



Higher National Unit Specification

General information

Unit title: Psychology D: The Research Process in Psychology
(SCQF level 8)

Unit code: FK8C 35

Superclass: PK

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Unit purpose

This unit is designed to enable learners to develop their knowledge and understanding of the research process in psychology. Learners are required to design and implement an investigation into a psychology topic and statistically analyse the data produced. This unit is intended for learners who have a basis and knowledge of psychology and of research methods and wish to further develop this in a practical way.

Outcomes

On successful completion of the unit the learner will be able to:

- 1 Design an investigation in psychology.
- 2 Conduct research into a psychological topic.
- 3 Analyse the data produced using inferential statistics and report on findings.

Credit points and level

1 Higher National Unit credit(s) at SCQF level 8: (8 SCQF credit points at SCQF level 8)

Recommended entry to the unit

Learners should possess good communication skills. Other knowledge, skills and experience relevant to the unit would be beneficial.

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In addition, learners would benefit from achievement of HN Unit *Psychology A: History and Development of Psychology*, HN Unit *Psychology B: Explanation and Research of Psychological Topics* and HN Unit *Psychology C: Analysis and Evaluation of Psychological Topics*

Ultimately, entry is at the discretion of the centre.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the support notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

Context for delivery

If this unit is delivered as part of a group award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

This unit is in the optional section of the HND Social Sciences award. It can also be offered as a stand-alone unit.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Higher 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

Design an investigation in psychology.

Knowledge and/or skills

- ◆ Plan an investigation
- ◆ Identification of theories and studies relevant to the investigation
- ◆ Selection of appropriate research design — experimental or non-experimental, as appropriate
- ◆ Analysis methods and levels of significance
- ◆ Identification of variables
- ◆ Aims and hypotheses
- ◆ Definition of population and selection of sample outlining procedures to be followed
- ◆ Identification of materials/apparatus required

Outcome 2

Conduct research into a psychological topic.

Knowledge and/or skills

- ◆ Research procedures
- ◆ Control of variables
- ◆ Record data appropriate to research design
- ◆ Ethical implication(s) of design

Outcome 3

Analyse the data produced using inferential statistics and report on findings.

Knowledge and/or skills

- ◆ Selection and use of appropriate parametric or non-parametric statistical technique
- ◆ Clear statement of the findings
- ◆ Analysis of data/research findings
- ◆ Reach conclusion and relate to current literature
- ◆ Critical evaluation of methods used, including ethical implication(s)

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Evidence requirements for this unit

Learners will need to provide evidence to demonstrate their knowledge and/or skills across all outcomes by showing that they can:

Design/plan an investigation into a psychological topic including:

- ◆ identifying theories and previous studies relevant to the investigation (including producing a bibliography/references)
- ◆ selecting research design (experimental or non-experimental)
- ◆ selecting appropriate methods of analysis
- ◆ identifying variables being investigated (including independent variable and dependent variable)
- ◆ stating aims and formulating hypotheses
- ◆ defining population and selecting sample
- ◆ outlining procedures to be followed
- ◆ identifying materials/apparatus required

Conduct research into a psychological topic including:

- ◆ implementing research procedures
- ◆ controlling variables
- ◆ recording data
- ◆ identifying ethical implication(s) of design using BPS Guidelines
- ◆ giving details of how the research was conducted — including the development of necessary materials, choice of subjects, etc

Analyse the data produced using inferential statistics and report on findings including:

- ◆ selecting and using appropriate statistical techniques
- ◆ giving a clear statement of the findings
- ◆ analysing data/research findings
- ◆ reaching conclusion and relating these to current literature
- ◆ critically evaluating methods used including ethical implication(s)

This unit will be holistically assessed by a single instrument of assessment covering all unit outcomes. This will take the form of one open-book assessment handed out or negotiated at an appropriate point in the delivery of the unit (generally near the start of the unit) and a submission date set.

This is an open-book assessment completed according to a prescribed format set in advance. The format chosen will provide evidence of all items listed under the knowledge and skills section. The learner must conduct research into a psychological topic — choose a topic, state the objective of the research, report on the research design, the findings and the analysis and provide a critical evaluation of the research. This should involve the use of current literature. The task set should test critical and evaluative skills.

In response to the task set, learners must convey complex ideas in a well-structured and coherent form. The report must contain evidence of all aspects of the knowledge and skills sections for Outcomes 1, 2 and 3.

Regardless of the assessment method chosen, the learner must submit a bibliography/references presented in a standard referencing format, such as APA.



Higher National Unit Support Notes

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Unit support notes are offered as guidance and 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.

Guidance on the content and context for this unit

This unit belongs to the suite of Psychology units within the HNC and HND Social Sciences Group Awards but may be delivered as a stand-alone unit. In that case learners would need to be given access to materials relating to a topic that would be suitable for research. This Psychology unit aims to develop the learner's investigation and research skills.

Learners will have an opportunity to choose a topic from one of the topics areas already studied in the HN Unit *Psychology B: Explanation and Research of Psychological Topics* or HN Unit *Psychology C: Analysis and Evaluation of Psychological Topics* and conduct a piece of psychological research relating to that topic. This involves selecting a suitable design, formulating and testing a hypothesis and statistically analysing the data obtained.

The purpose of this unit is to enable learners to develop their knowledge and understanding of the research process in psychology, to introduce the idea of inferential statistics and to guide the learner through an appropriate test to enable the analysis of their data.

Selection of topics

The topic for the research unit should be chosen from those previously studied by the learner as part of HN Units *Psychology B: Explanation and Research of Psychological Topics* or *Psychology C: Analysis and Evaluation of Psychological Topics*.

There are **five** main general areas identified within this unit: cognitive processes, individual differences, development processes, social behaviour and biological basis of behaviour. **One** general area should be chosen and then **one** topic should be selected. The topic will normally be one studied in either *Psychology B* or *Psychology C* units.

Biological basis of behaviour	
Addiction	Sleep and dreaming
Motivation	Consciousness and awareness
Reproductive behaviour	Emotion

Cognitive processes	
Memory	Perception
Attention	Learning
Language/thinking	

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Development processes	
Attachment and separation	Cognitive and moral development
Gender development	Lifespan development
Forensic psychology	

Individual differences	
Personality	Intelligence
Psychopathology	

Social behaviour	
Interpersonal perception	Interpersonal attraction
Group processes	Attitudes and prejudice
Pro-social behaviour	Anti-social behaviour
Power and leadership	

Guidance on approaches to delivery of this unit

This unit is designed to be studied in progression after HN unit *Psychology A: History and Development of Psychology*, and HN unit *Psychology B: Explanation and Research of Psychological Topics*. It could be delivered as a stand-alone unit but learners will have to read the background theory and previous research relating to the topic chosen. In Outcome 2 of *Psychology B: Explanation and Research of Psychological Topics* the learner should have been introduced to research skills required to be successful in implementing research. This unit develops the skills further by developing knowledge of inferential statistics.

Learners should be given a brief introduction to experimental design, hypothesis testing and inferential statistics, which should provide the basis for the learner to carry out a piece of research on a topic previously covered in HN unit *Psychology B: Explanation and Research of Psychological Topics* or HN unit *Psychology C: Analysis and Evaluation of Psychological Topics*. Learners should be taught how to select an appropriate statistical test, based on levels of measurement, size of sample, and the parametric/non-parametric distinction. They need only, however, be taught the steps of the actual test required to analyse their own data: for example, 't' test, chi-square test, or perhaps Mann-Whitney-U test and can use computer programs for the calculation. The learning and teaching for this unit should take place in good time to allow the learner to make appropriate choices for their own data. It is assumed that the topic being researched has already been covered and so the time for this unit should be devoted to learning about inferential statistics including levels of significance, as well as giving time to carry out the research and complete the reporting required. Learners should be reminded of the use of descriptive statistics in such research, as they will be expected to use appropriate descriptive statistics in their analysis. Lecturers may have to teach specific calculations (descriptive statistics) unless the learner has the Core Skill of *Numeracy* or previous experience of dealing with similar calculations, or at least learners should be provided with suitable flexible learning materials for these procedures. These calculations should be taught as part of an ongoing exploration of how to carry out and interpret research. Ethical issues should be explored in the context of research evidence.

Centres should structure the teaching programme to allow time for development of Core Skills and other transferable skills and for assessment practice within the notional hours suggested.

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Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

This assessment could take the form of an open-book report with an expected learner response of approximately 2,000 words *or* an individual oral presentation *or* poster exhibition with expected learner's response of 12–15 minutes in presentation *or* explanation of poster *or* any other method that is appropriate to meet the evidence requirements. Learners could also provide the evidence requirements in the form of an individual blog *or* creation of a website, with approximately 2,000 words. It is important that it is designed with an agreed format to meet all knowledge and skills required across all outcomes.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work *or* further and higher education.

Tutors should make learners aware of the importance of the judicious selection of appropriate academic. They should be encouraged to choose academic sources rather than generic search engines, to enable them to be more confident of information, particularly as this unit is at SCQF level 8.

The suitable prescribed format could contain the following:

- ◆ abstract/summary
- ◆ aims and background
- ◆ hypotheses
- ◆ method — containing information on design, participants, apparatus/materials, procedure and ethical considerations
- ◆ results using descriptive and inferential statistics
- ◆ discussion and conclusion (including critical evaluation and ethical implications)
- ◆ bibliography/references
- ◆ materials used and raw data (may be as an appendix *or* appendices)

Learners may work together on the design/planning and carrying out of research but the reporting must be the individual's own work.

Centres should design an appropriate assessment instrument based on a method that is suitable in allowing learners to meet the evidence requirements. This can be written *or* oral (depending on the needs of the learners and the organisational aspects for the centre in choosing particular methods). If an oral method is chosen, it is recommended that centres record this (either by DVD *or* digital recorder etc) *or* provide assessor notes on the presentation for external verification purposes. Oral presentations must be done individually as each learner has to show evidence of meeting all evidence requirements, so a group presentation would not be suitable.

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If the centre is using a blog or creation of a website as the way of gathering evidence, this should not be in the public domain. Rather it should be on an intranet or private area of a VLE to reduce the likelihood of plagiarism. Authentication of the learner's work is essential. It would be helpful to collect notes or PPT presentation materials from the learner as further evidence of meeting SCQF level 8 in the presentation.

A centre can choose to use a mixture of methods across a cohort, as it may be more suitable for some learners to give a written response and for others to use an oral method.

Centres should make sure they can authenticate a learner's work for this unit (open-book). This may be done by questioning a learner about their work, by seeing drafts of work under construction, by having a partial write-up in the presence of the assessor or by using an anti-plagiarism tool, such as Turnitin or SafeAssign, which checks internet sites.

Remediation should be done by a review of the original work. Learners should be asked to hand in a complete piece of work, with amendments incorporated in the appropriate context, rather than a large add-on at the end, or asked to fully rewrite their work to a prescribed format if it did not meet requirements. Oral clarification could be used for minor omissions or to clarify minor detail. If it is thought appropriate that a learner tackle a different topic or question, then that new submission would count as a re-assessment.

In oral work, learners can be questioned by the assessor at the end of their presentation or explanation, where minor omissions occur, or where clarity is required. This would help to reduce the need for re-assessment. However, where more work is required to meet the evidence requirements (eg, where the quality of evidence is poor in a presentation) another presentation of the same duration, on the same topic or question as the original would be required. Only where a different topic or question is attempted would this be classed as re-assessment.

Opportunities for 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 Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the evidence requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

The delivery and assessment of this unit may contribute towards the development of all 5 Core Skills of *Communication, Information and Communication Technology, Numeracy, Working with Others* and *Problem Solving*. It can also support the development of other transferable skills, such as, essay/report writing, referencing, citation and bibliography skills and thinking, analytical and critical skills.

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It is possible to develop **Communication at SCQF level 6** if the assessment takes the form of an essay/report or oral presentation. **For Written Communication at SCQF level 6 the skill is: produce well-structured written communication on complex topics.** To develop this skill learners can be encouraged in both formative and summative assessment to present all essential ideas/information and supporting detail in a logical and effective order; use a structure that is organised and use paragraphing to make distinctions between facts, opinions, arguments and conclusion, use a format, layout, and word choice which are appropriate to the content and context, and use spelling, punctuation, vocabulary and sentence structures which are consistently accurate. It is part of the evidence requirements for the unit to ensure learners convey complex ideas in a well-structured and coherent way. This can be stressed in delivery and in formative work, as well as being considered in summative assessment.

The learners could be tasked with producing a written communication, such as a report, which presents, analyses, and evaluates a substantial body of information. These skills can be developed through formative activities, such as providing an essay on the background to the chosen topic or on a major related study, without being formally assessed for certification of Core Skill. The topics that centres can choose are complex so should easily fit with SCQF level 6.

It is important to develop report writing or essay-writing skills for learners' future progression. In doing this, learners should also be encouraged to use an appropriate referencing method, such as Harvard or APA, for any formative or summative reports. Referencing, citation and bibliography skills are best developed using the vehicle of formative essay or report writing. It is hoped learners will have been introduced to these skills by undertaking *Psychology A, B* or *C* units. This unit is useful for consolidation of the skills. The assessment for the unit could be a written report that would be to a prescribed format but would include the need for referencing and citation skills.

For Oral Communication at SCQF level 6 the skill is: produce and respond to oral communication on a complex topic. In both formative and summative assessment, the learner could be encouraged to give a detailed oral presentation on the topic chosen for summative assessment of this unit as this would be sufficiently complex. The specific skills of using an appropriate level of vocabulary, consistent spoken language structures and formality, conveying all essential information, opinions, or ideas with supporting detail accurately and coherently, and with varied emphasis as appropriate and responding to others, taking account of their contributions would be developed in an oral presentation. Although a summative assessment would require individual work and individual presentation, a formative assessment could be constructed that would encourage learners to work in a small group, with a few people contributing to the presentation on their group research project. This could be on a particular subtopic or for a whole topic, for their whole research or just the planning stage. This may allow a learner to experience the demands of oral presentation before choosing this as an option for summative assessment of the unit (if the centre is able to give that choice).

As it is important that learners submit a bibliography (or reference section) in a standard format, such as Harvard or APA, for the summative assessment, even oral assessment methods should incorporate an appropriate bibliography.

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For the Core Skill of *Information and Communication Technology (ICT)* at SCQF level 5 the skills are: ‘Accessing Information, use ICT independently, effectively, and responsibly to access information within a range of tasks’ and ‘Providing/Creating Information, use ICT independently, effectively, and responsibly to carry out a range of processing tasks’. This unit can help to develop such skills by the use of mini formative presentations using PowerPoint or other ICT presentation tool that will also support the development of oral communication. A summative assessment using ICT presentation methods is also possible. Specific areas of accessing information using internet searches or VLE use and providing and creating information can be developed in such tasks. Creating a blog or a website for the summative assessment is another way in which this Core Skill can be developed. This could be used where learners (and their lecturer) have particular skills and interest in ICT.

For the Core Skill of *Numeracy* at SCQF level 5 the skill is: ‘Using Number, apply a range of numerical skills in various everyday situations’ and ‘Using Graphical Information, interpret and communicate graphical information in everyday situations’. The research investigation for this unit lends itself well to development of *Numeracy* at SCQF level 5. Learners can be given sample calculations (inferential statistics) to work out and data presented in tables and graphs to analyse as formative work. As part of the summative assessment learners will have to work with statistical data, carry out calculations (inferential and descriptive statistics), present information in graphical form and draw conclusions based on collated data.

For the Core Skill of *Working with Others* at SCQF level 6, the skill is ‘Working Co-operatively with Others’, ‘Review Co-operative Contribution’. Learners will be involved in complex interactions, work with others co-operatively on an activity and/or activities, particularly the research investigation, which can be done as a group (although the reporting should be done individually to ensure each learner meets all evidence requirements). It would be appropriate to encourage learners to reflect on their own contribution to any group activity, whether that is a formative oral presentation on a topic or the research investigation for summative assessment.

For the Core Skill of *Problem Solving* at SCQF level 6, the skill is ‘Critical Thinking’, ‘Planning and Organising’ and ‘Reviewing and Evaluating’. Thinking, analytical and critical skills could be developed by posing questions at appropriate points in the delivery, enabling discussion and promoting the need for learners to take responsibility for learning by encouraging the development of research skills via the internet or using text books. These skills are also developed through the discussion of the research. The research task for this unit requires that a complex issue is identified (in the aim, background and hypotheses sections), plans drawn up considering all variables to develop and implement an appropriate strategy (methodology section), carry out task including providing materials, critically evaluate the strategy used and make recommendations about future research (Discussion and Conclusion section). This task fits well with development of this Core Skill.

Curriculum for Excellence

The Curriculum for Excellence aspires to place learners at the centre of the curriculum and develop their capacities as Successful Learners, Confident Individuals, Responsible Citizens and Effective Contributors. All four capacities will be developed throughout this unit.

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This unit will develop the literacy and communication skills of the learners by way of formative and summative assessments. Independent learning is required throughout this unit, as it is an independent research task, whilst the opportunity is available for group learning through the summative assessment. The subject of psychology demands independent thinking, and through reasoned evaluation encourages learners to reach satisfactory conclusions. Further opportunity is offered to develop technological skills by way of researching via the internet, the production of word documents, PowerPoint presentations, blogs and/or the creation of a website. Collectively these skills contribute towards the creation of a **Successful Learner**.

Time management skills should improve during the delivery of this unit, as should the ability to relate to others through formative tasks and during the summative assessment task. The topics that form the basis for the research in *Psychology D* should allow the learner to develop their own thoughts of the world around them, and they will be given the opportunity to express these views within the classroom setting. This should lend to the emergence of a **Confident Individual**, particularly if they gain success in the achievement of the unit.

Psychology D can also contribute to learners becoming **Responsible Citizens** by allowing the opportunity to develop knowledge and understanding of why people behave the way they do. Learners will be encouraged to develop a more ethical view, particularly in designing and carrying out their research task. Furthermore, informed, ethical views of complex issues can be developed, as can an understanding of different cultures or sub-cultures.

Learners can become **Effective Contributors** to society by learning to work together effectively in teams within the class setting or outwith in carrying out their research task. This can be achieved through group-work where they can apply critical thinking within new contexts. In planning group tasks, evaluating data and presenting their findings, learners will also develop problem solving skills. Both oral and written communication skills will also be developed. This can be achieved through written work, individual PowerPoint presentations, and the creation of blogs and websites.

All these skills can be developed within the unit.

History of changes to unit

Version	Description of change	Date

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General information for learners

Unit title: Psychology D: The Research Process in Psychology
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This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This unit is designed to develop your investigation and research skills. You will design an investigation and conduct research on a topic already studied in HN Unit *Psychology B: Explanation and Research of Psychological Topics* or HN Unit *Psychology C: Analysis and Evaluation of Psychological Topics*.

You will learn to use inferential statistics and how to choose an appropriate statistical technique to analyse data. You will report on the findings.

The research will be conducted partly in structured class time and partly in your own time and will be detailed work. The assessment will be open-book. This means that you will be allowed access to materials (eg, text books, notes, VLE) throughout.

The research task will be handed out to be completed by a date specified by your lecturer. It should be completed according to a prescribed format given by your lecturer and could be submitted as a written report of approximately 2,000 words *or* an oral presentation of approximately 15 minutes in duration. You may also be allowed to provide the evidence requirements in the form of an individual blog or creation of a website, with approximately 2,000 words. It is important that it is designed with an agreed format to meet all knowledge and skills required across all outcomes. Your lecturer will inform you of which method(s) your centre will support.

As you progress through the unit, you will be encouraged to develop Core Skills of *Communication* (at SCQF level 6), *Information and Communication Technology* (at SCQF level 5), *Numeracy* (at SCQF level 5), *Working with Others* (at SCQF level 6) and *Problem Solving* (at SCQF level 6) by the types of activities you will experience.

You will also be given opportunities throughout the unit to develop as a successful learner, a confident individual, a responsible citizen and an effective contributor.