

# UCL, Bloomsbury and East London Doctoral Training Partnership

## ESRC Research Studentship Applications 2020

### Guidance on Research Foundation Statements (+3 applicants)

The following adapted extracts from the ESRC *Postgraduate Training and Development Guidelines 2005* provide a template for considering students' research training needs, as well as being designed to assist candidates and their supervisors wishing to make a case for admission to a +3 ESRC studentship in those cases where the candidate does not hold a recognised ESRC masters degree.

Such applications will only be considered from candidates who can demonstrate that they have already undertaken a programme of research training at postgraduate level which covers a minimum of 50% of the input detailed under General Research Skills below and in the subject-specific sections of this document, beginning on page 5, with the remainder to be made up during the first year of doctoral study.

Applicants should note that one of the main reasons that applications fail is because applicants are not able to fully justify and demonstrate appropriate prior research training.

## Expectations for Core Researcher Development Skills Training

### General Research Skills

#### Bibliographic and computing skills

Programmes are expected to include training for all students in certain basic skills. With particular reference to the student's own research, this training is likely to cover:

- the identification and use of library resources
- other bibliographic sources and methods
- techniques for preparing literature reviews, and keeping up to date with the literature
- preparing a personal research bibliography
- research management, including word processing and other basic computing skills such as spreadsheets and database management
- web-based research techniques (general web searching, and specific training in using web-based social science indices), and
- procedures for the evaluation of research, including refereeing and the preparation of book reviews.

#### Teaching and other work experience

Students undertaking teaching or other employment related responsibilities should receive appropriate training and support. It is beneficial to research students if they can obtain teaching experience, for example with seminar groups, or any other work that helps develop personal and professional skills. This might include internship opportunities with government, business or third sector organisations. The ESRC recommends that opportunities to gain any work experience should be accredited where appropriate.

### **Language skills**

The ESRC believes that the opportunity for training in a second language is desirable for research students, particularly where there is a perceived need within the student's research project. Programmes are expected to provide access to this training where that need exists.

### **Ethical and legal issues**

The ESRC expects issues relating to ethics, confidentiality and legality to be explicitly and systematically addressed as an integral and embedded part of core training provision. Furthermore the ESRC expects that supervisors will have access to specialist training in this area so as to be equipped to assist students in acquiring the knowledge, skills and understanding they need to respect, consider and attend to the rights of other researchers and research participants. The revised ESRC *Framework for Research Ethics* (FRE) (see <http://www.esrc.ac.uk/about-esrc/information/research-ethics.aspx>) sets out ESRC's approach, aims and methods in ethical evaluation and conduct of research, including doctoral level research. It is expected that research students will be made aware of this document as well as local ethics review requirements as part of their core training.

### **Skills for engaging with users and for maximising the impact of research**

Students should be made aware of the potential for societal and economic impact of their research and be equipped with the relevant skills to engage and exchange knowledge with users in the process of devising and shaping their research.

In order to achieve this, the ESRC expects programmes to offer training as appropriate that will enable postgraduate students to:

- identify potential benefits and beneficiaries of their research from the outset, and throughout the lifecycle of their project/research
- develop the skills required for effective co-production of knowledge
- develop entrepreneurship and enterprise skills
- develop skills that foster the better use of research outputs in policy making
- acquire skills that help and enable outreach and public dialogue, both throughout the research process and as part of the dissemination process.

### **Exploitation of research and Intellectual Property Rights (IPR)**

Students should be made aware, as an integral part of their research training, of the possibilities and problems of academic or commercial exploitation of their own research activities, as well as the research activities of others. This should include an understanding of their institution's intellectual property policy as well as relevant training.

## **Transferable Skills**

### **Communication, networking and dissemination skills**

Students should be strongly encouraged to develop skills to communicate their research, promote themselves and build up a network around their research. The development of communication and networking skills should form an embedded part of their overall programme of research training including presenting their work to both academic colleagues and non-academic users, and to build networks with others including researchers and. They should have opportunities to attend and contribute to seminars, workshops and conferences. They should also be given the opportunity to circulate papers to interested individuals and groups.

An early introduction should be given to the essential skills of writing, presentation and dissemination, although the development of these skills will continue throughout the student's studies. Opportunities should also be given for students to develop these skills for a non-academic audience such as writing for or speaking to the media, general public and government bodies. The development of skills around co-production of research, public engagement and enterprise skills (see General Research Skills) can play an important role in helping postgraduate students to raise their profile and to disseminate their knowledge to wider audiences.

### **Leadership, research management and relationship management skills**

The ESRC expects that students will be encouraged to acquire skills to help manage their research project effectively including leadership skills, project and time management, relationship management, and skills to manage the resources available to them to conduct their research. These may be acquired through formal learning, through the experience of conducting and completing their own research and through opportunities for experiential learning (eg through managing their own Research Training Support Grant (RTSG), or by undertaking an internship opportunity).

Students should receive training that extends beyond project management to encompass research leaderships skills and a sophisticated understanding of the life cycle of the research process from the initial idea for a research question, through the development of a research proposal that may attract funding, to the archiving of data and, where appropriate, the completion of end-of-award reports to research sponsors.

### **Personal and career development**

The ESRC expects research students to be encouraged to proactively engage in their own personal development and career direction, in accordance with the Concordat to Support the Career Development of Researchers. Institutions are encouraged to formalise personal development activity where appropriate, however, at a minimum level students should be encouraged to develop a training plan in discussion with their supervisor(s) to develop an awareness of their career aspirations, personal attributes and skills and to plan to address gaps in knowledge. Students should be encouraged to reflect upon and actively manage their own career direction and to engage with a range of activities that will help develop useful skills and knowledge for different possible career paths. Institutions are required to make students aware of relevant support for career development learning, especially that provided by the institution's central support services, and their entitlements in respect of such provision.

## National Training Provision

In addition to generic and transferable training available within the institution or through a consortium arrangement, the ESRC expects that research students will be made aware of external sources of support for career development and transferable skills especially that provided by the Research Councils and other national organisations that champion the personal, professional and career development of doctoral researchers. Institutions should commit to developing the potential of postgraduate researchers and to encourage students to take advantage of specific support provided by organisations like Vitae, which builds on the work and activities of the previous UKGrad Programme.

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# Area and Development Studies

## The Nature of the Area

- 1.1 Area Studies and Development Studies are interdisciplinary fields concerned with the study of particular geographical/historical regions or 'areas'. The fields of study are closely related, but Development Studies focuses more on the processes of change associated with transition from less to more developed economies and societies. Research is likely to be grounded in at least one social science discipline, but will be informed by an advanced understanding of the theories and methods of related disciplines.

## Preparation

- 2.1 Before commencing research training at the master's level it is likely that students will have acquired the following knowledge and training:
  - training in a relevant social science discipline (or disciplines)
  - where appropriate, a working knowledge of the language(s) of the area in question
  - a background in the historical, cultural and institutional context of the area to be studied
  - in the case of Development Studies, knowledge of the basic theories and issues of development (which might include relevant practical experience)
- 2.2 Not all students embarking on a degree will have equal strengths and it is likely that subject specific training in the initial training period will be devoted in part to filling any gaps.

## Subject-Specific Domains of Expertise

- 3.1 Given the geographical diversity of the field, and of the disciplinary backgrounds of students entering the subject area, it is important that any subject specific training programme in addition to generic research training be highly flexible and adaptable to the specific requirements of individual students. Many students will have a sound grounding in a discipline of the social sciences and there will be a need to strengthen the specialist language skills of some students. Some students will have a humanities background, often focused on training in languages or history and will require training to enhance skills in a social science discipline.
- 3.2 It is recognised that language training requirements will be varied. For some social science research, especially quantitative work in economics, knowledge of an area's language may not be essential as adequate data may be available in English. For some geographical areas, strength in one or more basic West European language may be sufficient, but for other areas, especially when qualitative methods are employed, competence in one or more language of the area will be an essential requirement.

- 3.3 Subject specific research training for all students will be a requirement to equip students to undertake research in a given area. This is likely to take the form of training in the practical use of social science research methods in a given social and cultural environment in order to promote sensitivity to local conditions and the problems likely to be encountered. This training will encourage an appreciation of the problems of cross-cultural research and address issues such as access, e.g. the norms and conventions of interviewing in a specific cultural context, ethical concerns pertaining to the religion, politics and social mores of a given area, and the discursive context in which research questions are formulated.
- 3.4 Students engaged in Development Studies research will need to be sensitive to the regional and global factors that are part of the local development process and, in many cases, they will be required to analyse the dynamics of national and international policy making. Students will need to acquire the ability to analyse and identify the concerns of different interest groups in the context of development interventions and their management at both macro and micro levels.
- 3.5 By the end of the initial training period the minimum learning outcomes will include a sound grasp of:
- at least one social science discipline, including qualitative and quantitative social science research methods and their application to a given area
  - when appropriate, a good working knowledge of a relevant language, adequate for at least reading and understanding research materials relating to the chosen geographical area(s)
  - the cultural and historical background of an area(s) and relevant knowledge of contemporary economic, social and political developments
  - Development Studies students will be familiar with the history and culture of international development co-operation and its institutions, especially as these impact on the area of study.
- 3.6 Given the range of requirements, students will be expected to devote part of their time to training in subsequent years. This training might include: acquisition of additional disciplinary skills, courses strengthening general area/development studies expertise, or language training to up-grade specialist skills (especially oral/interviewing skills required for field research), to maintain the active use of a language or, in some cases, to acquire an additional language. By the end of the second year of the research, a student's language proficiency will be adequate for active use in field research.
- 3.7 On completion of the training, the student will be equipped with the range of skills required to undertake further independent research at the frontier of the field, or to take up employment involving research-based policy making relating to area or development issues.

## Research Methods Training

### *Data collection methods*

- 4.1 An essential element of research training in the initial training period is thorough preparation for field research. This should include issues of data availability (including Internet and archive resources), of the specific social and cultural problems likely to be encountered in data acquisition, of limitations to the applicability of research techniques developed originally for use in different 'area' contexts, and provide guidance in the acquisition of relevant documentary evidence and statistical data, and training designed to foster a critical understanding of the problems of using such evidence. It is essential that students undertaking field research become culturally aware, reflexive and sensitive to the specific circumstances of the area.
- 4.2 Students engaged in Development Studies research will require training in techniques for establishing frameworks that facilitate participation of relevant groups from the local context of the research; in identifying different approaches to the development process; and in defining the wider context of power relationships that influence development outcomes. Students will need to be familiar with the theories and practices of project monitoring and evaluation and, for many types of qualitative research, e.g. elite and other interviews, focus groups and documentary analysis, a high level of linguistic competence will be essential.

### *Methods of analysis*

- 4.3 In general, the methods of data analysis will be typical of those used in the social sciences, but subject specific training may be required in the initial training period of the studentship to enhance an appreciation of the relevance, problems and limitations of the application of methods that, in many cases, will have been developed originally for use in a different context. In the analysis of qualitative data, the student will require an appreciation of the issues of transcribing, coding and analysing data collected from non-native language speakers, including specific problems created by the lack of appropriate software to apply for the language of an area. Students will also need to conduct their research reflexively because of the cross-cultural nature of the research.

# Demography

## The Nature of the Area

- 1.1 Demography is the study of human populations, past, present and future, and especially how births, deaths, and migration determine change. It includes the analysis of characteristics, such as age, sex, marital and health status and the composition of families and households, that determine the components of change and/or are affected by population structure, together with associated aggregate phenomena such as nuptiality and population ageing. Formal demography has been particularly concerned with the measurement of the size, composition, and spatial distribution of human populations using statistical and mathematical techniques. Social demography (or Population Studies) is concerned with the explanation and consequences of population trends and differentials, drawing on insights from a number of relevant disciplinary perspectives, including sociology, economics, anthropology, human geography, epidemiology and human biology.

## Preparation

- 2.1 Few undergraduate students receive more than an introductory training in demography and population studies. Thus, the first year of research training in demography will include a large conversion element since a background in the discipline is not required to commence study of it as a postgraduate student.
- 2.2 Those entering a programme of research training in demography will usually have a good honours degree. They may come from a wide range of backgrounds, though many of them will have a degree in either one of the other social sciences or a mathematical or statistical discipline. All postgraduate students should be willing and able to acquire a common foundation training in both social science thought and quantitative methods as applied in demography. They should have good writing, critical thinking, and numerical skills and be proficient in the basic use of information technology.

## Subject-Specific Domains of Expertise

- 3.1 As a foundation for research training, the student will develop subject specific skills and expertise in the following areas:
  - demographic data sources (population registers, censuses, vital statistics, migration data, special surveys for the collection of population materials e.g. Demographic and Health Surveys, historical records, qualitative and ethnographic materials)
  - analytical methods (the analysis of population structures, and patterns and trends in fertility, mortality - including life tables - and migration)
  - demographic concepts and models (including stationary and stable models, population momentum and demographic ageing)

- theoretical developments in population studies (including, for example, transition theories, theories of individual behaviour, life course and living arrangements, health inequalities, gender)
- analytical tools, explanatory and interpretive approaches drawn from relevant social sciences, such as social statistics, sociology, human geography and social anthropology

3.2 The aim of this initial research training should be to provide a grounding in basic methods, techniques and concepts which can be built on by more specialist work on theory construction, the collection of empirical evidence and analytical techniques. It will be important to encourage both critical perspectives (in term of existing research, data, techniques, styles of formulating research questions etc.) and 'hands-on' practical experience (e.g. by devising small projects, running computer programs, exploring alternative methodologies etc).

## **Research Methods Training**

4.1 By the nature of the discipline and the subject-specific domains of expertise outlined above, students in Demography may expect to receive initial training in research methods that exceeds the minimum.

### **Data collection methods**

4.2 Demographers make use of a range of data, involving both primary data collected by the analyst and secondary analysis of existing data. As part of their training, students need to be introduced to a wide range of data collection methodologies such as population registers, censuses and surveys (face-to-face, telephone, postal and Internet); issues of sampling and questionnaire design; semi-structured and unstructured individual and group interviews along with issues concerning discussion guide design; observation (systematic and participant); and documentary data and systematic review. Students will acquire a detailed awareness of the strengths and limitations of alternative data collection methods, with a particular focus on issues of validity and reliability and how these might be maximised. They should gain a clear understanding of the ethical issues involved in the collection and subsequent analysis of data.

### **Methods of analysis**

4.3 There should be sound training in the standard demographic methods of analysis of population structures, fertility, mortality and migration including life tables, stationary and stable models and population projections. Training should include both an understanding of the principles underlying population analysis and practical experience of using relevant software packages.

4.4 All students should be competent in the use and interpretation of general descriptive and inferential statistics. Those intending to conduct research using quantitative methods should receive further training in the theory and practical application of relevant statistical techniques (these could include generalised linear models, survival and event history analysis, multivariate analysis, multi-level modelling or epidemiological approaches). Quantitatively-oriented students should

also acquire generic skills in the use of computers for data analysis, including the merging and manipulation of data sets and the derivation of new variables.

- 4.5 Other students conduct doctoral research projects that use qualitative methods to obtain an in-depth understanding of the behavioural processes underlying demographic change. The research training for such students may include ethnographic and narrative analysis (particularly concerning the complex processes underlying fertility and migration decision making), the analysis of case studies, discourse and semiotic analysis of data from focus group discussions and content and textual analysis of policy documents. Where appropriate, students should acquire practical experience with software for the storage, indexing and retrieval of qualitative data.
- 4.6 Demography students that do not fall into one of the two broad categories above, such as formal mathematical modellers, may also require specialised training in other areas.

# Economics

## The Nature of the Area

- 1.1 Economics is the study of the factors that influence income, wealth and well being within and between countries. From this it seeks to inform the design and implementation of economic policy. It analyses the allocation, distribution and utilisation of scarce resources, and seeks to understand both at the micro and the macro level how present allocations arise and how they may change in the future. This requires a structured understanding of resources, agents, institutions and mechanisms, and of the normative basis of policy recommendations. Some of these issues are studied in an inter-disciplinary context and geographic, historical, legal, political, psychological and sociological factors come into play. There are also issues in which economics links with the natural sciences.
- 1.2 The typical methodology of Economics involves observation, abstraction, the construction of models and the testing of the hypotheses to which these give rise. Data and data collection can play a central role in the process of assessing, refining and validating analysis and the development of techniques for analysing data is a key feature of the subject.

## Preparation

- 2.1 Students should have some understanding of appropriate mathematical and quantitative techniques. They should normally also have a prior training in analytical methods of economics, including a coherent core of microeconomic and macroeconomic principles and applications and in statistical and econometric methods. In a general sense, therefore, they should have some ability to apply core economic theory and economic reasoning to applied topics and to apply appropriate methods to the analysis of economic data.

## Subject-Specific Domains of Expertise

- 3.1 Normally during the initial training period of the research training, the student will require course work in all of the following areas:
  - microeconomic theory and analysis
  - macroeconomic theory and analysis
  - quantitative methods
  - econometric theory and methods
- 3.2 The aim of this course work should be to provide a thorough grounding in basic tools and techniques of economic and econometric analysis, familiarity with the concepts and research methods used in current debates, training in the use of appropriate econometric software packages, the ability critically to read articles in the core general journals, and the skill to construct the derivation of fundamental results and offer a critique of the underlying models. Subject specific work on research methods is likely to include a practical project or other 'hands-on' experience.

- 3.3 In addition to the core training, each student should see the core material being used in a variety of specialist areas of economics and/or econometrics. The aim should be to make the student aware of, and able to explore, the frontiers of the specialist areas, the contributions of other disciplines, and to appreciate alternative theoretical and methodological approaches.
- 3.4 Additional specific training on advanced topics should also take place in the first year of the '+3'.

## **Research Methods Training**

### **Methods of data collection**

- 4.1 To a considerable extent economists make use of data sources assembled by statistical agencies: national, transnational and international. Students need to be introduced to these in their core training, develop a knowledge and understanding of them, especially their strengths and limitations, and receive training in accessing and processing such data. This could be done in conjunction with the training in relevant empirical methods.
- 4.2 There are some areas in economics, such as development economics, experimental economics, industrial organisation and labour economics, where economic researchers may have to generate their own data sets. To do this effectively may require appropriate subject specific training taking in qualitative analysis and training in specific techniques such as questionnaire design, sampling and survey methods and interview techniques.

### **Methods of analysis**

#### **4.3 Theoretical methods**

- 4.3.1 Students should receive an advanced training in model building, both micro and macro. They should appreciate the typical intellectual steps involved: from observation through stylised facts, abstraction, formalisation, model construction and analysis, to testing and prediction. They should learn to appreciate the way in which economic models are formulated, reformulated and validated and see these methods applied in a range of areas. They should be able to demonstrate the ability to formulate, manipulate and draw conclusions from a model. They should also be able to conduct constructive critical analysis of theory, of its application, and of policy.

#### **4.4 Empirical methods**

- 4.4.1 There should be sound training in the initial training period in the standard econometric methods applied to time-series, cross-section and panel data. This should include an understanding of data generating processes, standard econometric models, the assumptions of these models, the implications of violation of the standard assumptions, and of model estimation and hypothesis testing. This should cover theoretical methods and applications.

# Education

## The Nature of the Area

- 1.1 Educational research may include any enquiry which promotes theoretical and/or empirical social science understanding of educational and/or learning processes and settings, or which informs judgements and decisions about educational policy and practice. Research may be conducted in any social context including formal educational settings, and industrial, commercial and professional situations or informal contexts (such as parent-child interaction, self-help groups or local communities). Research may be concerned with a particular sector or aspect of education such as community education or primary schools, or focus on investigations and themes that cut across these areas, such as lifelong learning.
- 1.2 Educational enquiry draws upon a broad range of theoretical and methodological resources including philosophy and social science disciplines. It may involve specific methods and techniques appropriate to the distinctive nature of educational knowledge and theories and the generation of new methods may itself be a focus of educational research.

## Preparation

- 2.1 Students may be drawn from the social science disciplines or from those with educational training and experience but with no specific social science disciplinary background. This means that student training needs are often very diverse. Part-time students are likely to draw on previous work experience in educational settings and, as in the case of full-time students, relevant research experience and learning will be taken into account in determining training needs.

## Subject-Specific Domains of Expertise

- 3.1 In addition to the generic research training, the student in Education should have training in philosophical issues in educational research including an introduction to:
  - epistemological and ontological issues in the philosophy of social science and the philosophical underpinnings of educational theories
  - the nature of theory and explanation in education
  - the philosophical assumptions underlying different methods of empirical enquiry, e.g. evaluation and action research
  - the use of a range of concepts such as objectivity, subjectivity, and reflexivity in educational research
  - the relationship of the researcher to the researched and connections between theory and educational practice, including the nature of professional knowledge
  - interpretations of the concept of education and their implications for research and the role of values in educational theory and research methodologies

- 3.2 In addition, students should become aware of the ethical and political concerns implicit in different methodological approaches and be equipped to deal with ethical dilemmas and problems that may arise when working in educational settings or contexts (including, where appropriate, making use of ethical guidelines issued by learned societies and professional bodies). Students should also have some familiarity with the politics of educational research in democratic and other types of societies and an understanding of the basic principles of policy-relevant research, including evidence-based policy. They should be able to communicate and discuss their research with a variety of lay, practitioner and academic audiences.

## **Research Methods Training**

### **Research design**

- 4.1 All students will need to understand a range of subject-specific types of research strategies and designs which may include life histories, action research, discourse and other forms of linguistic analysis, experimental methods, evaluations and ethnographies. Students should acquire knowledge about sampling strategies including the consequences of small samples and related sampling errors and biases, and an awareness of issues relating to criteria for assessing the validity of data, the interpretation of claims about the results of research, and the ways that research designs may affect user and practitioner views about the results of research.

### **Methods of data collection**

- 4.2 Students should have the opportunity to gain familiarity with and hands-on experience of using a range of methods, including, as appropriate: the use of questionnaires and other structured approaches such as attitude scales and repertory grids; interviews; participant and structured observation; and methods of educational assessment. Students should become familiar with the use of the Internet and email for data collection; the use of official and other textual, audio and visual documentation, data sets and historical archives. Students should also understand issues concerning the choice, effective use and validity of data collection procedures and the use and limitations of triangulation methods. They should be able to assess the strengths and weaknesses of data, including consideration of the social, cultural and economic locations of respondents.

### **Methods of data analysis**

- 4.3 Students should understand the principles underlying, and be able to use, both qualitative and quantitative methods of analysis for creating and testing educational theories. In addition to generic research methods, training in quantitative analysis should include techniques for modelling and familiarity with when and how to access expert statistical advice. Training in qualitative analysis should include an understanding of the principles underlying and practical experience of using a range of approaches including manual and computer software-based techniques for organising data.

# Political Science and International Studies

## The Nature of the Area

- 1.1 Political Science, International Relations (IR), and International Studies (IS) cover a broad range of issues. Political Science covers subjects including the study of how power, authority and legitimacy are related to processes and systems of governance and the behaviour of state and non-state actors. International Relations cover broadly similar subjects within regional and global frameworks. International Studies is, by definition, interdisciplinary and covers a wider range of both subject matter and methodologies including historical, legal and cultural dimensions. Students are expected to use material from a variety of cognate disciplines. Political Science and International Relations also have their own sub-areas, while International Studies includes further linkages across a range of fields. These subject specific guidelines apply equally to all three areas except where indicated.

## Preparation

- 2.1 Students working in the fields of Political Science and IR/IS should have a good Honours degree normally in one of these areas or in a cognate discipline in social science (e.g. Geography) or humanities. However, students from other disciplines will also be considered. All students should demonstrate critical skills, analytical ability, communication skills and the potential for independent and critical research.

## Subject-Specific Domains of Expertise

Language and overseas fieldwork may be an integral part of research training for some students in the following subject-specific domains.

### 3.1 Political Science

In addition to the training described in Section 4, students in political science will require additional specialist training depending on the focus of their work. The following are examples of pathways for research training:

- Students in the field of political behaviour and political sociology will need to acquire specialised training in the primary methods of collecting and analysing data at mass and elite levels
- Students in political theory and political philosophy will need to develop a good grounding in normative analysis, the history and historiography of political thought and contemporary political theory
- Students in the field of comparative politics will need a further understanding of comparative methodology, theories of comparative politics and a good working knowledge of political systems that offer appropriate comparisons
- Students in public policy and public administration will require further training in case selection, public policy analysis, theories of decision making, organisational theory and wider theories of governance

- Students in European Union politics will require an advanced understanding of the European Union, and of relevant theoretical debates about the Euro-polity and the process of integration
- Students who specialise in the politics of a specific country or region will need to acquire an advanced understanding of the historical, cultural, social and institutional context of the area to be studied

### **3.2 International Relations/International Studies**

In addition to the training described in Section 4, students in IR/IS will require additional specialist training depending on the focus of their work. The following are examples of pathways for research training.

#### **3.2.1 International Relations**

- Students in the field of International Politics/International Relations theory will require specialised training in the following areas: the history of inter-state practices; the key theories and concepts of advanced International Politics, including the application of these to real world case studies; and international political theory
- Students in foreign policy analysis will require training in the history, governance, culture of the country(ies) to be studied; a detailed knowledge of the main theories of foreign policy decision-making and a grounding in the main theories of international relations and the ethical dimension of foreign policy
- Students in the field of International Institutions will require knowledge of the history and development of international (inter-governmental and non-governmental) organisations; organisational and institutional theories; and key debates about the relationship between such institutions and states social groups, economic development and power in world politics
- Students in the fields of Strategic/Security Studies and War/Peace Studies will require a grounding in the historical development of strategic thought and ideas about war and peace/security theory; key debates in strategic/security/war peace studies and contemporary developments in the role of force/security policies/war/peace in world politics
- Students in the field of International Political Economy will require further study in the history of, and politics of, international economic relations, and theoretical developments in International Relations and other related disciplines

### 3.2.2 International Studies

- Students in the field of International History will require specialised training in the philosophy of history, the main historiographical trends of the twentieth century and case study analysis and archival research
- Students in Area and Regional Studies (including the EU, ASEAN, NAFTA) are likely to require an advanced understanding of the contemporary history of appropriate parts of the world and their regional and global context, a good grounding in the skills of comparative political science and related disciplines and sub-disciplines, including relevant language studies and an understanding of the relevance of International relations theories for understanding developments in these areas
- Students of the role of law in international relations will need training in basic doctrines of international law, as well as an understanding of its origins and interpretation. They will also need to study the interplay of law with international organisation and with national foreign policy-making
- Students of historical sociology need a knowledge of the history of both state systems and international political economy. They must be familiar with the major thinkers who range across time and disciplinary boundaries to provide interpretations of the overall evolution of humanity's political, economic and social organisation

## Research Methods Training

4.1 In addition to covering the generic research methods training, subject specific training in Political Science, International Studies and International Relations should provide further training in: the nature of explanation in the social sciences, data collection and data analysis. As far as possible research methods training should be made relevant to the student's own research area. Outlets are encouraged to be flexible in the way they structure and deliver their research training. Different topics may be suitable to different course structures and teaching methods.

### Nature of Explanation and Justification in the Social Sciences

- 4.2 Students require a good understanding of the main epistemological issues relative to research in the social sciences. In particular, they need to be aware of:
- the major theoretical and epistemological debates in the social sciences, such as explanation of and understanding the differences between positivist, realist and other accounts of social science from perspectives including feminism, post-modernism and critical theory the practical implications of the major alternative philosophical positions in the social sciences for research in at least one of the major sub-fields of Political Science, International Studies and International Relations
  - the epistemological implications of the use of alternative quantitative and qualitative methods in social science research in their fields of study

## **Methods of Data Collection**

### 4.3 Training is likely to include:

- qualitative methods: survey methods, field research methods, methods for elite and mass interviewing, focus groups, archival and documentary research, observational and ethnographic methods and the use of life histories and political biographies, and the use of electronic search materials appropriate for political analysis, e.g. World Values Survey; election monitoring
- quantitative methods: introduction to measurement theory and the design of questionnaires and sampling methods for political surveys, experimental and non-experimental methods, analysis of official data sets, and the processing and coding of political data at the individual and aggregate levels.

## **Methods of Data Analysis**

### 4.4 Training is likely to include:

- qualitative methods: content and textual analysis of political texts, ethnographic and narrative analysis of political processes, familiarity with computer-based coding of political variables
- quantitative methods: the multivariate analysis of survey-based and aggregate political data such as electoral data or comparative survey data; methods of scaling and data reduction applied to political variables, reliability and validity testing of political indices

## **Further Training**

4.5 In addition to their generic research methods training and subject specific training, students may need additional training and support in subsequent years of research such as advanced statistics, language training, or the use of specialist resources such as the Public Record Office.

# Psychology

## The Nature of the Area

- 1.1 The discipline of Psychology involves the scientific study of all aspects of human behaviour, though some biological areas of psychology are excluded from ESRC support. Although these guidelines primarily cover those areas within the remit of the ESRC, it is anticipated that they may have wider generality and applicability.
- 1.2 All training programmes will be expected to cover the areas specified in these guidelines. It is expected, however, that there will be differences in emphasis both among institutions and among students within the same institution. Institutions may wish to contextualise the training according to their specific foci of activity; and the training can also be tailored to the individual student's needs, providing there is adequate coverage of the other areas.
- 1.3 It is anticipated that most of these topics will be covered within the first year of the student's studies.

## Preparation

- 2.1 Psychology students will vary in the skills they bring from their undergraduate training. Nevertheless, they can be expected to have basic skills of research design, including the design and conduct of experiments, questionnaires, psychometric instruments, interviews and surveys. They will also know fundamentals of statistical analysis, including parametric and non-parametric tests, correlation and regression and analysis of variance. They will be familiar with the use of computer packages for the analysis of data and with basic literature search methods. Students who do not have basic competence in these areas at the beginning of their studies will need to be given remedial training to bring them up to the standard necessary to cope with the methods covered in the programme.

## Subject-Specific Domains of Expertise

- 3.1 By the end of their training, students should have knowledge of a range of general historical, theoretical and philosophical issues underlying the discipline of psychology, for example:
  - philosophy of science
  - the nature and limitations of the scientific method and the main alternatives to this method
  - the nature of psychological knowledge and how it is embedded within its biological, social and cultural context
  - development of theories in psychology, including current and emerging issues; this may be geared towards the general area of the student's proposed research.
- 3.2 Ethics of psychological investigation, including prevailing codes of conduct.

- 3.3 Students should be aware of how psychological research is communicated, including preparation of conference presentations, posters, and journal articles according to British Psychological Society (BPS) and American Psychological Association (APA) format. They should understand the nature of the peer review process in the communication of psychological research.
- 3.4 Students should be familiar with methods of literature searching in psychology, including the use of the Internet.

## **Research Methods Training**

- 4.1 Students should be aware of all the methods listed below, should be able to select the most appropriate method for a specific purpose and should be able to use a subset of the methods. Students should have a critical awareness of the conceptual status of the various methods, and of their advantages and limitations.

### **Methods of data collection**

- 4.2 These are likely to include:

- quantitative methods such as observation and the experimental method; laboratory versus real life research; experimental and quasi-experimental designs; non-experimental designs including contingency table and correlation studies; n=1 designs (i.e. single case designs); longitudinal studies. Psychometrics including development of psychometric tests for research use; item analysis; and methods of delivery
- use of qualitative methods in psychology, such as focus groups and diary techniques; the characteristics of qualitative material including narrative records, text, audio and video recordings, and transcribed materials; and protocol analysis

### **Methods of analysis**

- 4.3 These are likely to include:

- quantitative methods such as observation and the experimental method; laboratory versus real life research; experimental and quasi-experimental designs; non-experimental designs including contingency table and correlation studies; n=1 designs (i.e. single case designs); longitudinal studies. Psychometrics including development of psychometric tests for research use; item analysis; and methods of delivery
- use of qualitative methods in psychology, such as focus groups and diary techniques; the characteristics of qualitative material including narrative records, text, audio and video recordings, and transcribed materials; and protocol analysis

- use of relevant computer packages: spreadsheets; graphical packages; and statistical packages
- analysis of variance: ANOVA for complex designs, e.g. mixed designs; models underlying ANOVA; planned and unplanned comparisons; and analysis of covariance
- regression: simple linear regression; multiple regression and related procedures, e.g. logistic regression, log-linear analysis; and exploratory factor analysis
- covariance structure modelling: path analysis; confirmatory factor analysis; structural equation modelling (manifest and latent variable analysis)
- analysis of qualitative data: conversational and discourse analysis, textual analysis and content analysis
- use of relevant software packages for qualitative data analysis
- meta-analysis: combining results from different studies; measures of effect size/power

# Social Anthropology

## The Nature of the Area

- 1.1 Social Anthropology is concerned with the comparative study of human social and cultural life and is best characterised by the key features - ethnography, holism, comparison and theory - which are present in virtually all anthropological research.
- 1.2 Social Anthropology's central mode of research is long-term ethnographic fieldwork.
- 1.3 Social Anthropology works with a creative tension between empirical particularity and attention to the broadest theoretical questions about what it means to be a human social agent. Its theory, method and analysis are mutually constitutive. The discipline is notable for its intense focus on fine-grained empirical detail. Its researchers achieve high levels of linguistic and cultural competence through long periods of fieldwork, complemented by ancillary sources of documentary information. Social anthropologists locate their evidence in as broad a context as possible, and the data they collect usually extend beyond the original focus of interest and specific research topic.
- 1.4 The discipline's historical concern with non-Western social groups means that forms of social research which take such groups as their object of study also fall within the purview of Social Anthropology (e.g. the study of ethnographic museum collections, ethnohistory, ethnobotany). Specialist training in some of these areas is covered in Section 5.

## Preparation

- 2.1 Before starting research training, students usually should have a thorough knowledge of the history of the discipline, including exposure to a wide range of theoretical positions and sustained engagement with published ethnography. They normally will have either studied the subject to an advanced level within the framework of their first degree, or have completed a master's course in Social Anthropology (or a master's in a sub-discipline such as Medical Anthropology). In some cases, and on some programmes, it may be possible for students with limited previous academic exposure to Social Anthropology to start research training within the framework of a master's degree; in these cases, a substantial part of the training programme will continue into the first and subsequent years of the research.

## Subject-Specific Domains of Expertise

- 3.1 Any programme of research training in Social Anthropology must give due recognition to the following issues:
  - 3.1.1 Anthropological methodologies are rigorous and thorough, ultimately learned as craft skills through experience, but resting upon a solid epistemological basis taught through a combination of classroom discussion and hands-on practical exercises. The two key sites of anthropological training are the research seminar and the field itself.

- 3.1.2 Anthropological practice rests upon a critical and reflexive approach to knowledge, recognising that the construction and conduct of a programme of research are themselves social and cultural activities. The best anthropological research is sensitive to the possibility of unanticipated findings or events in the course of fieldwork; training should prepare students for the processual nature of fieldwork, following social and cultural scenarios as they unfold, and allowing them to revisit and reformulate their research objectives as they proceed.
- 3.1.3 Seminar participation trains students to follow through the process by which long-term fieldwork contributes to social scientific knowledge, teaching them to isolate the theoretical questions that inform particular pieces of ethnography, and the kinds of empirical evidence that can be most effectively deployed to address those questions.
- 3.1.4 Unfamiliarity, which derives from the discipline's comparative dimension and is most starkly encountered as an issue during fieldwork, is Social Anthropology's first point of departure. Students learn to generate their own critiques of taken-for-granted concepts about people, culture and society, defamiliarising their own cultural assumptions. Fieldwork places demands on the researcher; this may generate a high degree of commitment, but may also involve personal and emotional costs (for which training should provide some preparation).
- 3.2 The outcomes of anthropological training include general and transferable skills such as critical and flexible judgement, interpersonal and collaborative skills, language acquisition, familiarity with survey methods, interviewing skills and social documentation, but also discipline-specific skills of a more subtle kind. Chief among these are skills in social understanding, awareness of context, cultural translation and mediation, and the ability to represent diverse epistemologies within a single frame. Social anthropologists are trained to be sensitive to changing individual, organisational and cultural concerns, and can be expected to work flexibly with other professionals in a wide range of social and cultural settings. Their skills are deployed within courts of law, health and social services, aid and development programmes, local government, the media, multinational companies, and other organisations which recruit and employ anthropologists specifically because of their disciplinary training.

## Research Methods Training

- 4.1 Data collection and data analysis are inseparable aspects of the process of ethnographic fieldwork. There are a number of general competencies which should be acquired by all research students in Social Anthropology, as well as more narrowly relevant sub-disciplinary skills (see Section 5). Of the general competencies, some are best acquired before fieldwork, some during fieldwork and some after fieldwork; training should be structured to accommodate this on-going need for new practical skills.
- 4.1.1 **Pre-fieldwork year:** Students in the initial training period of their research usually need to concentrate on: training in ethnographic and other research methods; preliminary language training (where necessary and possible); familiarity with a regional literature (including historical, geographical, demographic, political, etc.,

aspects) and relevant areas of social and cultural theory; logistical arrangements (e.g. choice of site, local institutional affiliations, ethical committees, visas and permissions, precautionary health measures).

4.1.2 **Research proposal/dissertation:** This constitutes the main work in which students demonstrate the extent to which they have achieved the crucial learning outcomes from the first year of research training. It should contain the following components: a review of the literature, both theoretical and ethnographic; an outline of the specific questions to be addressed, methods to be employed, and the expected contribution of the study to anthropological understanding; a discussion of the practical, political and ethical issues affecting the conduct of the research; a presentation of the schedule for the research, and its estimated budget. The proposal should be evaluated by a formal academic procedure, prior to, and as a condition for, the student's going on to fieldwork (or other data collection).

4.1.3 **Specific Methods Training:** The methodologies anthropologists adopt are closely shaped by the way they understand social knowledge and its representation. Students should understand the epistemological implications of their choice of methods, and training should address the following broad areas, although the content of each area will vary to suit the different needs of individual students:

- **Qualitative Methods:** Ethnographic method and long-term participant observation (training in this area should have a significant practical component); participatory research methodologies; interviewing, focus groups, life histories; archival research; field notes (including audio-visual methods of recording and analysing data and use of appropriate software for handling qualitative data); and interpretive/symbolic modes of analysis
- **Ethical and Political Issues:** All students should consult the Ethical Guidelines of the Association of Social Anthropologists of Great Britain and the Commonwealth. They should understand the principles of informed consent, especially in relation to groups who may not be in a position to give such consent (e.g. children, those with no prior experience of researchers or the media; the ill); debate in depth the different aspects of relations with informants and research collaborators; and grasp the legal and ethical issues at stake concerning intellectual property rights, ownership of data and copyright. Especially when dealing with marginal groups, students should be aware of ways in which they can train and assist the people they are studying as part of the research process
- **Quantitative Methods:** Most social anthropological research involves the use of numerical data: e.g. assessment of the basic demographic profile of the population under study, the compilation of frequency tables, or the use of other simple descriptive statistics. Training should include competence in the presentation and critical interpretation of this level of numerical data.
- **Research Design:** Unfamiliarity of context, and the processual nature of anthropological research itself, mean that formal research design has relatively limited use in anthropological training; nevertheless, students need to learn how to relate evidence to theory, and how to select the most appropriate methodology for the evidence required at particular points in their field research

- **Communication of Research Results:** Throughout their research, students need to be aware of the requirements and expectations of different audiences with regard to their work, in both academic and non-academic (including policy-related) fields, and must develop appropriate communication skills for the presentation of anthropological arguments to lay audiences
- **Project Management and Team-Working:** Anthropological research frequently involves collaboration with research subjects, local organisations and non-governmental organisation, and skills in managing inter-personal and inter-cultural relations are central to many careers in which anthropological training can be applied. Their inclusion in pre- and post-fieldwork training therefore maximises the potential long-term value of the fieldwork experience for the further development of the individual's competency

## 5.1 Specialist Social Anthropology Training

Many of the sub-fields of Social Anthropology research are inter-disciplinary, representing cross-cultural anthropological perspectives on issues that are also of interest to practitioners of other disciplines. In cases where research training is provided within the framework of a master's degree in a particular sub-field, training will combine elements from the Social Anthropology guidelines above with more specialised methods of collection and analysis appropriate to the sub-field in question.

- 5.1.1 **Visual Anthropology:** Technologies of image production, storage and reproduction, including post-production techniques and copyright issues; the politics and ethics of visual image production, including local media production; photographic and video elicitation; and visual analysis, including narrative versus informational aspects of representation.
- 5.1.2 **Material Culture and Museology:** Handling, storing and recording material assemblages; facilitating and documenting local ethnographic collections; awareness of ethical issues and national and international legislation surrounding the making of ethnographic collections and images of them; object analysis, issues of representation, aesthetics (Western and local), objectification and consumption.
- 5.1.3 **Anthropological Computing:** Data collection and storage, including entering and indexing field notes and other field data; database construction and use (flatfile and relational); digital text analysis, simulations and image manipulation for field elicitation and subsequent analysis; key word and code correlation; data bias and awareness of distinction between data and knowledge; methods of digital dissemination.
- 5.1.4 **Environmental Anthropology:** Knowledge of both qualitative and quantitative methods for collecting data on human activity patterns and food intake, and techniques for collecting biological specimens in relation to their cultural significance; ability to identify and curate specimens, and to use relevant statistical skills to manipulate a nutritional, ecological or ethnobiological data set.
- 5.1.5 **Medical Anthropology:** Awareness of constructs of 'patients' and competing ideas about health, issues in cognate social and health sciences (particularly in the understanding of quantitative issues and narrative); the possible uses of data,

including ownership; the effects of rapid change in, for example, medical technologies, development policies and international financing; their relationships to competing and plural definitions of health.

**5.1.6 Development Anthropology:** Managing interpersonal relations and establishment of frameworks that facilitate participation, responsibility and empowerment: awareness of the concerns of different stakeholders in the context of project management and the problems of eliciting the concerns of different groups within a population of project beneficiaries; awareness of alternative approaches to the development process and an understanding of the broader power relationships that influence project outcomes. Training for data collection and analysis may require greater competence in quantitative techniques than in other sub-fields of anthropology, but this is not the principal area of competence required for work in social development.

**5.1.7 Linguistic Anthropology:** Formal linguistic analysis and sociolinguistics, with specific training reflecting the extent to which the student's research focuses on the recording and analysis of a language in its own right or its context of use in social communication and/or the pragmatics of language use or change. Further specific training in methodology and analysis might be needed in other specialist areas of anthropological research, such as cognitive anthropology, where an appreciation of approaches in experimental psychology is likely to be necessary, and for research on specific kinds of data subjects, such as children or disabled people.

# Social Policy

## The Nature of the Area

- 1.1 Social Policy and Health Studies draw on a wide range of professional and disciplinary backgrounds. Students are expected to use material from a variety of disciplines, and to be able to work in a multiplicity of formal and informal research settings, with differing relationships to the policy process, often alongside people with different orientations to research. Each of the three subject areas has its specific own sub-areas with their own needs and intellectual traditions. Each also makes strong links with particular other disciplines, including, economics, social history, psychology, law, politics, sociology and medicine. This should be reflected in specific training provision.
- 1.2 Students undertaking research in these fields study societies, their institutions, and processes within them, and the impacts these have on individuals, groups and communities. These experiences are characterised by important differences in terms of gender, 'race' and ethnicity, physical and mental capacity and disability, sexuality, age, culture, beliefs and values, differences which also may be reflected in the experience and cultures of students themselves.
- 1.3 These subject specific guidelines apply broadly to all three subject areas although specific examples are provided for individual subject areas as appropriate and there may be differing degrees of emphasis within these areas.

## Preparation

- 2.1 Social Policy and Health Studies benefit from the wide variety of expertise and personal and professional experience brought to research by their students. Some may have specific qualifications while others may have a non-academic but policy-, practice- or user-oriented background and may come with substantial professional expertise. Many will have detailed knowledge of a substantive area, and an awareness of working with ethical dilemmas in practice.
- 2.2 There is no expectation that students will come to research training with a common knowledge base. However, all students should demonstrate analytical capacity, be able to deal with abstract concepts, communicate effectively (verbally and/or in writing as appropriate to their personal circumstances), and have the potential for independent, critical and original thought. Students will usually have a good honours degree or equivalent training or experience, though not necessarily in the cognate disciplines of the three subjects. The needs - and experiences - of part-time students, should be given specific attention in research training provision.

## Subject-Specific Domains of Expertise

- 3.1 Each subject area is mainly applied as well as being interdisciplinary, focusing on problems of the distribution of health, welfare and well-being within societies. Research requires the rigorous linking of theoretical analysis with empirical enquiry; the identification and understanding of different value positions; an appreciation of the interaction and interdependence between theory and the operation and impact

of social and health interventions and policies. Research in these subjects often involves bringing about change and/or investigating ethically sensitive issues such as the personal circumstances of individuals, groups and communities. Research which focuses on the delivery of services will also require skills in negotiating access with service users and practitioners, and for researchers to distinguish between their roles as practitioner and as researcher.

3. 2 Given the subject areas' multi-disciplinary basis, students require understanding of the epistemological and theoretical debates within the social sciences and how these relate to research practice; a recognition of how various philosophical and knowledge bases contribute to the understanding and shaping of research questions in one or more of the three subjects; and an ability to locate the research process within an explicitly socio-political context. Students should develop the capacity to work collaboratively with other disciplines, practitioners and users.
3. 3 Students should be able critically to engage with key relevant conceptual debates and, where relevant, with important contemporary practice debates. For research in a policy-related context, key concepts might include community, dependency, discretion, efficiency, effectiveness, equality, rights, citizenship, social justice, living standards, social exclusion, inequalities, regulation, freedom, need, risk and empowerment, in the context of the provision of health and welfare by the state, the market, the occupational, voluntary and informal sectors. For those concerned with research in practice settings, issues of participation, user involvement and control or clinical effectiveness are likely to be significant. An awareness of cross-national and comparative perspectives, as well as national perspectives, will be important. Students must also learn how to apply their knowledge to a specific research context within their subject of interest and to investigate in greater depth the concepts and issues that pertain to their own particular subject area or sub-area.
3. 4 Although the precise emphasis will vary from subject to subject within the two areas, and depending on the centrality of policy or practice concerns, research training for social policy, social work or health studies will need to be set within some or all of the following broad intellectual contexts:
  - explanatory frameworks that have played a major part in the study of the subject
  - an understanding of the relationship between major social trends (e.g., demographic change and labour market change) and social and health policy and practice
  - an understanding of the importance of institutions and institutional mechanisms, including organisational and professional groups, to the delivery of health and welfare
  - an appreciation of the relationship between economic, social and health policies
  - an understanding of the politics of policy and practice, including the ability critically to appraise the development, implementation and outcomes of policy change, and practice
  - a capacity to evaluate major debates (e.g. about globalisation and convergence)

- knowledge of the cause, development and differential experience of social and health problems (such as poverty, family breakdown or illness) among different social groups
- understanding of the origins and impacts of discrimination and oppression
- the consequences and impacts of policies, practices and technological advances on individuals, groups and communities and the ways in which users understand, experience or shape policy and practice

## Research Methods Training

- 4.1 Students undertaking research in these subjects study and interact with people as individuals and as members of groups, communities and societies. Research training must give students a clear understanding of the ways in which difference and diversity shape research questions, and must equip them with the skills, insights and sensitivity to understand and reflect issues of difference and diversity at every stage of the research process. It may also reflect a concern with engaging with oppression and working in emancipatory ways. The research process itself should generally be reflexive, allowing for adjustment in design and methodology(ies) in the light of emerging understandings.
- 4.2 Students should be conversant with and work within the guidelines published by the appropriate professional bodies, for both the ethical and the safe conduct of research. A concern with the ethics of social research will help students to ask why research is necessary in their field of study, and whether and how it can most sensitively be carried out. Students should also understand the need to incorporate the perspective of research users - whether funders, commissioners, policy actors, service users or the general public - in an appropriate manner, and to appreciate the tensions this may produce within the research process particularly where it is developed within a participatory paradigm.

## Research design

- 4.3 Research in these subject areas requires the enhancement of some skills in research design referred to in the generic research training guidelines, and attention to some forms of research design less emphasised in other subject areas. These differences stem largely from the philosophical, political, ethical and technical challenges associated with the need to investigate and make sense of a range of complex social processes and the responses of differing social actors.
- 4.4 Students should know how to select a research design appropriate to the question being asked and to its theoretical and/or empirical nature (these might include, e.g. case studies, longitudinal studies, action research, comparative research and experimental or quasi-experimental designs). Because of the centrality of evaluating the impact of policies, practices and interventions on the lives of individuals, groups and communities, students need to be familiar with the relative merits and limitations of designs used in evaluation research. This includes both competence in experimental methodology and/or the ability to design studies that address appropriate contextual factors and different perspectives. They need also to be able

to undertake effective research in understanding organisational and social processes.

- 4.5 Decisions regarding research design need to take into account that research in these areas is usually conducted in a complex political and social context. Power differentials between potential stakeholders, including students themselves, normally dictate that the latter should understand and respond to the contexts in which they operate, throughout the entire research process. This will require an ability effectively to involve or respond to the demands of key stakeholders, particularly users, in research design, in identifying appropriate sources of data, and in interpreting the results of studies.

### **Data collection**

- 4.6 Students should be able to identify the kinds - and, where appropriate, mix - of data needed to address specific research questions. They should be able to recognise situations where the multi-dimensional nature of a problem requires them to draw on data from a range of sources, and where a combination of types of data and methods of analysis are required. They should be familiar with sources relevant to their work of existing numerical, textual and pictorial material, research and legislative reports and articles, archival and historical data, institutional and agency records (including official reports), official statistics, survey data sets and material generated by service users. Skills in literature searching and information retrieval should be developed within a multi-disciplinary context.
- 4.7 Students should have a clear understanding of the theoretical and ethical approaches to, and the skills required for, carrying out a systematic review, and/or the appraisal of existing research and statistical evidence, to map what is already known and appreciate different perspectives on that knowledge. Using existing material, students should also be able to identify where and why a need to collect new data arises. They should understand the different kinds of information available from, e.g. documentary sources, observation techniques, ethnographic fieldwork, group discussions, vignette exercises, in-depth structured, semi-structured or unstructured interviews, and postal and telephone questionnaire surveys. Practical skills in these methods should be accompanied by a knowledge of the processes used for data recording and the way the data are to be used in subsequent analyses.

### **Data analysis**

- 4.8 Students should be competent in handling and managing both qualitative and quantitative data from a range of primary and secondary sources. They should be aware of the potential and limitations of using secondary data - both qualitative interview transcripts and large survey data sets - for analysis, and of the complexities of dealing with comparative data. Skills in interpreting data should be developed alongside more formal analytical skills.
- 4.9 Students should be familiar with analytical techniques appropriate to different kinds of data and with methods for initial exploratory analysis. For textual and other qualitative data, they should understand how to choose appropriate methods for systematic analysis. They should be aware of the advantages and disadvantages of

using computer-assisted packages for data handling, and of techniques for 'cleaning' data prior to analysis.

- 4.10 All students should be competent in the use and interpretation of general descriptive and inferential statistics and students in particular subject areas should be familiar with more advanced techniques relevant to those areas, e.g. epidemiological and longitudinal techniques in health studies, event history and time series analysis in social work studies, and linear modelling techniques in social policy. Computer skills are essential for statistical analysis of large quantitative data sets. Students should understand the underlying principles of the statistical techniques themselves and be aware of the social and organisational construction of statistics and the need for their careful interpretation.

### **Use and dissemination of research**

- 4.11 Research in Social Policy and Health Studies can play an important part in evidence-based public policy-making and practice. Students should have an understanding of the relationship of research to the formation, implementation and evaluation of policy and practice. They should be aware of how research is commissioned and funded, and the possibilities and problems involved in attempting to influence policy and practice change alongside, or on behalf of, research users.
- 4.12 The definition of 'users' remains an area for debate. Nevertheless, students should recognise the forms of relationship existing between researchers and the agencies (including government bodies) commissioning or funding research, other agencies responsible for dealing with policy change in practice, and the people whose daily lives are affected by such change. Students need to develop communication skills to enable them to disseminate research findings in a range of formats appropriate to different audiences - academics, policy-makers, practitioners, managers, service users and the general public and to involve users where appropriate.

# Statistics, Methods and Computing

## The Nature of the Area

- 1.1 This area is concerned with methodological research, for example, the development of a new method for Internet-based surveys or a comparative study of different approaches to analysing textual data. Such research may include the development and refinement of new research methods; the evaluation and refinement of existing research methods; the application of research methods to empirical data, where the research is driven primarily by methodological not substantive concerns; the inter-relation and/or triangulation of different methods; and the epistemological and logical foundations of research methods.
- 1.2 The term research methods is used to refer generally to either quantitative or qualitative methods for research design, data collection or analysis in the social sciences. Social statistics is treated here as a special class of research methods. In contrast, computing is treated as an integral part of a wide range of methods in quantitative and qualitative research. For example, the management of computer files containing quantitative survey data is seen as part of the methods of social statistics rather than as a distinct computing method. This area is restricted to methods which are applicable across a range of substantive disciplines. Methodological research on methods specific to a particular discipline should be classified under that discipline, for example, the development of a new Geographical Information System should normally be classified under Human Geography.

## Preparation

- 2.1 Two different forms of training may be undertaken in this area and the necessary preparation varies accordingly.
  - 2.1.1 **Research methods:** general training in research methods may be appropriate for students who will undertake doctoral research in any area of research methods, and who wish to proceed to careers such as researchers in social research organisations or government or as university lecturers in social science research methods. Students undertaking research training in this general area normally should have a strong background in research methods in a social science context, through an undergraduate degree in the social sciences (e.g. sociology, psychology or geography). Some training programmes may enable students to convert from other undergraduate subjects such as mathematics, chemistry, or computing.
  - 2.1.2 **Social statistics:** more specialised training in social statistics may be appropriate for students who will undertake doctoral research involving advanced statistical methods, and who wish to proceed to a career as a social statistician. Students undertaking research training in this area will be expected to have a high level of competence in statistical theory and methods, normally through an undergraduate degree containing a substantial element of statistics.

## Subject-Specific Domains of Expertise

- 3.1 The expertise developed will vary according to the two forms of training, although a common thread is an appreciation that different research problems require different methodological approaches and that all research methods have both strengths and weaknesses.
- 3.1.1 **Research methods:** students will build on the competence established under their generic research methods training to develop a high level of expertise in a range of research methods by learning the theory, practice, uses and limitations of these methods; they will develop expertise in critically appraising and comparing alternative methods and in assessing which methods are appropriate in different circumstances.
- 3.1.2 **Social statistics:** students will build on the competence established under their generic research methods training to develop a high level of expertise in a range of statistical methods of research design, data collection and analysis, relevant to the social sciences, by learning the theory, practice, uses and limitations of these methods; they will learn which methods are appropriate in different circumstances and develop a critical appreciation of the use of statistical methods in the social sciences.

## Research Methods Training

- 4.1 Training in this area needs to adapt not only to the potential diversity in students' backgrounds and research projects, but also to different types of expertise required in the wide range of careers in this area. The subject specific research methods training ensures a common basis of training for all students, with a broad coverage of both quantitative and qualitative methods. To allow for flexibility in addressing additional training needs, two sub-areas are distinguished. Students are required to undertake the training specified in only one of these sub-areas, in addition to undertaking the research methods training outlined above. The two headings are not mutually exclusive, but are intended to allow for different sets of training needs to be met.
- 4.1.1 **Research methods** This sub-area is applicable for students requiring broad training in social science methodology, to a greater depth and to greater levels of competence in individual research methods than provided in the generic research methods training. All programmes of training should cover the topics below, but some programmes may develop particular expertise in specific fields of research methodology, e.g. survey methods, qualitative data analysis, demographic methods or social science computing.

***Methods of research design and data collection:*** Students should cover: research design; sampling; field methods, e.g. observation, interviewing, documents and visual material; fieldwork relations; survey methods, including alternative modes of survey administration; integration of quantitative and qualitative methods; official statistics: production, application and interpretation; secondary analysis; ethics and the protection of the rights and welfare of research subjects and researchers; online research methods; and archiving of social science data.

**Methods of analysis:** Students should be exposed to a range of frameworks for the analysis of social science data, e.g. grounded theory, semiotic and discourse analysis, ethnomethodological analysis and other systematic approaches to qualitative data analysis; and approaches to quantitative data analysis such as exploratory data analysis and statistical modelling. They should acquire a high level of competence in the application of a variety of methods of both quantitative and qualitative data analysis. This training should involve appropriate software and students should acquire a broad range of skills in using computers for managing and analysing data

In addition to training in specific procedures for research design, data collection and analysis, students should learn about the *management and conduct* of social research as a process and about reflexive research practice. They should acquire a critical perspective on different methods and an understanding of associated philosophical debates. This will involve studying the epistemology and logic of scientific analysis, including mainstream and alternative criteria of methodological and analytic quality

4.1.2 **Social statistics** This sub-area is applicable for students requiring training for a career as a professional social statistician. All programmes of training should meet the guidelines below, but some programmes may develop particular expertise in specific aspects of social statistics, e.g. demographic methods.

- **Methods of research design and data collection:** Students should acquire a clear understanding of: methods of research design, including experimental and quasi-experimental designs, comparative studies and longitudinal designs; ethical issues in research design; sample survey methods, including sampling, alternative modes of survey measurement, coding and editing. Students should be able to justify choices between designs and data collection methods and understand statistical issues, such as randomisation, power, sample size determination, reliability and validity, and selection effects
- **Methods of data analysis:** Students should acquire a clear understanding of the issues involved in the analysis of non-experimental studies and in the use of statistical modelling for the analysis of continuous and categorical response data. Their training should also involve specialist courses which are likely to include coverage of most of: generalised linear models; multivariate analysis; log-linear models; multilevel models; longitudinal data analysis; survival and event history analysis; structural equation models; latent variable models; handling missing data and measurement error; analysis of data from surveys with complex sampling schemes; and graphical presentation. This training should involve appropriate statistical software and students should acquire a broad range of skills in using computers for data analysis and the merging and manipulation of data sets
- In addition to acquiring competence in individual methods and an awareness of when it is appropriate to use different methods and what their limitations are, students should develop a *critical perspective* on how statistical methods are used to address substantive research issues in the social sciences. Emphasis should be placed on how to interpret results in the context of the substantive area, and on how to communicate results to non-statisticians