



National Unit Specification: general information

UNIT Psychology: Investigating Behaviour (Intermediate 1)

CODE DF5L 10

COURSE Psychology (Intermediate 1)

SUMMARY

This Unit will enable candidates both to gain an understanding of a range of research methods used in the investigation of psychological processes, and to acquire basic practical psychological research skills. As well as studying experimental and non-experimental methods and data analysis techniques, candidates plan and carry out research tasks, collect data, and report their findings in a practical portfolio.

For those new to the subject the Unit should stimulate interest and enjoyment, and may serve as an introduction to the discipline of psychology, or as an introduction to research methods of the social sciences.

As part of Intermediate 1 Psychology, the Unit provides suitable preparation for progression to Intermediate 2 Psychology or further study in other subjects. Whether as part of a Course or on a free-standing basis, the Unit may offer preparation for employment or career advancement; alternatively, it may be studied simply for interest. As an understanding of research methodology is increasingly demanded in employment contexts, the knowledge and skills gained in this Unit are likely to be of relevance to candidates in their future careers.

OUTCOMES

- 1 Describe psychological research methods.
- 2 Demonstrate basic practical research skills.

Administrative Information

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National Unit Specification: general information (cont)

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RECOMMENDED ENTRY

Entry is at the discretion of the centre. There are no formal entry requirements; however, it would be beneficial if candidates had achieved the following, or equivalent:

- ◆ a Standard Grade Social Subject at Foundation level or relevant Access 3 Units
- ◆ **and** Standard Grade English at Foundation level or Communication at Access 3

CREDIT VALUE

1 credit at Intermediate 1 (6 SCQF credit points at SCQF level 4*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

CORE SKILLS

This Unit gives automatic certification of the following:

Complete Core Skills for the Unit: Problem Solving Intermediate 1

National Unit Specification: statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Describe psychological research methods.

Performance Criteria

- (a) Identify the main features of the experimental method.
- (b) Identify the main features of a range of non-experimental methods of investigation.
- (c) Describe briefly techniques of data presentation.

OUTCOME 2

Demonstrate basic practical research skills.

Performance Criteria

- (a) Participate in research tasks, including collecting or contributing data, and following standardised and ethical procedures.
- (b) Complete a practical portfolio of research plans and reports, including aims, methods, presentation of data and conclusions.

EVIDENCE REQUIREMENTS FOR THIS UNIT

The mandatory content for this Unit can be found in the appendix to the statement of standards.

To demonstrate satisfactory attainment of all Outcomes of the Unit, candidates must produce written or recorded oral responses to items that cover all Performance Criteria (PCs). These will typically be produced by means of two instruments of assessment: a supervised test for assessment of Outcome 1 and practical work in the form of a portfolio of research tasks for the assessment of Outcome 2.

The test for Outcome 1 will take place under closed-book, supervised conditions, with a time limit of 30 minutes, and will comprise responses to specific questions in a question paper containing a mixture of short-answer, structured and close items; questions may be based on stimulus material. This instrument of assessment will provide opportunities for Outcome 1 to be fulfilled, by means of sampling across the range of research methods content of the Unit. For example, if knowledge and understanding of the survey method are demonstrated (Performance Criterion 1b), it may be inferred that the candidate can demonstrate knowledge and understanding of other research methods also. The Performance Criteria are thus assessed holistically. The pattern of sampling of content will vary from one instrument of assessment to the next. Thus, sampling of content for assessment should be relatively unpredictable, and candidates must, therefore, learn all of the Unit content, in order to be able to answer questions on any part of it. Each item may correspond to a single Performance Criterion, or may fulfil both Performance Criteria.

National Unit Specification: statement of standards (cont)

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The practical portfolio for Outcome 2 should comprise a research plan and report for **one** classroom-based research activity. This should comprise either an experimental task or a non-experimental survey task. In either case, the plan should be completed by the candidate before data are collected, showing the:

- ◆ research aim
- ◆ method
- ◆ variables to be studied
- ◆ sample
- ◆ description of materials and
- ◆ choice of data presentation techniques

Following data collection, a brief report should be completed, to include:

- ◆ procedure (including standard instructions)
- ◆ results (including raw data, data presentation and calculations)
- ◆ conclusion

If a re-assessment is required, it should contain a different sample from the range of content.

Achievement can be decided by the use of a cut-off score. The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

National Unit Specification: support notes

UNIT Psychology: Investigating Behaviour (Intermediate 1)

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours. It is suggested that approximately 20 hours be allocated to each of the two parts of this Unit, ie Research Methods and Research Skills.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

Content and context for this Unit can be found in the appendix to the statement of standards.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

An ethical approach to learning and teaching

Teachers/lecturers should be aware that some topics may be sensitive for individual candidates, based on stages of development or personal experiences, and discretion should be used. To this end, care should be taken in the delivery of material and sensitivity should be shown. Candidates should not be made to feel pressurised to disclose personal information, for example in discussions which may relate to health, relationships, emotions, and teachers/lecturers should be alert to any signs of discomfort or distress. The power relationship that, of necessity, prevails in the classroom, should be recognised and handled with care. Such concerns are particularly relevant to delivery methods involving classroom research demonstrations, and teachers/lecturers should be familiar with two sources of ethical guidance: the BPS *Code of Conduct, Ethical Principles and Guidelines* (2000), at www.bps.org.uk; and the ATP *Guide to Ethics for Teachers and Students of Psychology at Pre-Degree Level* (2003), the latter being included in the SQA document *Research Investigation Guidance for Higher Psychology* (revised 2005).

Resources for learning and teaching

A wide range of good quality resources for studying psychology are readily available, including textbooks, candidate journals, videos, CD-ROMs, commercially-produced resource packs, websites and online materials. A number of published introductory textbooks are at a suitable level for this Unit and Course, and teachers/lecturers may wish to recommend one of these as a set text, or to obtain a set, either to issue to candidates or for use in class. Introductory textbooks often contain chapter(s) on research methods, and, in addition, there are more specialised texts on methods and data analysis, sometimes including learning activities for candidates. Additional resources may aid understanding, particularly those providing candidate-centred learning activities, eg copies of handouts/worksheets from journals or resource packs (ie resources that are designated suitable for photocopying in the copyright information), centre-produced learning packs, teachers'/lecturers' own handouts, etc. Some materials for other Units/Courses may be adapted to support this Unit, at the teacher's/lecturer's discretion.

National Unit Specification: support notes (cont)

UNIT Psychology: Investigating Behaviour (Intermediate 1)

Delivery of the Unit

In this Unit research methods and research skills will be taught. To help candidates achieve the Unit Outcomes/Performance Criteria, and the Course assessment objectives where relevant, it is suggested that teachers'/lecturers' delivery of content address the activities below. As Intermediate 1 and 2 Units are sometimes delivered in bi-level classes, this guidance is identical to that provided for this Unit at Intermediate 2, however, teachers/lecturers should adjust learning activities to suit the needs of learners at both levels, where applicable. Wherever skills of analysis or evaluation are referred to below, teachers/lecturers should bear in mind that such skills are not demanded by Outcomes/Performance Criteria at Intermediate 1 level.

This section is divided into guidance on research methods, and guidance on practical research skills. As in other areas of the subject, there is no universally agreed method for delivery of research methods. Therefore, the guidance below is not intended to be prescriptive; rather, it offers suggestions for learning activities, which reflect the demands of Unit Outcomes/Performance Criteria and Evidence Requirements. The underlying rationale of the suggested approach is that principles of research methodology are more readily grasped if they are tackled in the context of actual research studies/scenarios.

Research methods

- ◆ Introduction to the **Domain** of research methods in psychology: the scientific nature of psychology, contrasted with common sense; importance of sound research methodology in producing evidence, upon which theory is constructed, and/or which form the basis of applications of the discipline in everyday life; the stages of the research process, from aims/hypotheses to conclusions. These introductions will **not** be assessed.
- ◆ Teachers/lecturers vary in their approach to delivering research methods, possibly more so than in other areas of psychology. For example, some start by emphasising the scientific nature of the discipline, and exemplify this by teaching the experimental method first, before moving on to non-experimental methods. Others feel that non-experimental approaches are somewhat easier for novices to grasp, so deliver these first, followed by the experimental method. Either way, experimental and non-experimental methods can be compared/contrasted in terms of, eg control, cause-and-effect, replicability, ecological validity, ethics.
- ◆ To teach a particular method, it is often useful to present simple examples for discussion, based on actual research. For example, for the experimental method, small groups of candidates can be set a research problem, such as how they would, scientifically, discover whether coffee keeps you awake, whether people are more likely to be aggressive after watching a violent film, whether talking on a mobile phone reduces ability to drive safely, whether brain damage affects memory, whether people under stress at work make more errors, etc. Often, after some discussion, supported by questions and prompts from the teacher/lecturer, key research principles will emerge (without the proper terminology) — IV and conditions, DV, controls, types of experiment (lab/field/natural), sampling, validity, ethics, etc.
- ◆ The same, or similar, examples can be used to introduce non-experimental methods, by asking candidates to discuss how these questions could be investigated by other means.

National Unit Specification: support notes (cont)

UNIT Psychology: Investigating Behaviour (Intermediate 1)

- ◆ Where candidates are taking the Unit as part of the Intermediate 1 Psychology Course, examples of research from the other two Psychology Units which are part of this Course, which are already familiar to candidates, will provide a rich source of material for discussion of methods. The basic underlying framework common to all research, ie aim/method/results/conclusions, will have been grasped already, and candidates will now be encouraged to further study the methodologies of particular studies.
- ◆ Once (some of) the main principles of research methods have been elicited, the details of each methodology can be presented more formally, with explanations illustrated by the examples used in discussion, and others. In this way research methods can be grasped in a meaningful context, rather than in the abstract. It should also be pointed out that, in real-life research, a multi-method approach is often the norm, largely because it is recognised that a single method rarely provides a full answer to a research question.
- ◆ Similar examples can also be used to discuss strengths and weaknesses of different types of experiment, eg pros and cons of a lab or field experiment to investigate effects of TV violence on aggression.
- ◆ Surveys: examples of real questionnaires (eg market research, Course evaluation) and interview schedules (from books or learning pack) can be provided for candidates to examine, identifying types of items, spotting weaknesses in wording, etc; simple design exercises on questionnaire items and interview schedules can be set.
- ◆ Case studies: these do not lend themselves quite so readily to the problem-solving tasks suggested for experiments and surveys, however, candidates could be presented with an outline of the background of a number of actual case studies (eg Genie, SB, Clive Wearing, etc), and asked to suggest methods of study. It may be appropriate, for the sake of completeness, to mention use of other methods, such as observation, psychometric testing, etc in such cases, though knowledge of these is not required for the Unit. Teachers/lecturers should use the term *case study* in a precise way, ie to denote the well-defined specific methodology of in-depth study of an individual or small number of individuals; the term should not be used to refer to any research example, in general, as this would confuse candidates. Where a piece of research, of whatever method, is studied in depth, or given as an illustrative example, teachers/lecturers should refer to this as a *study*, or *scenario*.
- ◆ Having learned the features of the different research methods, candidates can be presented with descriptions of actual research, eg *Major Studies*, or those they have encountered in a previous Unit (if taking the Course), and asked to identify all key details of the method and design. As well as promoting understanding of content, this kind of activity will provide practice for assessment items based on research scenarios.
- ◆ Data presentation: like research methods, data presentation knowledge and skills can be effectively delivered through extensive use of examples, to illustrate measures of central tendency and types of charts and graphs. Examples of graphical results of actual studies, or fictitious examples, from books and learning materials, can be used to give practice in interpreting data. Sets of fictitious data can be provided, and candidates asked to construct suitable graphs. Delivery of this part of the Unit should provide a strong basis for practical application of data presentation in the candidates' own practical portfolios.

National Unit Specification: support notes (cont)

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- ◆ Ethical issues: once again, these may be introduced by means of discussion of illustrative research scenarios. Where candidates are studying for the Course, they are likely to already have some familiarity with ethical issues that have arisen in relation to research studies dealt with in the other Unit(s). Once these issues have been grasped in the concrete context of research examples, formal ethical principles can be presented.

Practical research skills

- ◆ Conduct **one** classroom research task. This should include either an experimental design or a survey. Using the frameworks provided, candidates should complete a plan and report for the research task, to make up a **practical portfolio**. If the Unit is taken as part of the Intermediate 1 Psychology Course, the focus of the research should be related to topics studied in the other Units, wherever possible.
- ◆ Timing: it is logical to conduct the tasks subsequent to the teaching of methods, so that recently-acquired knowledge can be applied; however, it may also be feasible to conduct the research task in parallel with the teaching of methods, eg if a group has two lessons per week, one lesson could cover methods, the other could address the research task, over several weeks.
- ◆ It is intended that the task be carried out in class time, using, as participants, either the candidates themselves, or other 16+ candidates or staff in the centre. The research task must be ethical in content, and follow ethical procedure: a brief including information about the task must be given, and consent obtained, right to withdraw, confidentiality/anonymity assured, full debrief, no deception, no discomfort/distress caused. Research with younger participants is strongly discouraged, due to stringent ethical constraints in researching under-16s.
- ◆ Depending on the delivery time available, and the nature of the candidates, the research task may be introduced initially in outline, and discussion prompted as to how the research might best be conducted. Thus candidates may be involved in basic aspects of the design process; this activity is suggested for reasons of promoting effective learning (as the Unit Outcomes/Performance Criteria do not demand design skills); it demands application of knowledge of research methods, from earlier in the Unit, and thus integrates the two sections. Alternatively, if the candidates in the class are the participants, the teacher/lecturer can ask them to carry out the task (eg a motivation questionnaire) without prior information about the methodology; discussion of methodology can then follow. If taking the Unit as part of the Course, teachers/lecturers may have already conducted research demonstrations in class as part of the learning and teaching process, thus candidates will be familiar with this format. Classroom research demonstrations provide opportunities for the teacher/lecturer to model research procedures, including the consideration of ethical principles; for example, when introducing any classroom research demonstration, the teacher/lecturer (in the role of *researcher*) should obtain informed consent of candidates (in the role of *participants*); certain tasks might involve ethical issues, and would need to be treated sensitively.

National Unit Specification: support notes (cont)

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- ◆ Following the initial discussion, candidates discuss and complete their detailed research plan (including research aim and hypothesis, method, variables to be studied, sample, description of materials and choice of data presentation techniques); data are then collected, and collated; the research report is then discussed and completed, either in class or as a homework task, to include procedure (including standard instructions), results (including raw data, data presentation and calculations) and conclusion. Templates for the research plan and report are provided in the National Assessment Bank items (NABs).

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

On completion of this Unit, candidates will achieve a complete Core Skill of *Problem Solving* at Intermediate 1.

Through Unit and Course assessments, candidates will be required to answer written and oral questions. This will give the opportunity to develop aspects of Written and Oral Communication.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by information and communications technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

Instruments of assessment

Teachers/lecturers from devising their own assessment tasks, and the National Assessment Bank will provide assessment instruments and guidance on implementation. The most appropriate means of obtaining evidence of attainment of Outcome 1 of this Unit will be a question paper comprising a mixture of short-answer, structured and close items, where questions may be based on stimulus material; to be conducted under supervised test conditions. Outcome 2 will be assessed by means of **one** classroom research task which will be written up in accordance with the frameworks provided in a practical portfolio.

Timing

Where assessment evidence is gathered towards the end of the Unit, care should be taken to ensure that sufficient time is allowed for remediation and re-assessment if required.

Weighting of Outcomes

Candidates' performance in this Unit is assessed by means of two instruments of assessment.

In the question paper, candidates will be required to demonstrate knowledge and understanding in familiar contexts which have been dealt with in the learning and teaching process.

National Unit Specification: support notes (cont)

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Added value

The Unit assessment provides evidence of the specific level of achievement demanded by the Unit. However, the Unit assessment may allow candidates to demonstrate *added value*, ie performance beyond the minimum standard required for achievement of the Unit. Therefore, evidence gathered for internal Unit assessment may, along with other evidence, be used for Course grade estimates and for appeals for external Course assessment. For details of the Grade Descriptions for external assessment, and further information on *added value*, please refer to the Intermediate 1 Psychology Course Arrangements documentation, including the Course Assessment Specification.

CANDIDATES WITH DISABILITIES AND/OR ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

National Unit Specification: statement of standards (cont) — Appendix

UNIT Psychology: Investigating Behaviour (Intermediate 1)

APPENDIX: Content and context

This appendix is within the statement of standards, and demonstrates the mandatory requirements of the Unit.

This Unit has the same content as *Psychology: Investigating Behaviour (Intermediate 2)*; however, the Units are differentiated by Outcomes, Performance Criteria and Evidence Requirements. It follows that in a bi-level class, while candidates will cover the same content, Intermediate 1 candidates will not be expected to master it to the same depth of knowledge and understanding as Intermediate 2 candidates. Analytical and evaluative skills are **not** required at Intermediate 1.

One of the six core Domains, Research Methods, is addressed in this Unit, along with practical research skills. The nature of the research process is studied, several specific types of psychological research methodology and data presentation are considered, and ethical issues in research are examined. Psychological research skills are developed by means of planning and carrying out one classroom-based research task, and reporting on it in a research portfolio.

Domain: Research Methods

Candidates should be introduced to the nature of the research process:

Hypothesis about human behaviour — design/conduct research and collect data — support/reject hypothesis.

Experimental method:

- ◆ types of experiment — laboratory, field, natural experiments
- ◆ hypothesis — prediction of the effect of one variable upon another
- ◆ independent variable and its conditions
- ◆ dependent variable
- ◆ control of variables
- ◆ cause-and-effect
- ◆ replicability

Non-experimental methods

Key features of:

- ◆ survey, including questionnaires and interviews
- ◆ case study

Research issues common to all methods:

Sampling: definition of sample as small number of participants selected from population; need for representativeness; process of random sampling; opportunity/convenience sampling; realism ecological validity.

National Unit Specification: statement of standards — Appendix (cont)

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APPENDIX: Content and context (cont)

Presentation of quantitative data:

Descriptive statistics, numerical and graphical:

- ◆ measures of central tendency — mean, median, mode
- ◆ line graphs
- ◆ bar-charts
- ◆ percentages and pie-charts

Ethical issues in research:

Ethical principles in psychological research with humans, including participants used in candidates' research: informed consent, deception, welfare of participants, confidentiality.

Research skills

A practical research task should be carried out, based on psychological topics selected by the teacher/lecturer, from a list of recommended studies. Either the experimental method or a non-experimental method should be used. This Unit requires that candidates put into practice the following skills:

- ◆ plan the research: establish the aim, hypothesis and method to be used, variables to be studied, sample, description of materials and choice of data presentation techniques
- ◆ describe ethical aspects of the task:
collect/contribute data.
- ◆ report the research, including procedure (with standard instructions), materials, results (including raw data, data presentation and calculations) and conclusion
- ◆ compile a practical portfolio of plans and reports of the research tasks