



## Unit 2: Conducting Psychological Research

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### Delivery guidance

This unit will give learners the practical skills and knowledge required to complete a piece of psychological research in the form of a pilot study. They will learn how to investigate a specific area of interest in psychology, and then discuss the process practically and ethically.

Learners will gain the knowledge and skills required in order to enable them to write a report looking at the purpose of research, and its importance for society, as well as to plan and execute a pilot study to test a specific hypothesis. Learners will need a sound understanding of scientific processes and research methodology in order safely execute the research process and to be able to assess its effectiveness.

Investigating hypotheses presents a number of practical issues for teaching and learning. Learners often find the concepts of psychological research challenging and it is important that tutors give learners numerous opportunities for small-scale practical research prior to completing their main assessment. This could be as simple as preparing a questionnaire or performing a small-scale experiment within the class. These research opportunities will give learners the knowledge to make informed judgements about which methodology to use in their assessment. The use of existing research to illustrate evaluation issues such as ethics, reliability, validity, etc. will also be preferable.

Making this unit as practical as possible is critical to learners' success. However, tutors must ensure learners have the underpinning knowledge in order to make informed judgements about their own research, and also ensure they have a sound base to take forward to the subsequent units on the course.

### Approaching the unit

Learners will need to know and understand the process, components and characteristics of research. They will need to have the knowledge and skills to carry out a pilot study to answer a research question/hypothesis, and the skills to evaluate the success of their research using practical, theoretical and ethical issues as their base. This unit will allow learners to have the experience of carrying out practical research – something that will hopefully inspire them to study psychology further in the future.

Learning aim A is concerned primarily with the principles behind psychological research and how it can inform and improve practice (purpose and value) – focusing in particular on the scientific processes that are an integral part of research. Evaluative issues such as reliability, validity and ethics are also a critical part of Learning aim A.

For many learners the concepts introduced in Learning aim A will be unfamiliar, and therefore the style of teaching may reflect the more abstract nature of the information required. Tutor-led sessions to establish a sound knowledge base about the principles of research will be the primary focus in the early part of the learning aim; however, independent research on current issues in applied psychology can also be integrated at this time. Current issues can reflect a number of the units learners will encounter within this qualification, such as health psychology, forensic psychology and psychopathology, although there needs to be an awareness of the limitations, and ethical constraints, of possible research questions for learners.

Although the strengths and weaknesses of research methods are introduced in Learning aim B, it is expected that this information will form an early part of teaching and can be integrated into Learning aim A – especially due to the fact that these strengths and weaknesses are a part of the learner's first assignment brief. This section could turn out to be quite lengthy and worksheet based. Therefore, it is preferable that learners have as much practical experience as possible with the different research methods.



This could involve learners performing small-scale in-class research using the different types of methodology – i.e. a small-scale experiment, observation or questionnaire – which will give them a greater appreciation of how to carry out research. It will also give them a greater awareness of the strengths and limitations of a particular type of methodology. At this point, some of the key terms such as ‘hypotheses’, ‘operationalisation’, ‘reliability’, ‘validity’ can be explained, and integrated within the practical activities. This active participation will enhance learners’ practical skills – something that is essential when carrying out their pilot study in Learning aim C.

Learning aims C and D focus on the practical task of carrying out the pilot study, which will include: deciding on a suitable research aim and hypothesis; carrying out a literature review to support learners’ research; carrying out the task; reporting its findings; and reflecting on its success, or failure.

Many learners will find the construction of hypotheses alongside the literature review a challenge; therefore, it is critical that time is spent within lessons to ensure learners have the appropriate skills for these tasks. This may include giving learners practice at the formulation of hypotheses, alongside independent learning tasks asking them to find information about a particular topic area. When carrying out the practical task, tutors should monitor learners. Therefore, it may be more appropriate for participants to be within the school/college or, as recommended, within the classroom. Learners must always be reminded about their ethical responsibilities and be encouraged to keep a record of the process, so they have an awareness of what is right and wrong. Learners also need to have an awareness of basic ways of representing their data. Most should be aware of these methods from other subjects but a refresh prior to writing up the report may be advisable.

For Learning aim D, the challenge will be to ensure learners have the skills to critically reflect on their own research. This could be aided by learners keeping accurate records of what happened during the process as well as having a worksheet with prompts about the types of questions they could ask themselves. It is important to convey to learners that it is okay to discuss areas of weakness, as this is what a pilot study is for.



## Assessment model

Learning aim	Key content areas	Recommended assessment approach
<b>A</b> Understand research methods and their importance in psychological inquiry	<b>A1</b> Principles of research <b>A2</b> Key terms used in research <b>A3</b> Research process	A report discussing the importance of research in informing and improving practice and provision, detailing the way in which research is organised and giving an evaluation of different research methods and their usefulness in answering specific questions.
<b>B</b> Plan research to investigate psychological questions	<b>B1</b> Research methods <b>B2</b> Developing research proposal	A report discussing a proposal for a pilot study that takes account of research questions, methods, participants, procedures, time and organisational management.
<b>C</b> Carry out a pilot study to explore current issues in psychology	<b>C1</b> Data collection <b>C2</b> Data analysis <b>C3</b> Presenting findings to an audience	A pilot study, including: <ul style="list-style-type: none"> <li>• a report on procedures followed for conducting research and collecting and analysing data</li> <li>• a report that discusses the findings and success of the pilot study, the implications of research on practice and provision, and the impact, through self-reflection and feedback from others, on personal and professional development.</li> </ul>
<b>D</b> Review implications of research into psychological inquiry	<b>D1</b> Reviewing research process and findings <b>D2</b> Implications of research into psychological inquiry	

## Assessment guidance

This unit is internally assessed through a number of independent tasks. Learners must produce individual evidence that can be authenticated. The main sources of evidence are likely to be case study reports, and research proposals and reports.

BTEC assessors could assist learners with completing their research proposals and reports, while colleagues and peers could help with the completion of the research task within lessons. It is critical that every learner has a completed research proposal and report in the proper format, which has to be authenticated as the learner's own work.

Other relevant evidence may include the use of surveys, observational schedules and experimental research.

For Learning aim A, the assessment criteria requires learners to produce a report looking at the importance of psychological research and how that can help improve practice and provisions in vocational settings. Within this report learners need to critically evaluate a number of different research methods. From the outset it is critical that learners engage with the different research methods as much as possible.



Although the initial teaching will be focused on making sure learners have the appropriate knowledge base to be able to produce the first part of the report, it is critical that they have the opportunity to engage with the subject area by doing independent research on various areas within psychology which may have improved the life of the individual or group, such as health psychology (e.g. stress and illness, causes of stress), forensic psychology (issues with Eye Witness Testimony) or child psychology (effects of day-care) to name a few. When teaching the strengths and weaknesses of research methods tutors should allow time for learners to have practical experience with the different methods taught. This will ensure learners have a full understanding of the principles of the method but also their strengths and limitations both practically and ethically.

The remainder of Learning aim B asks learners to complete a research proposal for a pilot study to be conducted independently (and which takes account of research questions, methods, participants, procedures, and time and organisational management). Some thought has to be given to the type of research that learners could feasibly do, and how it could relate to the vocational element of the course. It is critical that all learners choose research topics that will be straightforward to complete and are ethically sound. Learners need, at this point, to be fully conversant with the ethical guidelines. They must be able to justify their research both practically and ethically. Their research method should take the form of an observation, questionnaire or an interview. Some possible topics could include the link between stress and illness, the reliability of Eye Witness Testimony, a link between gender and memory, Type A/B personality and ill health/self-rated stress levels. It would be preferable for learners to choose a research topic that could be applied to a vocational area, so they can answer the question of how results could inform and improve provision.

The assignment for Learning aims C and D is primarily focused on the learner's ability to:

- carry out a pilot study
- write up, in a suitable format, their research
- reflect on their pilot study, looking at its strengths and limitations
- assess the usefulness of the research for practice and provision.

For this assignment it is critical that learners are given enough time and guidance within lessons in order to carry out the study successfully. All learners need to have been taught the appropriate format of how to write up a research project in addition to how to present their findings to their audience. This may involve looking at current research, and the format that has been used within these, and how it's findings are presented. One of the most important parts of this assessment is learner's ability to critically evaluate and reflect on their own research, a skill that many find difficult. Therefore, it is critical that tutors spend some time discussing what is involved in reflection, and the structure they need to use when writing their reflection for their assignment.



## Getting started

The following gives you a starting place for one way of delivering the unit, based around the recommended assessment approach in the specification.

### Unit 2: Introducing Psychological Research

#### Introduction

Learners are required to gain an understanding of research methods and be able to apply this to a practical investigation that they will carry out in the form of a pilot study. The results of this research will be presented in an appropriate format, and the implications for provision and practice will be discussed.

#### Learning aim A – Understand research methods and their importance in psychological inquiry

For Learning aim A, the teaching concentrates on three main areas: the principles of research; key terms used in research; and the research process. In addition, it is suggested that the individual research methods, alongside their strengths and weaknesses, and usefulness to practise, should also be taught at this point, in preparation for the learners' first assignment. The suggested delivery of each area may be as follows.

- The principles of research – learners should be introduced to the key principles of research. This could be done through a class discussion on why people do research, and what can it be used for; or the use of an existing piece of research which is vocationally relevant, i.e. Friedman and Rosenman (see Unit 3 resources) who looked at the role of personality in stress and ill health. Learners could also do independent research on possible research topics within health, or other vocational areas of psychology.
- Key terms in research – this is the point at which it would be preferable to introduce the research methods outlined in Learning aim B, as this will help integrate the key terms outlined in this section of Learning aim A. For example, within the lab, field and natural experimental methodology you could discuss what each type is, and then introduce the key terms of aim, hypotheses, IVs and DVs, sampling and so on. Within this section it is important to give learners some practical experience of using these research methods prior to their assessment. Therefore, you could set learners a small research question that learners need to investigate within the class – e.g. is there a difference in reaction time between males and females? Then ask them to construct a hypothesis and discuss the IVs and DVs, controls and so on. This should be repeated as much as possible with the other research methods, as time allows, and should be followed by a discussion of the strengths and limitations of each method to include key terms such as 'reliability', 'validity' and 'ethics'.
- Research process – many of the key terms within this part of Learning aim A can be integrated into the discussion of the methods in the second bullet point. The issues surrounding ethics is a critical one and therefore a discussion of ethical principles could invariably be taught separate to the methods given earlier – although preferably prior to them being taught. You could use examples of ethical and unethical studies such as Milgram, Watson and Raynor and Zimbardo to illustrate points. Alternatively, set learners an independent learning task to suggest ethical issues and problems.
- The assessment task should be in the format of a report incorporating all the earlier information. It could perhaps be split into two areas: the first discussing the purpose of research, and how it can affect practice and provision; and the second discussing how a piece of research should be planned, and the different types of methodology with strengths, weaknesses and usefulness.



This could be based around a case study scenario such as a hospital, care centre or other health provider looking to finance research about the link between health and illness, for example. Ask learners to produce a report to justify the research, alongside a second detailing how they would go about answering the question.

### **Learning aim B – Plan research to investigate psychological questions**

For this learning aim learners will need to produce a research proposal for a pilot study that they seek to carry out. The report will include methods, participants, etc. – all produced in the proper format.

- Developing research proposals – the most important part of the teaching of this learning aim is to ensure learners pick a topic area that is feasible, straightforward and ethically sound.
  - Learners could invariably pick any current area within psychology, but caution should be taken not to use topics such as mental health or anything that could possibly cause harm or distress.
  - Learners will also need some guidance on how to perform a literature review in terms of how to search, how to ensure the material they find is appropriate and how to structure the review. This could be achieved by giving learners a topic area to search and asking them to find the most relevant information about the topic area.
  - At this point that learners will need independent study time within lessons to formulate their research proposal. It is suggested that strict timescales are employed to ensure learners can submit a draft prior to final submission.

### **Learning aim C – Carry out a pilot study to explore current issues in psychology**

This learning aim is primarily concerned with three areas: preparing for the practical research; carrying out their practical research (data collection and analysis); and writing up their findings effectively and in the appropriate format.

- Organising – learners need to ensure they plan fully for carrying out the task. This will include ensuring they have all the resources they need to ensure a successful completion such as formulation of a questionnaire, letters of informed consent for participants to sign, interview or observation schedules and so on.
  - Prior to carrying out the task learners need to have an awareness of how to interpret and present their data once it has been collected. Learners need to understand how to perform measures of central tendency and dispersion, how to present correlational data and how to draw a bar chart or histogram. Learners also need to have an understanding of how to analyse qualitative data through thematic or content analysis.
  - Increasing knowledge of the above should include practical experience of handling data. You should carry out activities using data that asks learners to calculate averages, draw scatter graphs and interpret the findings. For qualitative analysis, learners could be given a task where they are asked to watch a TV programme and tally down every time a male or female complete a gender appropriate or inappropriate task. Alternatively, they could use newspapers to analyse the different attitudes (positive or negative) to a current issue such as Brexit.
- Carrying out the tasks – learners should preferably carry out their tasks within the classroom or at most within their school/college. It is possible for learners to recruit samples from outside the school/college but they need to ensure the research remains small scale (as this is just a pilot study) and that participants are easy to recruit. Guidance on process will be needed throughout this time. Learners should be encouraged to make notes throughout the process, i.e. if/when procedures do not go totally to plan and what they may have done differently, as this will be useful when they complete their reflection.



- Writing up the pilot study – once the research project is completed learners need to write up their study and findings. It may be useful for all learners to have a worksheet detailing all the different components within the research project with short bullet points, which reminds them what needs to be written within each section. Access to IT both for the written element, and for data analysis is essential.

### **Learning aim D – Review implications of research into psychological inquiry**

This learning aim concentrates on the learner's review of the success of their pilot study and should include both self-reflection and feedback from others.

- Review of the pilot study – learners should be encouraged to critically evaluate the success of their research study looking at both the positives and negatives. Learners also need to formulate a short questionnaire to give to their participants asking about their thoughts on the research. This could include any questions about what should have been changed or that they didn't understand, how the participants thought that they performed, whether they understood what they were supposed to do, etc. Other areas learners need to reflect on include:
  - how their research could impact practice on provision in their chosen area – whether it change how people see, or treat, the chosen area
  - how the research could help their own professional development – this could be based on their chosen career path or how it would help them going forward within this unit
  - how the research could be adapted for a larger scale project.

As in Learning aim C, it may be useful for learners to have a worksheet detailing the areas they need to focus on when writing up their pilot study and what needs, in particular, to be included within each area.



## Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

This unit links to:

- Unit 1: Psychological Approaches and Applications
- Unit 3: Health Psychology
- Unit 4: Criminal and Forensic Psychology
- Unit 6: Introduction to Psychopathology

## Resources

In addition to the resources listed below, publishers may produce Pearson-endorsed textbooks that support this unit of the BTEC Nationals in Applied Psychology. Check the Pearson website: (<http://qualifications.pearson.com/endorsed-resources>) for more information as titles achieve endorsement.

### Textbooks

Brain C, 2016 *Edexcel Psychology for A Level Book 2*, Hodder Education, ISBN 9781471835452 (research methods section provides information about key terms within research methodology)

Flanagan et al. 2018 *Edexcel Psychology for A Level Year 1 and AS: Student Book*, Illuminate Publishing, ISBN 9781911208594 (gives good information about all of the key areas within research methods)

### Websites

Simply Psychology – gives a useful, basic overview of a variety of research methods and strengths and weaknesses.

Wikibooks – search for ‘research methods in psychology’ for a guide to different issues within research methods.

*Pearson is not responsible for the content of any external internet sites. It is essential for tutors to preview each website before using it in class so as to ensure that the URL is still accurate, relevant and appropriate. We suggest that tutors bookmark useful websites and consider enabling learners to access them through the school/college intranet.*