ECAD5014C Ymchwilio i’r Dysgu: beth, sut a pham ydw i’n addysgu?

ECAD5014 Researching the learning: what, how and why am I teaching?

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Sesiwn - Session 4

Yn y sesiwn yma, byddwn yn edrych ar:
In this session, we will be looking at:

- Bod yn ymchwilydd medrus – Being a skilled researcher
- Offer ymchwil (holiaduron) – Research tools (questionnaire)
- Holiaduron a moeseg – questionnaire and ethics

Dylunio a chynnal astudiaeth ymchwil
Design & conduct a small-scale research study

Cyflwyniad Introduction	Adolygiad Llenyddiaeth Literature Review	Methodoleg Methodology
Diwrnod Ymchwil Research Day	Canlyniadau a thrafodaeth Findings & Discussion	Conclusion Casgliad

Methodoleg
Methodology

Offer ymchwil
- Holiadur
- Cyfweliad

Dadansoddi data
- codio, graffiau, siartiau

Moeseg

Research tools
- Questionnaire
- Interview

Data analysis
- coding, charts, graphs

Ethics

Cwestiynau ymchwil a'u pwrpas
Research questions & purpose

- Pam ymchwilio?
- Sut ydym am wneud yr ymchwil?

- Why research?
- How are you going to conduct your research?

- ANSODDOL
- MEINTIOL

- QUALITATIVE
- QUANTITATIVE

Holiaduron

Yn dibynnu ar natur y cwestiynau, gellir dosbarthu holiaduron fel hyn:

meintiol

Mae atebion a gafwyd trwy gwestiynau pen-caeedig gydag opsiynau ateb dewis lluosog yn cael eu dadansoddi gan ddefnyddio dulliau meintiol a gallant gynnwys siartiau cylch, siartiau bar a chanrannau.

ansoddol

Mae atebion a gafwyd i gwestiynau holiadur penagored yn cael eu dadansoddi gan ddefnyddio dulliau ansoddol ac maent yn cynnwys trafodaethau a dadansoddiadau beirniadol heb ddefnyddio rhifau a chyfrifiadau.

Questionnaires

Depending on the nature of the questions, questionnaires can be classified as:

quantitative

Answers obtained through closed-ended questions with multiple choice answer options are analysed using quantitative methods and they may involve pie-charts, bar-charts and percentages.

qualitative

Answers obtained to open-ended questionnaire questions are analysed using qualitative methods and they involve discussions and critical analyses without use of numbers and calculations.

Holiaduron
Questionnaires

- Ysgrifennu holiaduron -proses syml?

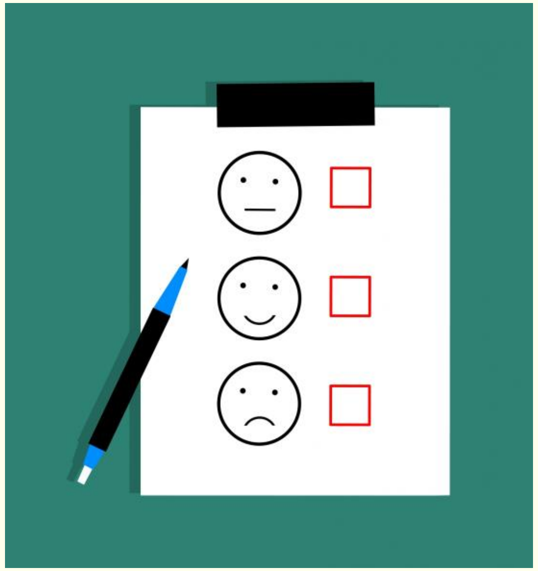
- Designing a questionnaire – a straightforward process?

'fiendishly difficult to design'…'discipline in the selection of questions, in question writing, in the design, piloting, distribution and return of questionnaires'

(Bell, 2010, p.140)

Enghreifftiau o gwestiynau mewn holiadur
Types of questions found in a questionnaire

- Caeëdig
- Cwestiynau ystod
- Cwestiynau aml-ddewis
- Graddio
- Dewisol
- Graddfa Likert
- Rhannol-strwythuredig
- Anstrwythuredig



- Closed
- Range questions
- Multiple choice questions
- Ranking
- Select
- Likert scale
- Semi-structured
- Unstructured

Mathau o gwestiynau
Types of questions

- **Amlddewis**

Cerdded/Beic/Bws/Car/Tacsi
Rhagorol/Da/Gweddol/Gwael

- **Trefn pwysigrwydd**

1-5 (lle 1 yw'r isaf a 5 yw'r uchaf)
1-10 (lle 1 yw'r un pwysicaf a 10 yw'r lleiaf pwysig)

- **Graddfeydd sgorio**

Cytuno/anghytuno
Bodlon/gwael
Hapus/anhapus

- **Multiple choice**

Walk/Bike/Bus/Car/Taxi
Excellent/Good/Fair/Poor

- **Rank order**

1-5 (where 1 is lowest and 5 is highest)
1-10 (where 1 is most important and 10 is least important)

- **Rating scales**

Agree/disagree
Satisfied/dissatisfied
Happy/unhappy

Mae holiadur da...
A good questionnaire is...

- Yn gryno
- Yn glir
- O faint y gellir ei reoli (ddim yn rhy hir)
- Yn osgoi jargon
- Yn deg a rhesymol
- Nid yw'n cynhyrfu/tramgwyddo pobl
- Wedi'i roi mewn trefn (ystyriwch adrannau)
- Yn mynd i'r afael ag un mater/pwnc ar y tro

- Concise
- Clear
- Manageable (not too long)
- Avoids jargon
- Fair and reasonable
- Does not upset/offend
- Sequenced (consider sections)
- Tackles one issue/topic at a time

Cyflwyno eich holiadur
Presenting your questionnaire.... Top tips!

- Trefnwch eich cwestiynau mewn ffordd sy'n ystyrlon ac sy’n hawdd i'w dilyn.
- Dylai'r cwestiynau lifo mewn rhyw fath o drefn sy'n swnio'n naturiol ac nad yw’n neidio o gwmpas yn ormodol.
- Grwpiwch bynciau tebyg, gyda'i gilydd yn hytrach na neidio'n ôl ac ymlaen.
- Dechreuwch gyda chwestiynau sy'n hawdd eu deall ac sy'n hawdd eu hateb.
- Os oes unrhyw gwestiynau sy'n bwysicach a'ch bod am i'ch ymatebwyr ganolbwyntio arnynt, rhowch nhw tua dechrau eich holiadur.

- Order your questions in a way that is meaningful and easy to follow.
- The questions should flow in some sort of order that sounds natural and does not skip around too much.
- Group like topics together rather than jumping back and forth.
- Start with questions that are easy to understand and easy to answer.
- If there are any questions that are of more importance and that you want your respondents to focus on, place them towards the beginning of your questionnaire.

Tuedd yr ymchwilydd – osgoi cwestiynau arweiniol neu awgrymog

Researcher Bias – avoiding leading or loaded questions

- 'Gawsoch chi ddiwrnod da yn yr ysgol?'

yn cyfeirio'r plentyn tuag at feddwl am bethau da a ddigwyddodd yn yr ysgol.

- 'Sut oedd yr ysgol heddiw?'

yn fwy cyffredinol, ac nid yw'n gofyn am farn ynghylch pa mor dda neu ddrwg fu'r diwrnod.

- 'Did you have a good day at school?'

points the child towards thinking about good things that happened at school.

- 'How was school today?'

is more generalised and does not ask for judgment about how good or bad the day has been.

Cynulleidfa darged – wed'i theilwra ar gyfer anghenion ymatebwyr
Target Audience – tailor to needs of respondents

- Pa mor hen ydyn nhw?
- Pa iaith y dylwn i ei defnyddio?
- Faint o opsiynau y mae angen i mi eu rhoi iddyn nhw?
- Beth yw eu rhychwant sylw?
- Fyddan nhw'n deall yn iawn beth rwy'n ei ofyn iddyn nhw?
- Allai delweddau/e-mojis helpu?
- Triongli data – disgybl/staff

- How old are they?
- What language should I use?
- How many options do I need to give them?
- What is their attention span?
- Will they fully understand what I'm asking them?
- Might images/emojis help?
- Triangulating data – pupil/staff

- Microsoft Forms
- https://support.office.com/en-us/article/create-a-quiz-with-microsoft-forms-a082a018-24a1-48c1-b176-4b3616cdc83d
- Step by Step how to use Microsoft Forms
- https://www.youtube.com/watch?v=ouFKWHQMxtQ

Bod yn foesegol wrth ymchwilio
Being ethical in research led practice

"The questionnaire will always be an intrusion into the life of the ***respondent****"* (Cohen & Manion, 2013, p.260)

- Allwch chi feddwl pam?

- Can you think why?

Bod yn foesegol wrth ymchwilio
Being ethical in research led practice

- Cwestiynau sensitif
- Trefn y cwestiynau
- Caniatâd
- Cyfrinachedd
- Rheoli data

- Sensitive questions
- Sequence the questions
- Consent
- Confidentiality
- Data management

Materion moesegol: Pwyntiau allweddol

Atebwyr holiaduron yw **goddrych** yr ymchwil ac nid y gwrthrych

Allwch chi ddim **gorfodi** atebwyr i gwblhau'r holiadur

Mae gan bob atebwr **yr hawl i dynnu'n ôl** unrhyw bryd neu i beidio â chwblhau pob rhan o'r holiadur

Bydd angen i chi sicrhau **caniatâd gwybodus**

Bydd angen i chi sicrhau **cyfrinachedd, anhysbysrwydd** ac **nad oes modd eu holrhain.**

- https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-fifth-edition-2024

Ethical issues: key points

https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-fifth-edition-2024

- Questionnaire respondents are the **subjects** and not **objects** of research
- You cannot **coerce** respondents into completing a questionnaire
- All respondents have the **right to withdraw** at any stage or not complete all parts of the questionnaire
- You will need to obtain **informed consent**
- You will need to guarantee **confidentiality, anonymity,** and **non-traceability.**

Cryfderau a Chyngiadau Holiaduron
Strengths & Limitations Questionnaires

- Beth yw manteision/ cryfderau ac anfanteision/heriau defnyddio **holiadur** fel dull o ymchwilio?

https://positivepsychology.com/wp-content/uploads/1_strength-finding-exercises-300x150.jpg

- What are the advantages/ strengths and disadvantages/ limitations of using a **questionnaire** as a research tool?

Cryfderau Holiaduron
Strengths of Questionnaires

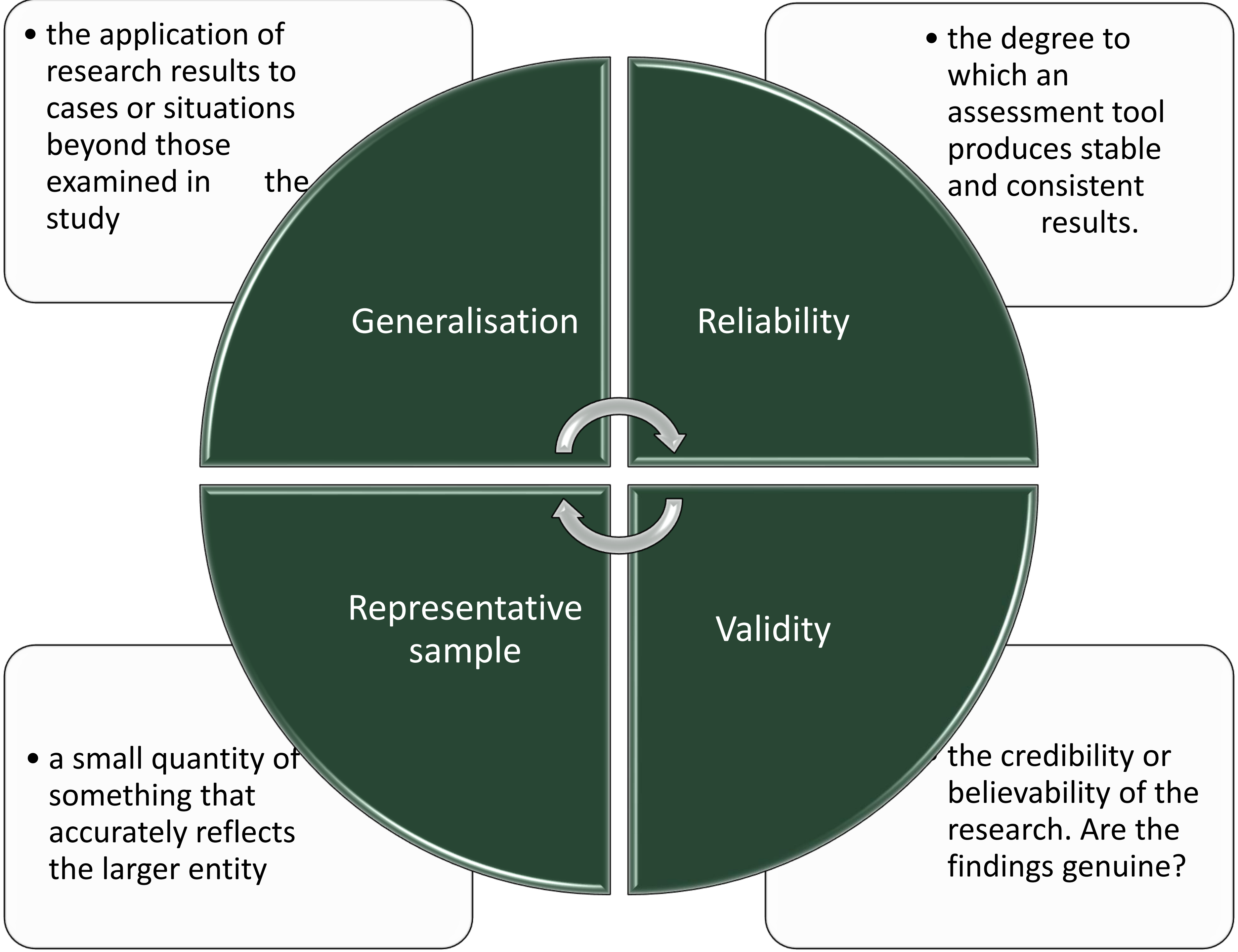
- Ymarferol
- Gellir casglu llawer iawn o wybodaeth yn gyflym
- Gall llawer o bobl gymryd rhan gyda effaith cyfyngedig i ddilysrwydd a dibynadywedd
- Mae'n bosibl cyfrifo y canlyniadau yn gyflym a rhwydd
- Yn gallu dadansoddi'r data yn gyflym a gwrthrychol.

- Practical
- Large amounts of information can be collected quickly
- Can be carried out by many people with limited affect to its validity and reliability
- Results can be quickly and easily quantified
- Can be analysed easily and objectively

Cyfyngiadau Holiaduron
Limitations of Questionnaires

- Anodd deall rhai gwybodaeth
- Dim ffordd o wybod os yw’r cyfranogwr yn dweud y gwir
- Dim ffordd o wybod faint o feddwl mae’r cyfranogwr wedi ei roi cyn ateb cwestiwn
- Pob yn ateb yn seiliedig ar eu dehongliad o’r cwestiwn (e.g. da, gwael, anodd)
- Diffyg dilysrwydd

- Difficult to understand some forms of information
- No way of telling how truthful a respondent is being
- No way of telling how much thought a respondent has put in
- People answer based on their interpretation of the question (e.g. good, poor, difficult)
- Lacks validity



• the application of research results to cases or situations beyond those examined in the study
Generalisation
• the degree to which an assessment tool produces stable and consistent results.
Reliability
Representative sample
• a small quantity of something that accurately reflects the larger entity
Validity
• the credibility or believability of the research. Are the findings genuine?

Cyffredinoli

- cymhwyso canlyniadau ymchwil i achosion neu sefyllfaoedd y tu hwnt i'r rhai a archwiliwyd yn yr astudiaeth

Dibynadwyedd

- y graddau y mae adnodd asesu yn cynhyrchu canlyniadau sefydlog a chyson.

Sampl gynrychioliadol

- rhywbeth bach sy'n adlewyrchu'n gywir y darlun mwy

Dilysrwydd

- hygrededd neu gredadwyedd yr ymchwil. A yw'r canfyddiadau'n ddilys?

Tasg Unigol
Individual Task

- Ysgrifennwch rhai brawddegau yn trafod manteision a chyfyngiadau **holiadur** fel offeryn ymchwil.
- Cofiwch gefnogi eich sylwadau gyda llenyddiaeth.

- Write a few sentences discussing the strengths and limitations of **questionnaire** as a research tool.
- Remember to support your points with literature.

Er enghraifft / For example:
Denscombe, M. (2014) *Good Research Guide*. 5th edition. Maidenhead: Open University Press (Chapter 12*) (Copi ar gael/Copy available – Moodle*)

Tasgau Gyfeiriedig
Directed Tasks

Archwilio y ddogfen: Llywodraeth Cymru (2010) *Sut i ddatblygu sgiliau meddwl ac asesu ar gyfer dysgu yn y dosbarth.* *https://hwb.gov.wales/api/storage/283b9318-dcf7-402d-b39a-67dee70efe18/sut-i-ddatblygu-meddwl-ac-asesu-ar-gyfer-dysgu-yn-yr-ystafell-ddosbarth.pdf* Dechreuwch ddrafftio cwestiynau cyfweliad ac holiadur posibl ar gyfer eich ffocws ymchwil.

Darllen Blackburn (2018) *Researching with young and developmentally young children: Ethical considerations, dilemmas and compromises*. Yn *BERA Bites: Early Childhood*, Issue 1. https://www.bera.ac.uk/publication/issue-1-early-childhood Ystyried materion cydsyniad plentyn/ caniatâd rhieni; cyfrinachedd; anhysbysrwydd

- Explore the document: Welsh Government (2010) *How to develop thinking and assessment for learning in the classroom*. https://hwb.gov.wales/api/storage/663d00fd-9c3b-4003-9a1f-0012bad39fad/how-to-develop-thinking-and-assessment-for-learning-in-the-classroom.pdf
- Begin drafting possible interview and questionnaire questions for your research focus.
- Blackburn (2018) *Researching with young and developmentally young children: Ethical considerations, dilemmas and compromises in BERA Bites: Early Childhood*, Issue 1
- https://www.bera.ac.uk/blog/researching-with-young-and-developmentally-young-children-ethical-considerations-dilemmas-and-compromises

Cyfeiriadau
References

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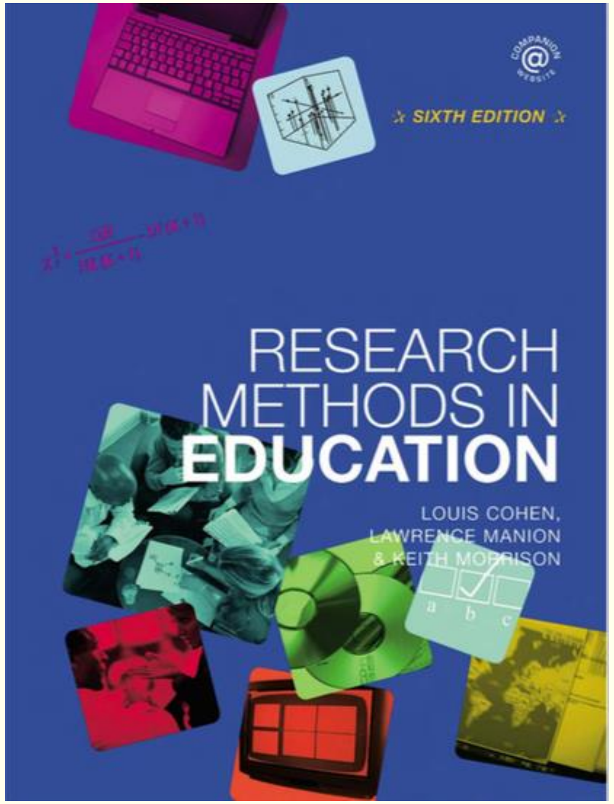
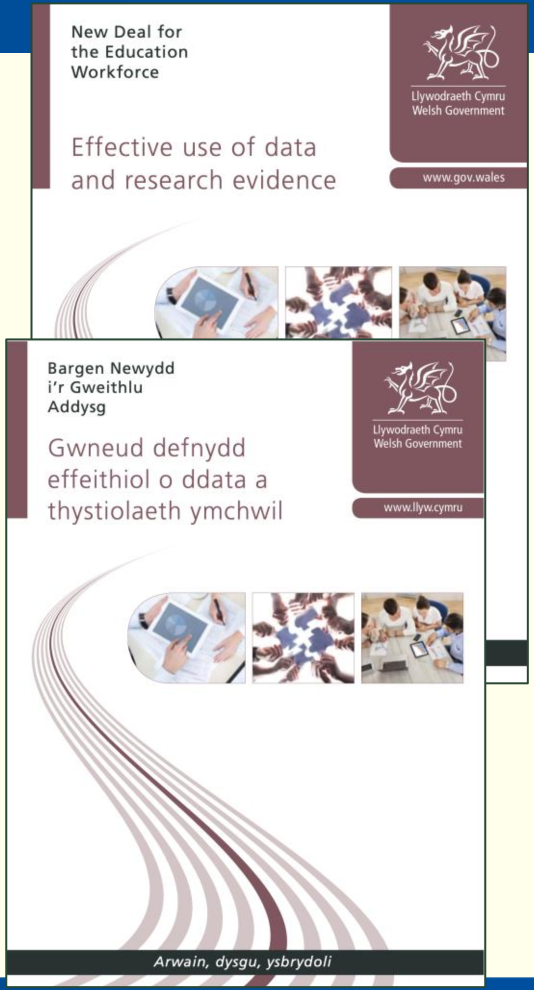
Cohen, L., Manion, L. and Morrison, K. (2013) *Research Methods in Education*. London: Sage Publications Ltd.
(Copy available on Moodle) rme-edu-helpline-blogspot-com.

Denscombe, M. (2014) *Good Research Guide*. 5th edition. Maidenhead: Open University Press (Chapter 11)
(Copy available on Moodle)

Cyfeiriadau Defnyddiol
Useful References





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