

Research Techniques in Education Practice Test 1

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. What is research in education best described as?

- (A) A careful review of one teacher's classroom diary
- (B) A systematic inquiry carried out to discover reliable knowledge
- (C) A collection of teaching materials prepared for a lesson
- (D) An official inspection report on a single school

Q2. What is the main purpose of educational research?

- (A) To confirm traditional teaching practices without testing them
- (B) To produce a longer list of classroom activities for teachers
- (C) To rank schools by their examination results alone
- (D) To gain dependable knowledge that helps solve educational problems

Q3. A study that explores how memory works in learning, without an immediate classroom application in view, is an example of which type of research?

- (A) Evaluative research
- (B) Basic research
- (C) Action research
- (D) Historical research

Q4. A school tests a new homework routine to reduce late submissions in its own classes. This is mainly an example of which type of research?

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

Q5. What most clearly distinguishes action research from other research types?

- (A) It always uses a large national sample
- (B) It is conducted only in a laboratory
- (C) It relies only on documents from the past
- (D) A practitioner studies and improves his or her own practice

Q6. A researcher wants the views of 400 teachers quickly and at low cost. Which research tool is most suitable?

- (A) An in-depth personal interview with each teacher
- (B) A questionnaire distributed to the teachers
- (C) A case study of one school
- (D) A historical study of old school records

Q7. Research is called systematic mainly because it does what?

- (A) Uses the same questionnaire in every study it conducts
- (B) Reports its findings in a fixed number of chapters
- (C) Follows planned, orderly steps from problem to conclusion
- (D) Collects data only from very large samples

Q8. Which quality is essential for scientific research?

- (A) Objectivity based on evidence rather than personal bias
- (B) Strong personal preference for one result
- (C) Reliance on a single person's opinion
- (D) Keeping methods secret from other researchers

Q9. Why should a practising teacher value educational research?

- (A) It helps the teacher make classroom decisions based on evidence
- (B) It removes the need for lesson planning
- (C) It guarantees promotion for every teacher
- (D) It replaces classroom experience entirely

Q10. How do basic and applied research mainly differ?

- (A) Basic research never uses numbers, while applied research always does
- (B) Applied research is unscientific, while basic research is scientific
- (C) Basic research seeks knowledge for its own sake, while applied research solves a practical problem
- (D) Basic research has no method, while applied research has a fixed method

Q11. A teacher who repeatedly tries a new grouping strategy, observes its effect and revises it is engaged in which kind of inquiry?

- (A) A one-time national survey
- (B) Laboratory theory-building
- (C) Archival historical study
- (D) Action research

Q12. Responses collected first-hand by a researcher through a new questionnaire for the present study are which type of data?

- (A) Historical data from old archives
- (B) Published data from a government report
- (C) Primary data collected by the researcher for this study
- (D) Secondary data taken from another study

The Research Process and Its Steps

Q13. Which step usually comes first in a research study?

- (A) Analysing the data
- (B) Writing the final report
- (C) Selecting the sample
- (D) Identifying the research problem

Q14. After identifying a research problem, what does a researcher normally do next?

- (A) Write the final report
- (B) Review related literature
- (C) Collect data from respondents
- (D) Draw the final conclusion

Q15. What is a key benefit of reviewing related literature?

- (A) It identifies gaps in knowledge and helps avoid duplicating earlier work
- (B) It replaces the need to collect any data
- (C) It proves the researcher's opinion before the study begins
- (D) It shortens the study by removing the analysis stage

Q16. Why does a researcher formulate clear objectives before collecting data?

- (A) Objectives state precisely what the study intends to find out
- (B) Objectives replace the research problem
- (C) Objectives serve as the final conclusion
- (D) Objectives remove the need for a research design

Q17. What is meant by a research design?

- (A) A list of books consulted by the researcher
- (B) A list of people selected for the sample
- (C) The overall plan or blueprint for carrying out the study
- (D) A questionnaire used to collect responses

Q18. In the usual sequence, data collection takes place after which stage?

- (A) Before the problem is identified
- (B) After the final report is written
- (C) Before the research design is prepared
- (D) After the tools are developed and the sample is selected

Q19. What happens during the data analysis stage?

- (A) References are arranged alphabetically
- (B) A new research topic is selected
- (C) Collected data are organised and interpreted to answer the research questions
- (D) The population of the study is defined

Q20. Figures from a published census that a researcher reuses for a new study are which type of data?

- (A) Secondary data, because they were collected by someone else for another purpose
- (B) Primary data collected for this study
- (C) Qualitative interview data
- (D) Experimental data from a laboratory

Q21. What is the purpose of a pilot study?

- (A) To publish results before the main study
- (B) To test the tools and procedures on a small scale before the full study
- (C) To replace the main sample entirely
- (D) To increase the size of the final sample

Q22. A good research problem should be which of the following?

- (A) Vague and extremely broad
- (B) Already fully answered by earlier studies
- (C) Beyond the researcher's time and resources
- (D) Clear, feasible and significant for education

Q23. At what point in the process is a hypothesis normally formulated?

- (A) After reviewing literature and before collecting data
- (B) Before the research problem has been identified
- (C) Only after the data have been analysed, as a conclusion in disguise
- (D) When the report is being written, as a summary of the findings

Q24. Which statement best describes the research process?

- (A) A single guess followed by a report
- (B) A systematic sequence of steps, with earlier steps revisited when needed
- (C) A rigid routine that can never be revised
- (D) A writing task with no data stage

Research Problems, Variables and Hypotheses

Q25. Which of the following is a common source of a research problem?

- (A) A textbook index alone
- (B) A single examination result
- (C) The date of a school holiday
- (D) Classroom difficulties observed by teachers and gaps found in earlier studies

Q26. What is a variable in research?

- (A) A characteristic that can take different values or vary across people or situations
- (B) A fixed rule that never changes in any study
- (C) A chapter heading in a thesis
- (D) A statistical table in the appendix

Q27. In a study of the effect of daily reading practice on reading scores, daily reading practice is which variable?

- (A) The outcome variable measured at the end
- (B) An intervening variable
- (C) The independent variable presumed to influence the outcome
- (D) A constant held fixed for all pupils

Q28. In the same study, the pupils' reading scores are which variable?

- (A) The dependent variable, or outcome being measured
- (B) The variable manipulated by the teacher
- (C) A variable that never changes
- (D) The sampling frame of the study

Q29. A researcher studies a new teaching method, but some classes also receive extra tuition at home. The extra tuition is best described as which type of variable?

- (A) The main independent variable
- (B) The dependent variable
- (C) An extraneous variable that may also affect the outcome
- (D) A constant of the study

Q30. If a researcher keeps the test time the same for all groups, test time is being treated as which variable?

- (A) The dependent variable
- (B) The independent variable
- (C) A control variable held constant
- (D) An intervening variable

Q31. Which statement is a null hypothesis?

- (A) The new method will greatly improve scores
- (B) Boys will score higher than girls
- (C) Scores will fall after the intervention
- (D) There is no significant difference between the two teaching methods

Q32. Which statement is an alternative hypothesis?

- (A) There is no relationship between study time and achievement
- (B) There is a significant relationship between study time and achievement
- (C) The study has no variables
- (D) The sample is too small to study

Q33. A hypothesis stating that group A will score higher than group B is which type?

- (A) A directional hypothesis, because it predicts the direction of the difference
- (B) A null hypothesis
- (C) A hypothesis with no prediction at all
- (D) A research question without variables

Sampling and Research Tools

Q34. In research, what does the term population mean?

- (A) The few people who return a questionnaire
- (B) The entire group about which the researcher wants to draw conclusions
- (C) A list of names used to draw a sample
- (D) The respondents in a pilot study only

Q35. What is a sample?

- (A) The whole population of a country
- (B) A subgroup selected from a population to represent it in the study
- (C) A list of research questions
- (D) The final chapter of a thesis

Q36. In simple random sampling, what is true of every member of the population?

- (A) Every member has an equal chance of being selected
- (B) Only the most willing members are selected
- (C) Members are chosen by the researcher's personal judgement
- (D) Whole classes are selected as units

Q37. A researcher divides teachers into urban and rural groups and then draws a random sample from each group. This is which method?

- (A) Cluster sampling
- (B) Systematic sampling
- (C) Stratified sampling
- (D) Convenience sampling

Q38. A researcher randomly selects whole schools and then studies all pupils in those schools. This is which method?

- (A) Stratified sampling
- (B) Purposive sampling
- (C) Cluster sampling
- (D) Quota sampling

Q39. A researcher picks every tenth name from a school register after a random start. This is which method?

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

Q40. A researcher deliberately selects experienced head teachers because they can give rich information on school leadership. This is which method?

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

Q41. A researcher surveys teachers who happen to be present at a training workshop because they are easy to reach. This is which method?

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

Q42. In a study of a small, hard-to-reach group of specialist tutors, each participant is asked to suggest another tutor for the study. This is which method?

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

Research Designs, Data and Basic Statistics

Q43. What is the defining feature of a true experimental design?

- (A) Manipulation of a variable under controlled conditions with comparison groups
- (B) Study of documents from the past only
- (C) A single in-depth case with no comparison
- (D) Collection of opinions through one open interview

Q44. A quasi-experimental design differs from a true experiment mainly because it lacks what?

- (A) Any manipulation of a variable
- (B) Full random assignment of participants to groups
- (C) Any form of data collection
- (D) A comparison between groups

Q45. A researcher distributes a questionnaire to 500 parents to describe their views on homework. This is mainly which design?

- (A) An experimental design
- (B) A historical design
- (C) A survey design
- (D) A single case study

Q46. A researcher spends a term studying one struggling school in great depth, using interviews, observations and documents. This is which design?

- (A) A large-scale survey
- (B) A laboratory experiment
- (C) A correlational study
- (D) A case study

Q47. A researcher compares the exam results of pupils who attended preschool with those who did not, without manipulating anything. This is which design?

- (A) A true experiment
- (B) An ex post facto study, because the cause has already occurred
- (C) A historical study of old records only
- (D) A laboratory experiment

Q48. A study that measures both library use and examination scores to see how closely they move together, without changing either, is which design?

- (A) A cause-and-effect experiment
- (B) A single case study
- (C) A correlational study
- (D) A historical study

Q49. Historical research in education mainly relies on which sources?

- (A) Past records, documents and other traces of earlier events
- (B) A new laboratory experiment
- (C) A questionnaire given next week
- (D) Random assignment of present-day pupils

Q50. Which of the following is an example of quantitative data?

- (A) Interview descriptions of classroom life
- (B) Field notes describing pupil behaviour
- (C) Open-ended comments from parents
- (D) Test scores expressed in numbers

Q51. A head teacher rates each teacher on a scale from poor to excellent for classroom management. Which research tool is being used?

- (A) An open-ended questionnaire
- (B) A personal interview
- (C) A rating scale
- (D) An achievement test

Statistics, Action Research, Ethics and Report Writing

Q52. For the ordered scores 3, 5, 9, 12 and 20, which value is the median?

- (A) 5
- (B) 12
- (C) 20
- (D) 9 as the middle value in the ordered list

Q53. In the scores 2, 5, 5, 7 and 9, which value is the mode?

- (A) 2
- (B) 7
- (C) 5, because it occurs most often
- (D) 9

Q54. What does a large standard deviation tell a researcher about a set of scores?

- (A) The scores have a high average
- (B) The scores are widely spread around their mean
- (C) The scores are strongly related to another variable
- (D) The two groups have very different means

Q55. A correlation coefficient close to +1.00 indicates which relationship?

- (A) No relationship between the variables
- (B) A strong negative relationship
- (C) A weak positive relationship
- (D) A strong positive relationship

Q56. A t-test is most commonly used for which purpose?

- (A) Comparing the means of two groups
- (B) Finding the most frequent score
- (C) Measuring the spread of one set of scores
- (D) Describing a single case in depth

Q57. A chi-square test is most suitable for which kind of data?

- (A) Comparing the means of two groups
- (B) Testing association between categorical variables, such as pass and fail counts
- (C) Measuring correlation between two test scores
- (D) Finding the spread of numerical scores

Q58. Action research is best characterised by which of the following?

- (A) It is carried out by outside researchers who never teach the classes studied
- (B) It aims only at producing general laws that apply in every country
- (C) It studies past events from documents and never changes practice
- (D) It is carried out by practitioners to improve practice in their own setting, in repeated cycles

Q59. What does informed consent require in research with human participants?

- (A) Hiding the purpose of the study from participants
- (B) Forcing participants to take part
- (C) Participants agreeing to take part after understanding the purpose and any risks
- (D) Publishing participants' names without asking

Q60. Which order is correct for the main parts of a research report or thesis?

- (A) References, introduction, results, methodology
- (B) Results, literature review, introduction, references
- (C) Methodology, references, introduction, discussion
- (D) Introduction, literature review, methodology, results, discussion and references

Answer Key

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

Worked explanations for all 60 questions:

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