

Research Techniques in Education Practice Test 2

60 original multiple-choice questions for teacher test preparation (FPSC / FGEI / PPSC style). Choose one answer for each question. The full answer key is on the last page — worked explanations for every question are free on the test page at QuaidianPoint.com.

Name: _____ Class: _____ Score: _____ / 60

Meaning, Purpose and Types of Research

Q1. Research may best be defined as what?

- (A) A systematic search for new and reliable knowledge
- (B) A careful reading of a single textbook chapter
- (C) A record of a teacher's daily classroom routine
- (D) A survey of parents' opinions about one school event

Q2. Educational research ultimately aims to improve which of the following?

- (A) The length of the school syllabus
- (B) The difficulty of examinations
- (C) Teachers' workloads automatically
- (D) The quality of decisions made in education

Q3. A study investigating the nature of curiosity in learning, with no immediate practical use in mind, is which type of research?

- (A) A school timetable evaluation
- (B) Basic research
- (C) A textbook evaluation
- (D) An action research project

Q4. A principal uses research findings to reduce dropout in her own district. This use of research is best described as which type?

- (A) Pure theoretical inquiry
- (B) Applied research
- (C) Historical inquiry
- (D) Philosophical inquiry

Q5. A teacher who investigates her own marking feedback to improve it is conducting which type of research?

- (A) A national survey
- (B) A laboratory experiment
- (C) Action research
- (D) A study of old archives

Q6. Which of the following is NOT a characteristic of good research?

- (A) It is systematic in its steps
- (B) It is objective in its judgements
- (C) It is based on observed evidence
- (D) It is based on guesswork alone

Q7. Why do education policy makers need research?

- (A) To justify decisions that have already been made, without examining evidence
- (B) To standardise every classroom routine in all schools
- (C) To replace teachers' professional judgement entirely
- (D) To base policy decisions on evidence rather than opinion

Q8. Which attitude is most scientific for a researcher?

- (A) Willingness to revise a conclusion when the evidence points another way
- (B) Refusal to change an opinion under any circumstances
- (C) Preference for results that please a sponsor
- (D) Reliance on authority without checking evidence

Q9. What is the main difference between basic and applied research?

- (A) Basic research collects no data, while applied research does
- (B) Applied research is not systematic, while basic research is
- (C) Basic research aims at theory and understanding, while applied research aims at practical use
- (D) Basic research is always qualitative, while applied research is always quantitative

Q10. Research is described as empirical because it is based on what?

- (A) Personal opinions alone
- (B) Philosophical argument alone
- (C) Observed and measured evidence
- (D) Long written reports alone

Q11. Why is research important in teacher training?

- (A) It helps future teachers base their practice on evidence rather than habit alone
- (B) It removes the need for classroom practice
- (C) It guarantees a teaching post for every trainee
- (D) It replaces subject knowledge entirely

Q12. What is the expected outcome of a successful action research project?

- (A) A universal law of learning for all schools
- (B) A national ranking of schools
- (C) A new textbook for the whole country
- (D) Improved local practice together with reflection by the practitioner

The Research Process and Its Steps

Q13. After a research problem has been identified, which step usually follows?

- (A) Writing the final report
- (B) Reviewing related literature
- (C) Analysing collected data
- (D) Drawing final conclusions

Q14. What does a literature review mainly help a researcher to build?

- (A) A list of respondents
- (B) A theoretical framework and a sense of the gap in knowledge
- (C) A set of examination questions
- (D) A list of references for the appendix only

Q15. How do research objectives relate to the research problem?

- (A) Objectives break the problem into specific, achievable aims
- (B) Objectives replace the problem entirely
- (C) Objectives are the same as the final conclusions
- (D) Objectives are written only after data analysis

Q16. What role does a hypothesis play in a study?

- (A) It offers a tentative answer that the study will test
- (B) It is the final conclusion of the study
- (C) It is a tool for collecting data
- (D) It is a list of the population members

Q17. When is the research design normally prepared?

- (A) After the final report is written
- (B) Before the problem is identified
- (C) After the data have been analysed
- (D) Before data collection begins

Q18. Sampling normally takes place at which point in the process?

- (A) After the design is set and before data are collected
- (B) After the report has been published
- (C) Before the research problem is chosen
- (D) After the conclusions are written

Q19. When should research tools such as a questionnaire be developed?

- (A) Before fieldwork, so they can be piloted and refined
- (B) After the final report is printed
- (C) During the writing of references
- (D) Only after all conclusions are drawn

Q20. Data analysis follows which stage in the usual sequence?

- (A) Problem identification
- (B) Literature review
- (C) Research design
- (D) Data collection

Q21. What happens at the interpretation stage of research?

- (A) Meaning and conclusions are drawn from the analysed data
- (B) New data are collected from a fresh sample
- (C) A new sample is selected
- (D) Literature is reviewed for the first time

Q22. Why must research findings be reported?

- (A) So that others can examine, use and build on the findings
- (B) So that the methods can be hidden
- (C) So that the sample size can be increased
- (D) So that analysis can be avoided

Q23. What is the main benefit of a pilot study?

- (A) It publishes results early
- (B) It detects flaws in tools and procedures before the main study
- (C) It provides the final conclusion
- (D) It replaces the main sample

Q24. A research problem is feasible when it meets which condition?

- (A) It can be studied within the available time, resources and access
- (B) It is extremely broad and vague
- (C) It has already been fully answered
- (D) It has no significance for education

Research Problems, Variables and Hypotheses

Q25. Which combination is a recognised source of research problems?

- (A) A supervisor's orders alone
- (B) A single textbook chapter alone
- (C) Past examination papers alone
- (D) Practical experience, gaps in literature, theory and social needs

Q26. What is an operational definition of a variable?

- (A) A vague general idea of the variable
- (B) The title of the study
- (C) A clear statement of how the variable will be observed or measured
- (D) A hypothesis about the variable

Q27. In a study of the effect of a revision method on test performance, the revision method is which variable?

- (A) The independent variable
- (B) The dependent variable
- (C) A variable held constant for all pupils
- (D) An intervening variable

Q28. A factor outside the study's main variables that may still affect the outcome, such as pupils' prior tutoring, is best called a:

- (A) Dependent variable
- (B) Independent variable
- (C) Extraneous variable
- (D) Research question

Q29. Motivation that comes between a teaching method and pupils' achievement, and helps explain the link, is best called which variable?

- (A) The outcome variable
- (B) The manipulated variable
- (C) A constant variable
- (D) An intervening variable

Q30. If pupils in two groups differ in prior knowledge and this is not controlled, prior knowledge may act as which variable?

- (A) An extraneous variable that distorts the result
- (B) The dependent variable
- (C) A constant of the study
- (D) The sampling frame

Q31. A hypothesis that states a difference exists but does not say which group will do better is which type?

- (A) A directional hypothesis predicting higher scores for one group
- (B) A non-directional hypothesis
- (C) A null hypothesis of no difference
- (D) A statement with no variables

Q32. Which statement is a research hypothesis rather than a null hypothesis?

- (A) There is no difference between the two groups
- (B) There is no relationship between the variables
- (C) There is a significant difference between the two groups
- (D) The sample cannot be described

Q33. A good hypothesis must be which of the following?

- (A) Vague so that any result fits it
- (B) Impossible to test with available data
- (C) Clear, specific and testable
- (D) Already proven before the study starts

Sampling and Research Tools

Q34. What is a sampling frame?

- (A) A list from which the sample is drawn
- (B) The final sample itself
- (C) A definition of the population only
- (D) A questionnaire used in the study

Q35. What is the key feature of probability sampling?

- (A) Selection by the researcher's personal judgement
- (B) Random selection, giving each member a known chance of selection
- (C) Selection of volunteers who are easy to reach
- (D) Selection of a set quota from each category

Q36. What is the main advantage of stratified sampling?

- (A) It ignores small subgroups in the population
- (B) It selects whole clusters at once
- (C) It ensures that each important subgroup is represented in the sample
- (D) It uses only volunteers

Q37. When a population is spread over a wide area, why might a researcher choose cluster sampling?

- (A) It guarantees every subgroup is represented proportionally
- (B) It requires a complete list of every individual
- (C) It is more economical because intact groups in fewer places are studied
- (D) It uses the researcher's judgement for every choice

Q38. What is a known risk of systematic sampling?

- (A) It needs no list of the population
- (B) A hidden pattern in the list may bias the selection
- (C) It depends on the researcher's judgement
- (D) It can only use volunteers

Q39. A researcher who selects a few expert science teachers because of their special knowledge is using which method?

- (A) Purposive sampling
- (B) Simple random sampling
- (C) Cluster sampling
- (D) Systematic sampling

Q40. A researcher surveys shoppers in a nearby market simply because they are available. This is which method?

- (A) Stratified sampling
- (B) Convenience sampling
- (C) Simple random sampling
- (D) Cluster sampling

Q41. A researcher studying a rare teaching specialism asks each participant to recommend another specialist. This is which method?

- (A) Quota sampling
- (B) Systematic sampling
- (C) Stratified sampling
- (D) Snowball sampling

Q42. In quota sampling, how are participants selected?

- (A) Entirely at random from a complete list
- (B) In set numbers from each category, but without random selection within categories
- (C) As whole intact clusters
- (D) By taking every tenth name from a list

Research Tools, Designs and Data

Q43. Which tool is best when a researcher needs to probe deeply into a teacher's views and clarify answers on the spot?

- (A) A closed questionnaire
- (B) A rating scale
- (C) A standardised test
- (D) An interview

Q44. Watching and recording how pupils actually behave during group work is an example of which tool?

- (A) A questionnaire
- (B) A written test
- (C) Observation
- (D) A literature review

Q45. A scale on which pupils rate their interest in science from strongly disagree to strongly agree is which tool?

- (A) An achievement test
- (B) An attitude or rating scale
- (C) A sampling frame
- (D) A case study

Q46. A standardised test of mathematics achievement is used mainly to do what?

- (A) Record classroom behaviour
- (B) Collect opinions about a school
- (C) Measure pupils' knowledge or skill in a subject
- (D) Select a research sample

Q47. In a true experiment, the researcher does which of the following?

- (A) Studies only documents from the past
- (B) Surveys a large sample once
- (C) Describes a single case in depth
- (D) Manipulates a variable and compares groups under controlled conditions

Q48. A survey's main limitation compared with an experiment is that a survey:

- (A) Cannot collect data from large numbers of people
- (B) Always produces biased samples
- (C) Can describe relationships but cannot prove cause and effect
- (D) Cannot use questionnaires at all

Q49. A researcher studies one innovative school in depth over a year, using several sources of evidence. This is which design?

- (A) A survey
- (B) An experiment
- (C) A correlational study
- (D) A case study

Q50. A researcher studies the effects of a training programme after it has already finished, without manipulating anything. This is:

- (A) A true experiment
- (B) A survey of current opinions
- (C) A case study of one pupil
- (D) An ex post facto study

Q51. A study that checks whether attendance and test scores rise and fall together, without manipulating either, is which design?

- (A) An experiment
- (B) A correlational study
- (C) A historical study
- (D) A case study

Statistics, Ethics, Action Research and Report Writing

Q52. Interview transcripts describing teachers' experiences in their own words provide which type of data?

- (A) Qualitative data
- (B) Quantitative test scores
- (C) Experimental data from a laboratory
- (D) Secondary census data

Q53. Which pair correctly contrasts descriptive and inferential statistics?

- (A) Descriptive statistics test hypotheses, while inferential statistics only describe a sample
- (B) Descriptive statistics summarise data, while inferential statistics draw conclusions about a population from a sample
- (C) Descriptive statistics use only interviews, while inferential statistics use only tests
- (D) Descriptive statistics need no data, while inferential statistics need no sample

Q54. For the scores 2, 4, 4, 6 and 9, what is the mean?

- (A) 2
- (B) 5, because the total of 25 divided by 5 scores equals 5
- (C) 6
- (D) 9

Q55. What does the standard deviation describe?

- (A) The most frequent score
- (B) The middle score in an ordered list
- (C) How spread out scores are around their mean
- (D) The relationship between two variables

Q56. When would a researcher most appropriately use a chi-square test?

- (A) To compare the means of two groups
- (B) To test whether observed frequencies in categories differ from expected frequencies
- (C) To find the average of a set of scores
- (D) To describe a single case in depth

Q57. Keeping participants' identities and responses private, so they cannot be linked to individuals, is which ethical principle?

- (A) Plagiarism
- (B) Informed consent only
- (C) Confidentiality
- (D) Random sampling

Q58. Presenting another author's words or ideas as one's own, without acknowledgement, is which ethical violation?

- (A) Confidentiality
- (B) Informed consent
- (C) Plagiarism
- (D) Random sampling

Q59. A teacher-researcher who plans a change, tries it, observes the result and reflects before revising the plan is following which cycle?

- (A) A survey cycle
- (B) A historical cycle
- (C) An experimental cycle with random assignment
- (D) The action research cycle

Q60. In a thesis, where do full details of sources cited in the text belong, and why are they given?

- (A) In the introduction, to lengthen the chapter
- (B) In the methodology, to describe the sample
- (C) In the results, to present the findings
- (D) In the reference list, to allow readers to trace sources and give credit to authors

Answer Key

Q1: A	Q11: A	Q21: A	Q31: B	Q41: D	Q51: B
Q2: D	Q12: D	Q22: A	Q32: C	Q42: B	Q52: A
Q3: B	Q13: B	Q23: B	Q33: C	Q43: D	Q53: B
Q4: B	Q14: B	Q24: A	Q34: A	Q44: C	Q54: B
Q5: C	Q15: A	Q25: D	Q35: B	Q45: B	Q55: C
Q6: D	Q16: A	Q26: C	Q36: C	Q46: C	Q56: B
Q7: D	Q17: D	Q27: A	Q37: C	Q47: D	Q57: C
Q8: A	Q18: A	Q28: C	Q38: B	Q48: C	Q58: C
Q9: C	Q19: A	Q29: D	Q39: A	Q49: D	Q59: D
Q10: C	Q20: D	Q30: A	Q40: B	Q50: D	Q60: D

Worked explanations for all 60 questions:

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