Research Techniques in Education Practice Test 4

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

Research Problems: Meaning, Sources and Focus

Q1. Educational research differs from casual classroom observation mainly in that research:

(A) Follows planned steps and checks evidence systematically
(B) Relies only on the teacher's memory
(C) Avoids collecting any data
(D) Reports only successful lessons

Q2. Why is a research problem usually stated as a question or a clear statement rather than as a vague topic?

(A) So that the study needs no method
(B) So that the results are known in advance
(C) So that no literature needs to be read
(D) So that the study has a definite focus that can be investigated

Q3. A college lecturer keeps meeting students who cannot write a coherent paragraph in English. He decides to study this weakness in his own classes. The problem comes mainly from which source?

(A) Personal experience in teaching
(B) A statistical table
(C) A government budget
(D) A library catalogue

Q4. A review of studies on classroom discipline finds plenty of work on secondary schools but almost nothing on primary schools. A study of primary-school discipline would fill which kind of source?

(A) A sampling error
(B) A completed hypothesis
(C) A gap in previous research
(D) A test score

Q5. A researcher reads a theory of motivation and wonders whether it explains the behaviour of trainee teachers during teaching practice. This problem originates mainly from which source?

(A) The researcher's personal classroom experience
(B) A gap noticed in earlier research on motivation
(C) A suggestion from the research supervisor
(D) A theory awaiting testing in a new situation

Q6. At a research seminar, senior scholars point out that no one has studied the effect of peer tutoring on slow learners in local schools. A beginner who takes up this suggestion is drawing on which source?

(A) A census form
(B) A mark register
(C) A laboratory manual
(D) Discussions with experts and fellow researchers

Q7. Concern grows in a province about children leaving school to work in workshops. A study of the reasons for this early leaving would be prompted mainly by which source?

(A) A referencing rule
(B) A sampling formula
(C) A social problem affecting education
(D) A classroom seating plan

Q8. A researcher starts with the wide area of assessment and finally settles on the effect of oral feedback on Grade 10 English writing in two schools. This narrowing is an example of what?

(A) Generalising a finding
(B) Delimiting a broad area into a workable problem
(C) Piloting a questionnaire
(D) Coding interview data

Q9. A problem statement that only says assessment is important, without saying what is unknown or needs fixing, is weak mainly because it lacks what?

(A) A clear issue and a reason for studying it
(B) A long list of references
(C) A large sample
(D) A statistical test

Q10. A student says her topic is teacher training and her problem is whether a short workshop improves trainees' lesson planning. The difference here is that the problem is what?

(A) Longer than the topic
(B) More specific and investigable than the topic
(C) Less important than the topic
(D) The same as the topic

Variables and Types of Research

Q11. Which variable does a researcher deliberately vary in order to observe its effect?

(A) The dependent variable
(B) The independent variable
(C) The extraneous variable
(D) The measured variable

Q12. Which variable is expected to change as a result of the independent variable?

(A) The dependent variable
(B) The independent variable
(C) The control variable
(D) The constant variable

Q13. A study examines the effect of daily homework on mathematics achievement. Daily homework in this study is which variable?

(A) The independent variable
(B) The dependent variable
(C) The intervening variable
(D) The sampling variable

Q14. In the same homework study, mathematics achievement is which variable?

(A) The independent variable
(B) The dependent variable
(C) The control variable
(D) The extraneous variable

Q15. Two classes are compared on a new science method, but one class has a far more experienced teacher. Teacher experience here threatens the study as what?

(A) A dependent variable
(B) A research design
(C) A primary source
(D) An extraneous variable

Q16. A new textbook is said to raise scores because it increases pupils' interest in the subject. Interest, acting between the textbook and the scores, is best called what?

(A) A dependent variable
(B) A control variable
(C) A population
(D) An intervening variable

Q17. A researcher keeps the test, the classroom and the lesson length identical for both groups in an experiment. These identical features are known as what?

(A) Dependent variables
(B) Controlled variables
(C) Hypotheses
(D) Samples

Q18. Age in years and marks out of 100 are examples of which kind of variable?

(A) Categorical variables
(B) Constant variables
(C) Quantitative variables
(D) Nominal hypotheses

Q19. Religion, district and type of school are examples of which kind of variable?

(A) Continuous variables
(B) Qualitative or categorical variables
(C) Dependent constants
(D) Inferential tests

Q20. Research that aims to solve a practical problem, such as reducing errors in lesson planning, is known as what?

(A) Basic research
(B) Historical research
(C) Action research
(D) Applied research

Hypotheses and Literature Review

Q21. A hypothesis differs from a research question mainly in that a hypothesis does what?

(A) Asks an open question with no prediction
(B) States an expected relationship in a form that can be tested
(C) Summarises the final results
(D) Lists the participants in the study

Q22. Which of the following is a null hypothesis?

(A) Rural teachers are more motivated than urban teachers
(B) Motivation differs between rural and urban teachers
(C) There is no significant difference in motivation between rural and urban teachers
(D) Urban teachers are less motivated than rural teachers

Q23. Which of the following is an alternative hypothesis?

(A) There is no relationship between parental involvement and pupil attendance
(B) There is a significant relationship between parental involvement and pupil attendance
(C) Parental involvement was measured by a questionnaire
(D) Pupil attendance was recorded daily

Q24. A hypothesis stating that pupils who receive revision notes will score higher than pupils who do not is an example of which type?

(A) A non-directional hypothesis
(B) A null hypothesis
(C) A directional hypothesis
(D) A research objective

Q25. A hypothesis stating only that the two teaching approaches will differ in their results, without saying which will be better, is an example of which type?

(A) A directional hypothesis
(B) A null hypothesis
(C) A sampling hypothesis
(D) A non-directional hypothesis

Q26. A researcher writes: There is no significant relationship between class size and pupil achievement. This is which type of hypothesis?

(A) A directional hypothesis
(B) An alternative hypothesis
(C) A conclusion
(D) A null hypothesis

Q27. A researcher writes: Female trainees will show more positive attitudes toward teaching practice than male trainees. This is which type of hypothesis?

(A) A null hypothesis
(B) A non-directional hypothesis
(C) A research problem
(D) A directional hypothesis

Q28. A good hypothesis should be stated in what kind of terms?

(A) Vague terms that can mean anything
(B) Terms that change during the study
(C) Terms that already assume the result
(D) Clear, specific terms that can be measured

Q29. Besides finding a gap, a literature review also helps a researcher to do what?

(A) Collect the final data
(B) Avoid repeating earlier mistakes and refine the method and definitions
(C) Choose participants by chance
(D) Write the results chapter

Q30. Which of the following is a secondary source for a literature review?

(A) A review article that summarises and discusses many earlier studies
(B) The original report of a single experiment
(C) A thesis based on the author's own data
(D) A conference paper reporting new findings

Sampling: Population, Sample and Techniques

Q31. A study aims to learn about all secondary-school teachers in a province but studies only 400 of them. The 400 teachers are best described as what?

(A) The whole population
(B) The research team
(C) A sample drawn from the population
(D) The sampling error

Q32. The lottery method, in which names are drawn from a box, is a simple way to carry out which sampling technique?

(A) Purposive sampling
(B) Quota sampling
(C) Simple random sampling
(D) Snowball sampling

Q33. A researcher wants the sample to include teachers from each subject in proportion to their numbers in the province. Dividing by subject first and then sampling randomly within each subject is which technique?

(A) Cluster sampling
(B) Convenience sampling
(C) Snowball sampling
(D) Stratified random sampling

Q34. A researcher randomly picks ten colleges and surveys every teacher in those colleges. This is an example of which technique?

(A) Systematic sampling
(B) Purposive sampling
(C) Cluster sampling
(D) Quota sampling

Q35. A researcher has an alphabetical list of 900 students and picks every fifteenth student, starting from a randomly chosen number. This is an example of which technique?

(A) Systematic sampling
(B) Stratified sampling
(C) Cluster sampling
(D) Purposive sampling

Q36. A researcher studying successful school leadership interviews only principals whose schools have improved for three consecutive years. This deliberate choice is an example of which technique?

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

Q37. A researcher hands questionnaires to trainee teachers attending a workshop that day because they are easy to reach. This is an example of which technique?

(A) Stratified sampling
(B) Snowball sampling
(C) Systematic sampling
(D) Convenience sampling

Q38. A researcher decides in advance to include 20 teachers from each of three districts, but picks the teachers by availability. This is an example of which technique?

(A) Simple random sampling
(B) Cluster sampling
(C) Quota sampling
(D) Snowball sampling

Q39. To study teachers who tutor privately without advertising, a researcher asks each interviewee to name other such teachers. This referral approach is an example of which technique?

(A) Stratified sampling
(B) Systematic sampling
(C) Snowball sampling
(D) Cluster sampling

Q40. A sample that leaves out an entire subgroup, such as teachers in remote schools, is most likely to suffer from what problem?

(A) Too much data
(B) Perfect accuracy
(C) Poor representativeness and weak generalisation
(D) Excessive cost only

Research Tools, Data and Designs

Q41. A mailed questionnaire is often criticised for which limitation?

(A) Its very high cost per respondent
(B) A low return rate and possible misunderstanding of questions
(C) Its need for face-to-face contact
(D) Its inability to reach many people

Q42. A structured interview differs from an unstructured interview mainly in that a structured interview does what?

(A) Lets the conversation wander freely
(B) Uses no questions at all
(C) Is conducted only by post
(D) Uses the same set of questions in the same order for every respondent

Q43. A researcher who sits at the back of a classroom and notes how often the teacher asks questions is using which tool?

(A) A questionnaire
(B) Observation
(C) A rating scale
(D) A documentary source

Q44. A tool that asks a teacher to rate a trainee's lesson planning as Excellent, Good, Fair or Poor is best described as what?

(A) An achievement test
(B) A rating scale
(C) An interview schedule
(D) A sampling frame

Q45. Data that a researcher gathers directly through her own questionnaire or interviews are called what?

(A) Primary data
(B) Secondary data
(C) Historical data
(D) Published data

Q46. In a true experiment, random assignment of participants to groups is important mainly because it helps to do what?

(A) Make the groups roughly equal on unknown factors before treatment
(B) Increase the number of participants
(C) Remove the need for a control group
(D) Guarantee a significant result

Q47. A researcher cannot reassign pupils, so she uses existing classes as the experimental and control groups. Her design is best described as what?

(A) Quasi-experimental
(B) True experimental
(C) Historical
(D) Survey

Q48. A researcher sends the same attitude questionnaire to 600 parents to describe parental views across a district. This is an example of which design?

(A) Case study design
(B) Experimental design
(C) Survey design
(D) Historical design

Q49. A researcher finds that as library use rises, reading scores also tend to rise, but she does not claim that library use causes the rise. Her design is best described as what?

(A) Experimental
(B) Historical
(C) Ex post facto
(D) Correlational

Q50. A researcher studies one struggling reader for a full year, gathering test results, teacher notes and parent interviews. This is an example of which design?

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

Research Designs, Statistics, Ethics and Report Writing

Q51. A researcher compares the school performance of children who attended preschool with those who did not, long after preschool ended. This is an example of which design?

(A) True experimental research
(B) Ex post facto research
(C) Action research
(D) Survey research

Q52. A researcher studies the minutes of a school board from the 1980s to explain how a curriculum change was adopted. This is an example of which design?

(A) Historical research
(B) Experimental research
(C) Correlational research
(D) Survey research

Q53. In the scores 4, 7, 7, 9 and 13, which value is the mode?

(A) 4
(B) 9
(C) 7
(D) 13

Q54. If one class has scores closely clustered around the mean and another has scores widely spread, the second class has the larger what?

(A) Mean
(B) Median
(C) Mode
(D) Standard deviation

Q55. A correlation of -0.85 between absences and scores would best be interpreted as what?

(A) A strong negative relationship
(B) A weak positive relationship
(C) No relationship
(D) Proof that absence causes low scores

Q56. A researcher compares the mean scores of a single group before and after training. A t-test is suitable here because it does what?

(A) Tests whether a difference between means is larger than chance variation
(B) Counts how many pupils passed
(C) Measures the most frequent score
(D) Describes a single case in depth

Q57. A researcher records whether teachers prefer lecture, discussion or project work, and whether they are new or experienced teachers. To test association between these two categories, which test fits best?

(A) A t-test
(B) A mean
(C) A chi-square test
(D) A standard deviation

Q58. Action research is most clearly different from other research in that it is carried out by whom, for what purpose?

(A) Outside experts studying strangers
(B) Practitioners studying and improving their own practice
(C) Historians studying the past
(D) Statisticians analysing old records

Q59. Which pair of practices is ethically correct in a research report?

(A) Use codes instead of real names and acknowledge every source in a reference list
(B) Publish real names with photographs and copy passages without acknowledgement
(C) Share raw questionnaires with anyone who asks and omit the reference list
(D) Name every participant and present another author's ideas as one's own

Q60. In a research report, the appendix is mainly used to:

(A) State the research problem for the first time
(B) Present supporting material such as questionnaires, raw tables or letters that would interrupt the main text
(C) Summarise the whole study in a single paragraph
(D) List the researcher's qualifications

Answer Key

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

Worked explanations for all 60 questions:
quaidianpoint.com/pedagogy-research-techniques-in-education-practice-test-4/