38	241	59	.21	.22	.81	-.9	.69	-1.2	k .70	.64	66.1	64.5	Q38	0
46	137	37	.87	.28	.80	-.9	.77	-1.0	j .76	.69	70.3	60.3	Q46	0
35	249	60	-.16	.24	.79	-1.0	.69	-1.2	i .71	.63	71.7	67.0	Q35	0
23	192	55	.51	.18	.78	-1.1	.72	-1.2	h .76	.71	52.7	50.8	Q23	0
37	243	61	-.13	.20	.74	-1.2	.59	-1.7	g .72	.64	68.9	62.9	Q37	0
30	200	55	.54	.18	.71	-1.5	.73	-1.1	f .71	.66	60.0	51.5	Q30	0
44	159	39	-.01	.31	.70	-1.2	.59	-1.6	e .79	.65	69.2	70.5	Q44	0
29	202	56	.34	.19	.67	-1.8	.61	-1.8	d .78	.69	67.9	55.2	Q29	0
42	233	60	.02	.19	.66	-1.6	.61	-1.6	c .76	.66	73.3	63.9	Q42	0
24	205	57	.47	.18	.64	-1.9	.59	-1.9	b .77	.68	64.9	57.5	Q24	0
28	195	56	.69	.19	.49	-3.0	.46	-3.0	a .83	.69	75.0	56.5	Q28	0
MEAN	220.6	56.1	.00	.21	1.00	.0	1.01	-.1			61.3	59.9		
S.D.	42.2	8.4	.54	.04	.28	1.2	.48	1.4			10.9	5.3		



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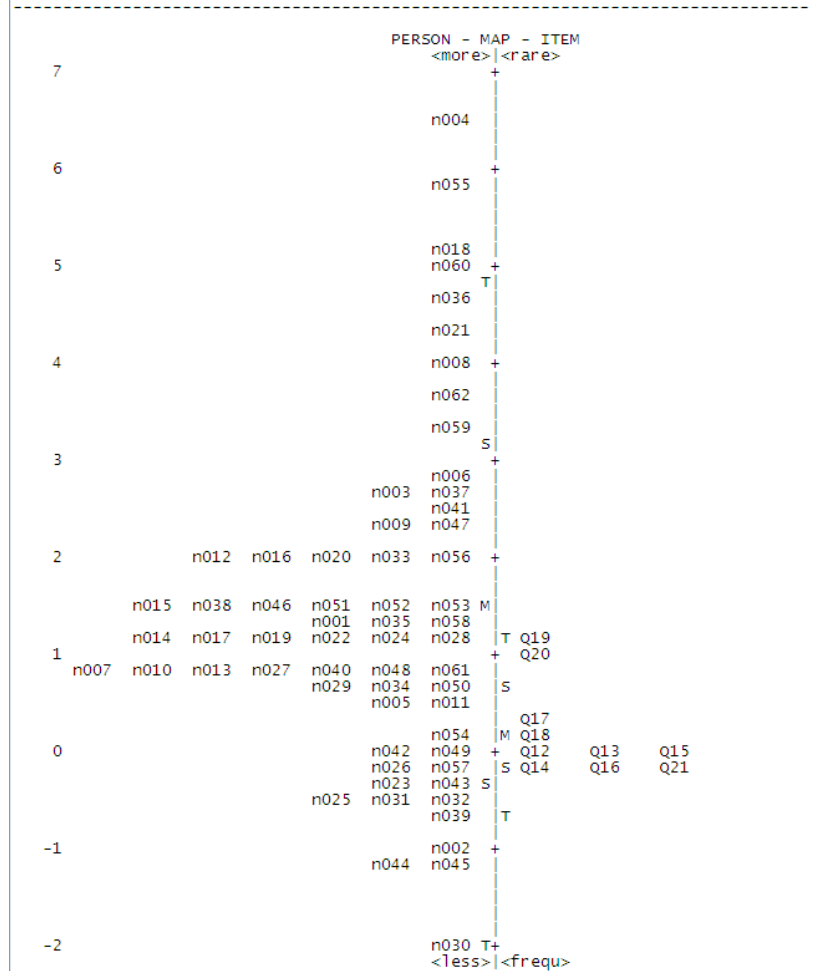
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INPUT: 62 PERSON 47 ITEM MEASURED: 62 PERSON 11 ITEM 225 CAT'S WINSTEPS 3.70.1.1
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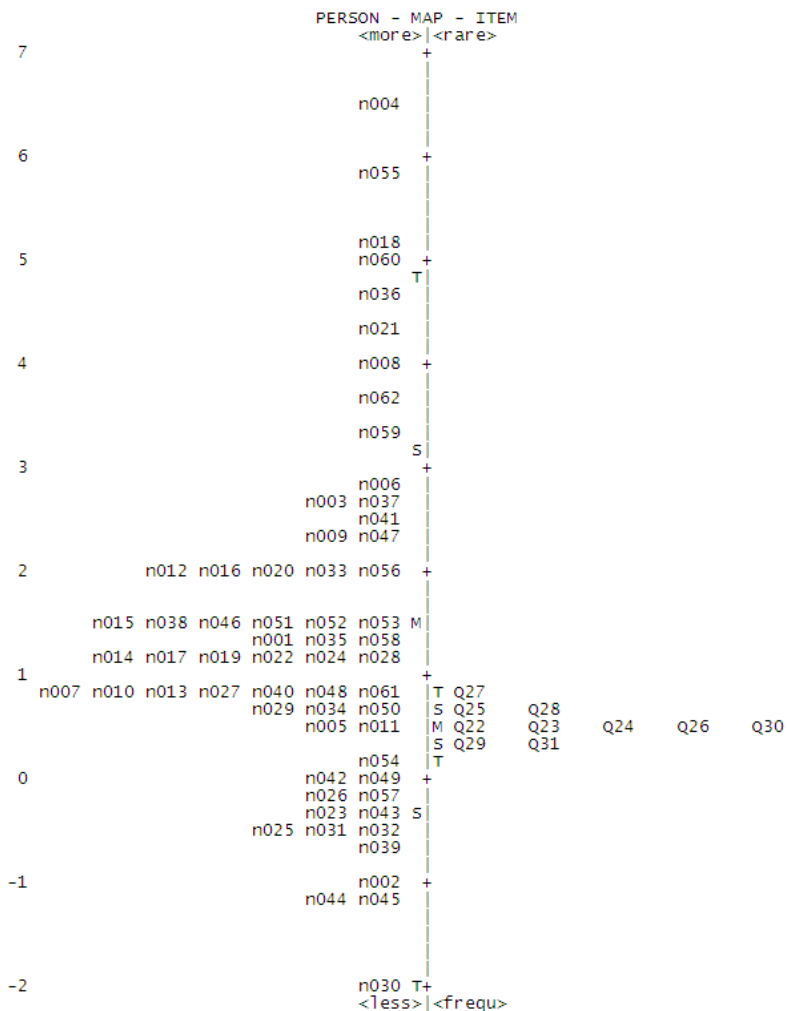
Supervision Subscale


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INPUT: 62 PERSON 47 ITEM MEASURED: 62 PERSON 10 ITEM 225 CAT'S WINSTEPS 3.70.1.1
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Infrastructure and Services Subscale

INPUT: 62 PERSON 47 ITEM MEASURED: 62 PERSON 10 ITEM 225 CATS WINSTEPS 3.70.1.1



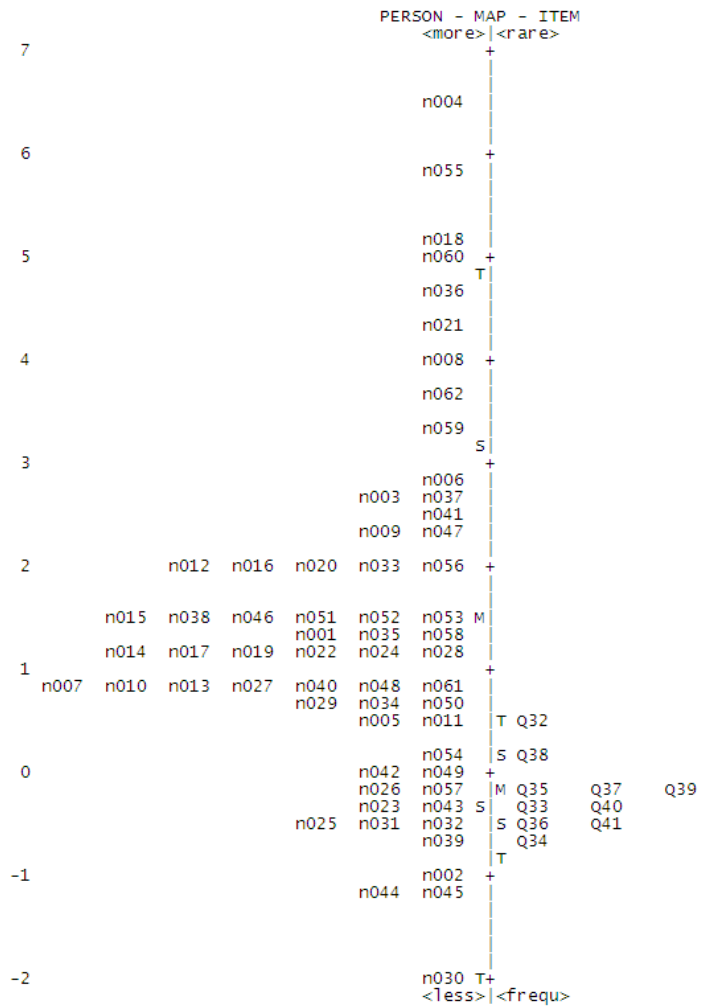
Intellectual and Social Climate Subscale



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Generic Skills Subscale



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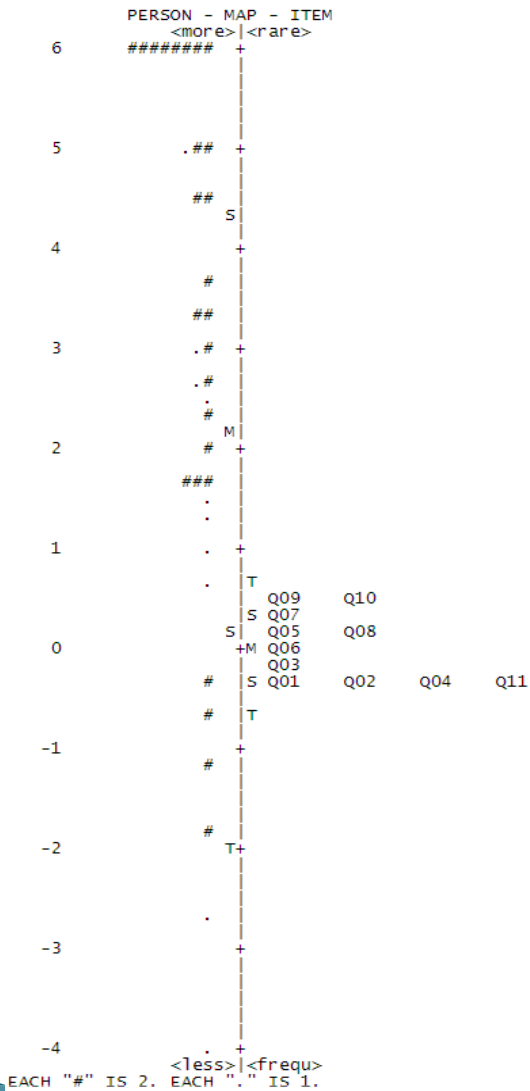
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Supervision Subscale

INPUT: 62 PERSON 11 ITEM MEASURED: 62 PERSON 11 ITEM 49 CATS WINSTEPS 3.70.1.1

PERSON: REAL SEP.: 2.47 REL.: .86 ... ITEM: REAL SEP.: .40 REL.: .14

ITEM STATISTICS: MEASURE ORDER

ENTRY	TOTAL	TOTAL	MODEL	INFIT	OUTFIT	PT-MEASURE	EXACT MATCH								
NUMBER	SCORE	COUNT	MEASURE	S.E.	MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.	OBS%	EXP%	ITEM	G	
9	258	61	.51	.28	.75	-1.2	.71	-1.4	.85	.81	80.0	67.2	Q09	0	
10	245	59	.49	.29	1.47	2.0	1.69	2.5	.76	.83	62.8	66.9	Q10	0	
7	262	61	.31	.27	.88	-.5	1.79	2.2	.78	.78	68.9	65.3	Q07	0	
5	254	59	.17	.29	.55	-2.4	.55	-2.1	.85	.79	76.7	67.0	Q05	0	
8	263	61	.17	.29	1.06	.4	.81	-.8	.79	.79	80.0	66.3	Q08	0	
6	256	62	-.04	.30	.71	-1.0	.60	-1.2	.87	.83	78.3	74.2	Q06	0	
3	261	62	-.24	.27	1.61	2.3	1.74	2.7	.77	.83	65.2	66.0	Q03	0	
1	263	62	-.31	.26	2.28	4.2	2.42	4.4	.70	.81	63.0	65.1	Q01	0	
4	263	62	-.32	.26	.68	-1.5	.70	-1.4	.85	.82	78.3	64.8	Q04	0	
11	267	61	-.33	.30	.50	-2.9	.44	-2.8	.85	.77	73.3	68.3	Q11	0	
2	265	62	-.41	.26	.47	-2.8	.45	-2.9	.87	.81	76.1	64.7	Q02	0	
MEAN	259.7	61.1	.00	.28	1.00	-.3	1.08	-.1			73.0	66.9			
S.D.	5.9	1.1	.33	.02	.54	2.2	.66	2.4			6.5	2.5			

Supervision Subscale

SUMMARY OF 11 MEASURED (NON-EXTREME) ITEM

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	259.7	61.1	.00	.28	1.00	-.3	1.08	-.1
S.D.	5.9	1.1	.33	.02	.54	2.2	.66	2.4
MAX.	267.0	62.0	.51	.30	2.28	4.2	2.42	4.4
MIN.	245.0	59.0	-.41	.26	.47	-2.9	.44	-2.9
REAL RMSE	.31	TRUE SD	.12	SEPARATION	.40	ITEM	RELIABILITY	.14
MODEL RMSE	.28	TRUE SD	.18	SEPARATION	.63	ITEM	RELIABILITY	.28
S.E. OF ITEM MEAN = .10								

U_{MEAN}= .0000 U_{SCALE}=1.0000

ITEM RAW SCORE-TO-MEASURE CORRELATION = -.68

496 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 716.36 with 413 d.f. p=.0000

Global Root-Mean-Square Residual (excluding extreme scores): .5397

Supervision Subscale

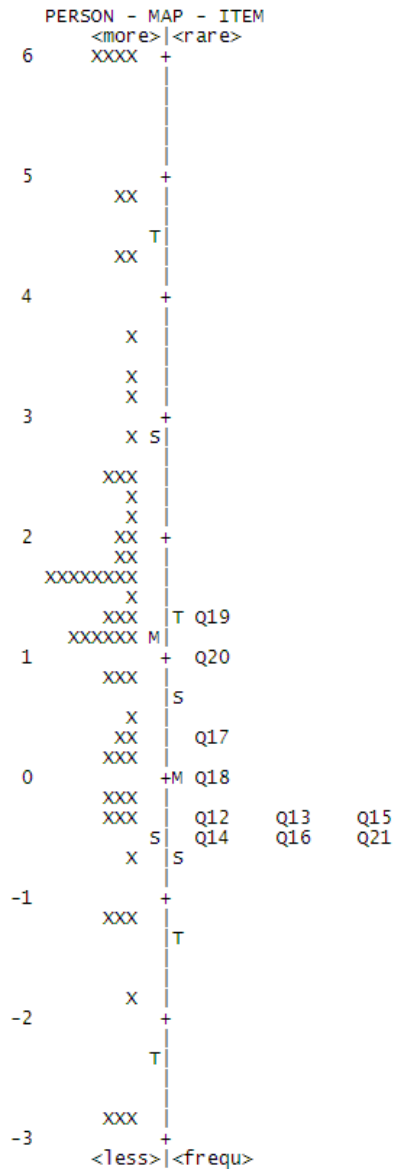


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HKIEd

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INPUT: 62 PERSON 10 ITEM MEASURED: 62 PERSON 10 ITEM 50 CATS WINSTEPS 3.70.1.1
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Infrastructure and Services Subscale

INPUT: 62 PERSON 10 ITEM MEASURED: 62 PERSON 10 ITEM 50 CATS WINSTEPS 3.70.1.1

PERSON: REAL SEP.: 2.59 REL.: .87 ... ITEM: REAL SEP.: 2.41 REL.: .85

ITEM STATISTICS: MEASURE ORDER

ENTRY	TOTAL	TOTAL	MODEL	INFIT	OUTFIT	PT-MEASURE	EXACT MATCH								
NUMBER	SCORE	COUNT	MEASURE	S.E.	MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.	OBS%	EXP%	ITEM	G	
8	92	28	1.30	.29	1.32	1.2	1.44	1.6	.67	.75	26.9	49.5	Q19	0	
9	151	46	1.05	.23	1.86	3.3	1.81	3.1	.67	.81	41.9	52.8	Q20	0	
6	232	62	.25	.19	1.41	1.7	1.43	1.6	.69	.74	56.9	58.4	Q17	0	
7	226	61	-.08	.22	1.18	1.0	1.17	.9	.73	.76	66.7	59.8	Q18	0	
4	210	53	-.30	.21	.46	-2.9	.46	-2.6	.81	.73	75.5	58.1	Q15	0	
2	239	62	-.30	.20	.81	-1.0	.73	-1.4	.77	.73	65.5	56.9	Q13	0	
1	245	62	-.39	.20	.92	-.3	.88	-.5	.73	.72	67.2	56.5	Q12	0	
5	244	61	-.48	.22	.86	-.6	.71	-1.3	.76	.71	66.7	63.8	Q16	0	
3	245	61	-.51	.21	.71	-1.4	.72	-1.3	.75	.71	70.2	62.9	Q14	0	
10	240	62	-.53	.24	.67	-1.6	.61	-1.8	.81	.73	74.1	68.3	Q21	0	
MEAN	212.4	55.8	.00	.22	1.02	-.1	1.00	-.2			61.2	58.7			
S.D.	48.4	10.5	.63	.03	.40	1.7	.42	1.8			14.6	5.2			

Infrastructure and Services Subscale



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SUMMARY OF 10 MEASURED (NON-EXTREME) ITEM

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	212.4	55.8	.00	.22	1.02	-.1	1.00	-.2
S.D.	48.4	10.5	.63	.03	.40	1.7	.42	1.8
MAX.	245.0	62.0	1.30	.29	1.86	3.3	1.81	3.1
MIN.	92.0	28.0	-.53	.19	.46	-2.9	.46	-2.6
REAL RMSE	.24	TRUE SD	.58	SEPARATION	2.41	ITEM	RELIABILITY	.85
MODEL RMSE	.22	TRUE SD	.59	SEPARATION	2.67	ITEM	RELIABILITY	.88
S.E. OF ITEM MEAN = .21								

UMEAN=.0000 USCALE=1.0000

ITEM RAW SCORE-TO-MEASURE CORRELATION = -.93 (approximate due to missing data)

521 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 925.73 with 424 d.f. p=.0000

Global Root-Mean-Square Residual (excluding extreme scores): .6456

Supervision Subscale



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