University of Edinburgh

1. Introductory seminar: 18th November 2009

1.1 Group Feedback

- **In what ways do you think you could benefit from being a member of AQM*e*N?**
  - Networking
  - Increase the number of social science staff with an awareness of an interest in QM – so some 'basic' level training rqd as well as more advanced
  - Access to advice – posting questions on data analysis and receiving one (or several) replies
  - Flexibility of membership – ability to participate in different ways
  - Awareness of methods beyond basics – although need to be clear of definitions. What do people consider to be advanced?
  - Personal learning and research
  - Materials for teaching
  - Training new staff
  - Training based in Scotland so less cost for PhDstudents
  - Access to an online 'statistical glossary'
  - Statistical Advisory service – being able to contact an expert on own work

- **What type of events would you like to see?**
  - Event on 'mixed methods'
  - Set piece lectures and seminars but also online materials which you can access at your own pace and time
  - Joint events with non-academics can be beneficial to encourage …?
  - Local hands on training
  - E-learning
  - Video
  - Lectures
  - Continuity of training – several consecutive workshops/one big workshop followed by online training
  - Online "Moving to STATA from SPSS" video, like the "Moving to MAC from PC" material
  - Course on interpretation/presentation of complex results

- **What features of the website would you use?**
  - Stats advice, for example a discussion forum for pooling queries or problems (needs little more than email distribution list)
  - Advice forum
  - Online teaching materials but also access to "experts" if you get stuck on a specific point
  - Pointers to basic data and .. society?
  - Training materials
  - Events notification

- **What type of online learning would be most useful to you?**
  e.g. Video lectures, audio, powerpoint, demo, interactive courses…

  - Depends on content
  - Interactive courses combined with video lectures.
  - Analysis only really makes sense when you combine it to data which you have some connection with.
  - Courses
  - Written practical examples with downloadable learning/practice datasets with syntax files
  - No video/audio – unlikely to be useful for advanced people

1.2 Notes from Discussion

John McInnes: Few teaching staff have basic skills and left to those to have them to do teaching, need to convince wide range of staff of need for stats skills. Would like basic level training.

London event on 'Using data in teaching' very popular. Should run something like this at a local level. But this is basic training? Cristina not sure network should do this.

Celia: wants to encourage use of established datasets, find out what training people need via network (may not have picked this up right)

Valeria: wants training in how to present and interpret data.

General awareness seminars about techniques useful, so people can decide what techniques they would like to learn.

Follow up and support after events is important.

An ESDS workshop/seminar on data sets.

May be worth working with psychologists to think about presentation of data to non-statisticians.
Need to identify local experts to support online materials

A blended learning approach should be considered.

E Learning resources available in Moray House
- most staff use QM
- research into how people learn online
- Sian Bain, Hamish Mcleod, Rory Ewins (Bulletin Boards)

Suggestions for Advisory Group members
- Peter Diggle

- Harvey Goldstein
- Christopher Weiss

Statistical Advisory Service: should find out if preference for expert answer in depth or a fast answer from less expert? Need to evolve timeframe for response to requests.]

1.3 Attendees

Elisabet Weedon	Moray House / CREID
Tania Smith	PhD / Edinburgh
Stephen Sharp	Visitor / Moray House
Valeria Skafida	Social Policy CRFR / Edinburgh
Morag Christine Treanor	PhD Social Policy / Edinburgh
Tom G Macintyre	Moray House
Gitit Kadar Satat	PhD Moray House
Lesley Kelly	GUS Dissemination Officer CRFR
B.K.Satish	PhD Architecture
Dorothy Currie	Senior Statistician/Edinburgh
Kate Orton	Senior Lecturer
Angus Bancroft	Sociology/Edinburgh
Fiona Mackay	Director Graduate SPSS/Ed
Cristina Iannelli	
Cecilia MacIntyre	Scottish Government
Jan Eichhorn	PhD Sociology/Edinburgh
John MacInnes	
Linda Croxford	

Convened by Susan McVie.

(Shaded people actually attended, otherwise registered but did not attend.)

2. Survey Results

Discipline

	N	%
Architecture	1	3.7
Economics, Finance, Management, Business, Marketing	3	11.1
Education	6	22.2
Geography, Geosciences, Environmental Studies	1	3.7
Health Related	2	7.4
Law and Criminology	1	3.7
Linguistics, Languages	1	3.7
Other	1	3.7
Politics, Employment Research	3	11.1
Sociology, Social Policy	8	29.6
Total responding	27	100.0

General level of expertise in quantitative methods

	N	%
1.Not given	1	4
2.Non-user of all methods	4	15
3.Beginner level in at least one descriptive method	1	4
4.Intermediate level in at least one descriptive method	1	4
5.Intermediate level in at least one advanced method (beyond linear regression)	9	33
6.Advanced level in at least one advanced method (beyond linear regression)	11	41

How would you describe yourself?

	N	%
	10	37.0
Professional statistician	3	11.1
Regular user of quantitative methods	10	37.0
Occasional user of quantitative methods	3	11.1
Non user but consumer of results of quantitative analysis	1	3.7
Total responding	27	100.0

Note: This question was added later and only some respondents have answered

Expertise: Descriptive quantitative analysis

	Percentage respondents with each level of expertise				
	Advanced	Intermediate	Beginner	Non user	Not given
Frequencies, cross-tabulation, means etc	70	15	.	11	4
Comparing frequencies or means	67	19	4	7	4
Graphical output (eg bar-charts, histograms, pie-charts etc)	63	22	.	7	7
Transforming data distributions (eg log, quadratic)	33	22	7	30	7
Indices of inequality (eg GINI index)	19	15	4	52	11
Measures of association (eg correlation)	56	26	4	11	4

Expertise: Regression analysis

	Percentage respondents with each level of expertise				
	Advanced	Intermediate	Beginner	Non user	Not given
Simple/multiple linear	48	19	7	22	4
Log-linear	19	19	11	44	7
Logistic/ordinal/multinomial	33	33	7	19	7
Other (eg poisson, negative binomial)	15	15	4	56	11

Expertise: Longitudinal analysis

	Percentage respondents with each level of expertise				
	Advanced	Intermediate	Beginner	Non user	Not given
Event history analysis	4	22	.	56	19
Times series analysis	11	22	.	52	15
Trajectory modelling	4	4	.	74	19
Other longitudinal analysis	4	19	4	44	30

Expertise: Grouping analysis

	Percentage respondents with each level of expertise				
	Advanced	Intermediate	Beginner	Non user	Not given
Principal components/factor analysis	22	26	11	33	7
Cluster/classification analysis	11	26	11	44	7
Latent class analysis	11	11	4	59	15
Multi-dimensional scaling	.	7	.	78	15

Expertise: Other complex analysis methods

	Percentage respondents with each level of expertise				
	Advanced	Intermediate	Beginner	Non user	Not given
Probability, set theory, matrix algebra	11	19	4	63	4
Multi-level modelling	11	22	7	48	11
Structural equation modelling	7	7	.	74	11
Spatial analysis/modelling	.	4	4	81	11
Geographically weighted regression	.	4	.	85	11
Econometric techniques	4	15	4	70	7
Simulation and risk analysis	4	4	4	74	15
Missing value analysis/imputation	15	22	7	48	7
Content analysis (eg NVivo)	.	11	4	74	11

Expertise: Software packages

	Percentage respondents with each level of expertise				
	Advanced	Intermediate	Beginner	Non user	Not given
SPSS	59	19	15	4	4
Stata	11	19	4	41	26
SAS	7	11	.	59	22
R/S/SPlus	7	15	.	48	30
Minitab	4	11	.	56	30
GAUSS	.	.	.	67	33
Amos	4	.	.	70	26
Lisrel	.	.	.	70	30
MPlus	4	.	.	63	33
LatentGold	.	.	.	70	30
MLWin	7	22	.	44	26
ARC/gis	.	4	4	63	30
BUGS (OpenBUGS WinBUGS etc)	4	.	4	59	33

Expertise: Which of the following datasets to you use, and how often?

	Percentage of respondents			
	Use regularly	Used once or occasionally	Do not use	Not given
Growing Up in Scotland (GUS)	11	7	41	41
Scottish School Leavers Survey	7	.	52	41
Scottish Crime Survey	4	7	48	41
Scottish Social Attitudes Survey	7	19	37	37
Scottish Health Survey	.	7	52	41
Scottish Household Survey	19	4	37	41
Scottish components of national datasets (eg BHPS)	7	7	48	37
Other Scottish datasets	11	15	26	48

	Percentage of respondents			
	Use regularly	Used once or occasionally	Do not use	Not given
Other UK datasets	26	15	26	33
Other datasets	33	11	15	41

Training requirements: Descriptive quantitative analysis

	Number requiring training	Percentage of respondents at each level (of those requiring training)				
		Advanced	Intermediate	Beginner	Non user	Not given
Frequencies, cross-tabulation, means etc	3	.	33	.	67	.
Comparing frequencies or means	3	.	67	.	33	.
Graphical output (eg bar-charts, histograms, pie-charts etc)	4	50	.	.	25	25
Transforming data distributions (eg log, quadratic)	6	.	17	17	50	17
Indices of inequality (eg GINI index)	5	.	20	.	40	40
Measures of association (eg correlation)	4	.	25	25	50	.

Training requirements: Regression analysis

	Number requiring training	Percentage of respondents at each level (of those requiring training)				
		Advanced	Intermediate	Beginner	Non user	Not given
Simple/multiple linear	7	.	14	29	57	.
Log-linear	10	.	.	20	70	10
Logistic/ordinal/multinomial	10	10	40	20	30	.
Other (eg poisson, negative binomial)	11	.	9	9	64	18

Training requirements: Longitudinal analysis

	Number requiring training	Percentage of respondents at each level (of those requiring training)			
		Intermediate	Beginner	Non user	Not given
Event history analysis	13	15	.	62	23
Times series analysis	13	23	.	54	23
Trajectory modelling	8	.	.	75	25
Other longitudinal analysis	15	13	7	40	40

Training requirements: Grouping analysis

	Number requiring training	Percentage of respondents at each level (of those requiring training)			
		Intermediate	Beginner	Non user	Not given
Principal components/factor analysis	10	20	20	50	10
Cluster/classification analysis	14	29	7	57	7
Latent class analysis	13	15	.	69	15
Multi-dimensional scaling	13	8	.	85	8

Training requirements: Other complex analysis methods

	Number requiring training	Percentage of respondents at each level (of those requiring training)				
		Advanced	Intermediate	Beginner	Non user	Not given
Probability, set theory, matrix algebra	4	.	.	.	100	.
Multi-level modelling	14	.	14	14	64	7
Structural equation modelling	10	.	.	.	80	20
Spatial analysis/modelling	7	.	.	14	71	14
Geographically weighted regression	5	.	.	.	80	20
Simulation and risk analysis	8	.	13	13	63	13
Missing value analysis/imputation	13	8	23	8	54	8
Content analysis (eg NVivo)	5	.	.	20	80	.

Training requirements: Software packages

	Number requiring training	Percentage of respondents at each level (of those requiring training)				
		Advanced	Intermediate	Beginner	Non user	Not given
SPSS	6	17	17	50	17	.
Stata	9	.	11	.	78	11
SAS	4	.	.	.	100	.
R/S/SPlus	10	.	20	.	70	10
Minitab	3	.	33	.	67	.
GAUSS	4	.	.	.	100	.
Amos	6	.	.	.	83	17
Lisrel	7	.	.	.	86	14
MPlus	3	.	.	.	67	33
LatentGold	4	.	.	.	100	.
MLWin	7	.	29	.	57	14
ARC/gis	5	.	20	20	60	.
BUGS (OpenBUGS WinBUGS etc)	4	.	.	25	75	.

Training requirements: List of top three training priorities (all responses in alphabetical order)

Priority
AMOS
ARCGIS
BAYESIAN STATISTICS AND WINBUGS
BETTER UNDERSTANDING OF LIMITATIONS OF BOTH OLS AND LOGISTIC REGRESSION
CHEAPER AND MORE LOCAL VERSIONS OF COURSES THAT ALREADY EXIST BUT ARE DIFFICULT TO ATTEND (E.G. THOSE IN SOUTHAMPTON OR LONDON)
CLUSTER ANALYSIS
CLUSTER ANALYSIS
CLUSTER ANALYSIS

Priority
CLUSTER ANALYSIS (INTERMEDIATE - ADV TRAINING)
COMBINE QUALITATIVE AND QUANTATIVE METHODS
CONJOINT ANALYSIS
COX-REGRESSION
DEVELOP MY STATISTICS SKILLS UP TO NEXT LEVEL
EARLY PHASE CLINICAL TRIALS
EFFECT SIZES IN MULTILEVEL ANALYSIS
EVENT HISTORY ANALYSIS
EVENT HISTORY ANALYSIS METHODS
FACTOR ANALYSIS
FACTOR AND CLUSTER ANALYSIS
FURTHER TRAINING IN SPSS FOR STATISTICAL ANALYSIS
GENERAL LONGITUDINAL TECHNIQUES
INTRODUCTION TO VARIOUS DATA SETS AVAILABLE
ITEM ANALYSIS (PSYCHOMETRIC TESTS)
LATENT CLASS ANALYSIS
LATENT CLASS ANALYSIS
LEARN MORE ABOUT MIXED MODELS
LEARNING MORE ABOUT PENALISED REGRESSION
LEARNING MORE ABOUT SMOOTHING TECHNIQUES
LEARNING R
LOGISTIC REGRESSION
LOGISTIC REGRESSION. I SUE IT, BUT NOT WITH CONFIDENCE
LONGITUDINAL ANALYSIS - PANEL ANALYSIS (FIXED/RANDOM EFFECTS)
MORE TRAINING IN EHA AND OTHR LONGITUDINAL ANALYSIS
MOST APPROPRIATE SOFTWARE FOR ABOVE
MULTI-LEVEL ANALYSIS
MULTI-LEVEL ANALYSIS/MLWIN (BEGINNER - ADVANCED TRAINING)
MULTI-LEVEL MODELLING
MULTILEVEL MODELLING
NON-PARAEMTRIC TECHNIQUES
ONLINE ADVICE ON SPECIFIC PROBLEMS
ONLINE TRAINING EXTENSION MATERIALS
ORDINAL REGRESSION
PRACTICAL METHODOLOGICAL TRAINING AT THE INTERMEDIATE LEVEL AND UP
QUANTITATIVE RESEARCH DESIGN
R
R
R GRAPHICS
REFRESH THE BASICS OF STATISTICS
SOFTWARE PACKAGES OTHER THAN SPSS

Priority
SPSS
STATA
STATISTICAL ANALYSIS TECHNIQUES - HOW AND WHEN TO APPLY THEM
STRUCTURAL EQUATION MODELLING
STRUCTURAL EQUATION MODELS
STRUCTURAL EQUATIONS (INTERMEDIATE-ADV TRAINING)
TRAINING EVENTS IN SCOTLAND
TRAINING FOR THOSE WHO TEACH QUANTITATIVE METHODS
UNDERSTANDING THE BASICS BETTER
USE OF CONFIDENCE INTERVALS

Training requirements: How likely to participate in different types of training

	Very likely	Quite likely	Not likely	Total replies
Taught courses with hands-on training	13	4	2	19
Presentations by experts, but no hands-on training	11	5	4	20
On-line training	9	7	3	19
Training by video link	2	6	11	19
Step by step examples on the website	7	10	3	20

Training requirements: How likely would you be to attend face-to-face training events in ...?

	Very likely	Quite likely	Not likely	Total replies
Aberdeen	1	2	14	17
Dundee	1	4	12	17
Edinburgh	19	.	1	20
Glasgow	6	4	7	17
St Andrews	1	3	13	17
Stirling	4	5	9	18
Elsewhere in Scotland	.	2	9	11

Training requirements: Preferred duration for face to face training

	N	%
Half day	3	18
1 day	11	65
2 days	1	6
5 days	2	12
Total responding	17	100

Training requirements: Are there any datasets on which you would like specific training?

	N	%
No	11	58
Yes	8	42
Total responding	19	100

Training requirements: Other methods where respondents want training
Note only a small number of respondents answered this question

Method	Level of expertise
Mixed random and fixed effects panel models (can never know enough - so training	Intermediate
cross-recurrence analysis	Intermediate
indices of attitudinal diversity	Beginner
mapping of political attitudes (GIS)	Beginner

What in your view should be the main priorities for AQMeN?

	Average ranking
Provide support/advice on using quantitative methods	2.1
Provide support/advice on using software packages	4.3
Provide a forum for like-minded people to have dialogue about quantitative methods	4.7
Enable people to make contact with potential collaborators	5.8
Develop modules for teaching quantitative methods at postgraduate level	6.2
Run training or CPD courses on intermediate/advanced level statistics	3.2
Run training or CPD courses on basic level statistics	7.8
Run training or CPD courses on using software packages	5.7
Provide information on other training/CPD opportunities	7.3
Provide information on relevant seminars and/or conferences	7.3

Respondents ranked priorities 1-10 (1 = top priority, 10 = bottom priority)

Which of the following things would you use the AQMeN website to do? Discover and Inform

	Average ranking
Search for information about quantitative methods	3.4
Find resources for teaching quantitative methods	4.4
Use online training resources for statistical software packages	3.6
Discover related organisations and projects in the UK	5.3
Identify upcoming training or other network events via a calendar	4.3
Find contact details of network members	5.5
Find out about activities of network members	5.4
Discover who in the network has expertise on a given subject	4.1

Respondents asked to provide top 5 rankings (1=high, 5=low), unranked items given a low rank of 6

Which of the following things would you use the AQMeN website to do? Participate and Network

	Average ranking
Link to my staff home page & provide a link to AQMeN on my home page	4.7
Write descriptions about my activities & expertise for the website	6.0
Link to my social network sites (Facebook, LinkedIn, Twitter, Wordpress…)	6.0
Write content about topics of interest to myself and the network	5.3
Add links to websites of interest to the network	4.9
Upload teaching materials or datasets directly for use by network	5.0
Start a discussion about a problem or topic on an online forum	1.9
Respond to a thread on an online discussion forum by a member	4.7

Respondents asked to provide top 5 rankings (1=high, 5=low), unranked items given a low rank of 6

Would you be prepared to contribute to AQMeN in any of the following ways?

	Yes	No	Total replies
Organising or hosting a seminar	12	9	21
Presenting a paper at a seminar	17	4	21
Offering support to other network members on methods or software issues (where appropriate)	16	7	23
Be involved in the development of training or CPD activities	12	9	21
Be involved in developing teaching modules on advanced methods	12	9	21