

Research Techniques in Education Practice Test 5

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. Which of the following best describes educational research?

- (A) The casual collection of classroom stories for a school magazine
- (B) A systematic and objective inquiry carried out to find dependable answers to educational questions
- (C) The routine preparation of lesson plans for daily teaching
- (D) The administrative filing of student attendance records

Q2. The main purpose of basic research in education is to:

- (A) Solve an urgent discipline problem in one particular school
- (B) Train teachers in the use of a new textbook
- (C) Evaluate a single school's annual examination results
- (D) Add to fundamental knowledge and build or test theory without an immediate practical use

Q3. A study that tests a new method of teaching fractions in order to improve marks in the next term is an example of:

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

Q4. Action research is most clearly distinguished from other research by the fact that it is:

- (A) Always conducted by university professors in laboratories
- (B) Based only on historical documents and archives
- (C) Carried out by practitioners themselves to improve their own practice
- (D) Concerned only with national education policy

Q5. Which statement about the scope of educational research is correct?

- (A) It is limited to studying classroom teaching methods only
- (B) It covers learners, teachers, curriculum, methods, institutions and policy
- (C) It includes only quantitative studies that use numerical data
- (D) It is carried out only in universities by academic staff

Q6. Research that describes what exists at present, such as the current reading habits of Grade 8 pupils, is called:

- (A) Descriptive research
- (B) Experimental research
- (C) Historical research
- (D) Ex post facto research

Q7. A researcher who studies the development of teacher training in Pakistan since 1947 is doing:

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

Q8. Which of the following is a characteristic of good scientific research?

- (A) It relies on the researcher's personal impressions alone
- (B) It changes its method whenever an unexpected result appears
- (C) It is systematic, empirical and open to verification by others
- (D) It reports only the findings that support the researcher's opinion

Q9. The term "research" is most accurately understood as:

- (A) A careful search for new knowledge through organised investigation
- (B) The memorisation of facts from textbooks
- (C) The copying of information from one book to another
- (D) A debate in which the louder argument wins

Q10. A university study that examines how motivation theory explains dropout among college students, with no immediate classroom intervention, is mainly:

- (A) Action research
- (B) Evaluation research
- (C) Applied research
- (D) Basic research

Research Process and Problem Identification

Q11. Which is the correct order of the first three steps in the research process?

- (A) Collect data, select a problem, review literature
- (B) Analyse data, formulate hypotheses, select a problem
- (C) Identify a problem, review related literature, formulate hypotheses or objectives
- (D) Write the report, identify a problem, collect data

Q12. Which problem is least suitable for new research?

- (A) A focused problem where earlier work leaves a clear gap
- (B) A problem already fully answered by earlier studies
- (C) A problem that matters for teaching or learning
- (D) A problem that can be studied with available time and resources

Q13. A study is most likely to be worth doing when its problem comes from:

- (A) A slogan printed on a school noticeboard
- (B) The colour of a school building
- (C) A single examination paper
- (D) An unresolved question in earlier studies combined with a real classroom difficulty

Q14. In a research proposal, the "statement of the problem" mainly does which of the following?

- (A) States precisely what issue the study will investigate and why it matters
- (B) Lists all the books in the college library
- (C) Presents the final conclusions of the study
- (D) Describes the researcher's personal biography

Q15. After data have been collected and analysed, the next major step in the research process is to:

- (A) Select a new research topic
- (B) Discard the research objectives
- (C) Interpret the findings and draw conclusions and recommendations
- (D) Repeat the literature review from the beginning

Q16. Research objectives are best written as:

- (A) Vague hopes about improving education in general
- (B) Long quotations from famous educators
- (C) Personal opinions about a teaching method
- (D) Clear, specific statements of what the study intends to find out

Q17. A teacher notices that pupils who sit near the front score higher, and wonders whether seating affects achievement. This wondering is best described as:

- (A) A research conclusion
- (B) The identification of a research problem
- (C) A sampling technique
- (D) A statistical test

Q18. Which question is most suitable as a research problem?

- (A) What is the effect of peer tutoring on the mathematics achievement of Grade 9 students?
- (B) Is mathematics a difficult subject?
- (C) Should all students like school?
- (D) Why is education important for everyone?

Q19. Delimitations in a research study refer to:

- (A) Errors made by the data collectors
- (B) The personal preferences of the supervisor
- (C) The cost of printing the final report
- (D) The boundaries the researcher deliberately sets, such as one district or one grade level

Q20. The research design of a study is best defined as:

- (A) The cover design of the printed thesis
- (B) The overall plan that guides how data will be collected and analysed to answer the research questions
- (C) The seating plan used during data collection
- (D) The list of references at the end of the report

Variables and Hypotheses

Q21. In a study of the effect of homework duration on test scores, homework duration is the:

- (A) Independent variable
- (B) Dependent variable
- (C) Extraneous variable
- (D) Control variable

Q22. In an experiment, the group that receives the new teaching method is called the:

- (A) Control group
- (B) Population of the study
- (C) Experimental group
- (D) Sampling frame

Q23. A student's prior knowledge affects both the teaching method group they join and their final score, but it is not the focus of the study. It is best called a/an:

- (A) Dependent variable
- (B) Extraneous variable
- (C) Independent variable
- (D) Outcome variable

Q24. When a researcher keeps the time of day the same for all test groups to prevent it from affecting results, time of day is being used as a:

- (A) Dependent variable
- (B) Intervening variable
- (C) Hypothesis
- (D) Control variable

Q25. A factor that changes how strong the link between a teaching method and achievement is, for example working differently for older and younger pupils, is best called a:

- (A) Dependent variable
- (B) Independent variable
- (C) Moderating variable
- (D) Sampling frame

Q26. A hypothesis is best defined as:

- (A) A tentative, testable prediction about the relationship between variables
- (B) A proven law of education
- (C) A summary of the literature review
- (D) A personal belief that needs no testing

Q27. "There is no significant difference between the reading scores of boys and girls" is an example of a:

- (A) Directional hypothesis
- (B) Research question
- (C) Research objective
- (D) Null hypothesis

Q28. "Students taught with audio-visual aids will score significantly higher than students taught without them" is an example of a:

- (A) Null hypothesis
- (B) Directional alternative hypothesis
- (C) Non-directional research question
- (D) Sampling hypothesis

Q29. Which of the following is a non-directional hypothesis?

- (A) Group A will perform better than Group B
- (B) Revision will reduce examination anxiety
- (C) There is a significant difference in science achievement between urban and rural students
- (D) Regular feedback will increase homework completion

Q30. A hypothesis that cannot be tested with any available evidence is weak mainly because:

- (A) No observation could ever support or refute it
- (B) It is stated too clearly
- (C) It uses measurable variables
- (D) It predicts a relationship between variables

Literature Review and Sources

Q31. A concept map in a research proposal mainly helps the researcher to:

- (A) List the respondents for the survey
- (B) Collect data from participants
- (C) Publish the final results early
- (D) Show how the study's key concepts relate to each other

Q32. In a research report, the list of sources actually cited in the text is called the:

- (A) Appendix
- (B) List of references
- (C) Table of contents
- (D) Abstract

Q33. A review article that summarises and evaluates the work of many other researchers is best described as a:

- (A) Secondary source
- (B) Primary source
- (C) Raw data set
- (D) Research instrument

Q34. A researcher searching for recent journal articles on classroom assessment should first consult:

- (A) A school notice board
- (B) A general dictionary
- (C) Academic databases and peer-reviewed journals in education
- (D) Social media posts by students

Q35. One important function of the literature review is to help the researcher:

- (A) Avoid repeating a study that has already answered the question fully
- (B) Ignore earlier findings that disagree with personal views
- (C) Select participants without any criteria
- (D) Write conclusions before collecting data

Q36. When reviewing literature, a researcher should give most weight to:

- (A) Unverified claims repeated on blogs
- (B) Peer-reviewed studies with clear methods and evidence
- (C) Old opinions quoted without a source
- (D) Advertisements for teaching materials

Q37. A theoretical framework in a literature review mainly provides:

- (A) A theory or set of concepts that guides the study and explains its variables
- (B) A list of the researcher's friends and colleagues
- (C) The budget for the research project
- (D) A timetable for printing the thesis

Q38. Which practice is essential when writing a literature review?

- (A) Presenting other authors' ideas as if they were one's own
- (B) Quoting long passages without acknowledgement
- (C) Synthesising findings, noting agreements and disagreements, and citing sources accurately
- (D) Reporting only studies that agree with the researcher's hypothesis

Q39. Theses and dissertations kept in a university library are useful in a literature review mainly because they:

- (A) Are shorter than journal articles
- (B) Provide detailed accounts of earlier studies, including methods and instruments
- (C) Never need to be cited
- (D) Replace the need for data collection

Q40. A researcher who organises the review by themes, such as motivation, feedback and assessment, rather than by listing studies one after another, is using a:

- (A) Chronological list only
- (B) Table of contents
- (C) Sampling frame
- (D) Thematic synthesis of literature

Sampling: Population, Probability and Non-Probability Methods

Q41. In research, the population is best defined as:

- (A) The students who return a completed questionnaire
- (B) The small group actually studied by the researcher
- (C) The entire group of people or items about which the researcher wants to draw conclusions
- (D) The teachers who help in collecting data

Q42. A sample is best defined as:

- (A) A subgroup selected from the population for actual study
- (B) The complete list of all schools in a country
- (C) The final chapter of a research report
- (D) A statistical formula used in analysis

Q43. The main advantage of probability sampling is that:

- (A) It always produces a very large sample
- (B) It requires no list of population members
- (C) It is the cheapest method in every situation
- (D) Every member has a known, non-zero chance of selection, which supports generalisation

Q44. A researcher writes the names of all 400 teachers on slips, mixes them well and draws 80 at random. This is:

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

Q45. In stratified sampling, the strata used to divide the population should be:

- (A) Mutually exclusive and together covering the whole population
- (B) Overlapping, so members can appear in several strata
- (C) Chosen after the sample has been drawn
- (D) Based only on the researcher's convenience

Q46. A researcher selects a random sample of individual pupils from a complete district list, rather than whole schools. This is:

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

Q47. From a list of 1,000 pupils, a researcher selects every 10th pupil after a random start. This is:

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

Q48. The main weakness of purposive sampling is that its findings:

- (A) Always require a complete census of the population
- (B) Cannot be generalised confidently beyond the selected cases
- (C) Are always expressed as numbers
- (D) Need no research question at all

Q49. A researcher studies the student teachers who happen to be present in the college on the day of the visit because they are easy to reach. This is:

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

Q50. In quota sampling, the researcher:

- (A) Draws names by lottery from the whole population
- (B) Selects entire clusters at random
- (C) Fills fixed numbers for categories such as gender or subject, but chooses individuals within each category non-randomly
- (D) Asks each participant to recruit the next participant

Q51. Snowball sampling is most appropriate when the researcher needs to reach:

- (A) All pupils in a large public school system
- (B) A hard-to-reach group whose members can identify others like themselves
- (C) A sample stratified exactly by district
- (D) Every 20th name on an official register

Q52. The sampling frame for a study of primary teachers in a district is best described as:

- (A) The questionnaire used in the study
- (B) The statistical test applied to the data
- (C) The actual list of teachers from which the sample is drawn
- (D) The final conclusion of the study

Tools, Designs, Statistics, Action Research, Ethics and Report Writing

Q53. Which research tool is best when a researcher needs written responses from a large number of respondents at low cost?

- (A) A questionnaire
- (B) A clinical interview lasting one hour per person
- (C) Direct observation over several weeks
- (D) A laboratory experiment

Q54. An interview differs from a questionnaire mainly because it:

- (A) Cannot be used with literate respondents
- (B) Always produces only numerical data
- (C) Allows face-to-face interaction, probing and clarification of answers
- (D) Requires no planning or schedule at all

Q55. A study in which the researcher manipulates a teaching method and randomly assigns pupils to experimental and control groups is a/an:

- (A) Case study
- (B) Historical study
- (C) Survey study
- (D) True experimental design

Q56. A researcher studies the relationship between study hours and examination marks without manipulating either variable. This is best described as:

- (A) Experimental research
- (B) Correlational research
- (C) Action research
- (D) Historical research

Q57. In a set of scores, the mean, median and mode are all measures of:

- (A) Variation within the scores
- (B) The relationship between two variables
- (C) Sampling error
- (D) Central tendency

Q58. The mode of a set of scores is best defined as:

- (A) The middle score when scores are arranged in order
- (B) The sum of all scores divided by the number of scores
- (C) The score that occurs most often
- (D) The difference between the highest and lowest scores

Q59. The action research cycle is best summarised as:

- (A) Publish, then collect data, then plan
- (B) Observe only, without any action
- (C) Test a hypothesis once and stop
- (D) Plan, act, observe and reflect, then revise the plan and repeat

Q60. Which practice best reflects research ethics and good report writing?

- (A) Publishing participants' names without their permission
- (B) Obtaining informed consent, protecting confidentiality, avoiding plagiarism, and presenting methods, findings and references honestly
- (C) Copying another thesis and changing only the title page
- (D) Reporting only results that favour the researcher's hypothesis

Answer Key

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

Worked explanations for all 60 questions:

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