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ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD

Course: Educational Research (1649) • Level: PGD-ELM

Semester: Autumn 2026

Assignment No. 1 (Units 1–4)

SOLVED ASSIGNMENT GUIDE

(For Study & Reference)

Note: This guide is prepared for study and reference purposes. Students are advised to read the relevant units of the course book, understand the concepts, and then write the assignment in their own words. Total marks of the assignment are 100; each question carries the marks shown with it.

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Question 1: Scientific and Traditional Sources of Knowledge (20 Marks)

How are scientific sources of knowledge different from the traditional sources of knowledge?

Introduction

Every human society possesses knowledge, but not all knowledge is produced in the same way. Long before laboratories, journals and universities existed, people explained the world, educated their children, healed the sick and organised their communities on the basis of knowledge handed down from elders, priests, rulers and custom. With the rise of modern science, a second and very different route to knowledge appeared: knowledge built on observation, measurement, experiment and public testing. Educational research, the subject of this course, stands on the scientific side of this divide, yet a student of research must understand both sides, because schools and classrooms still run largely on traditional knowledge — the experience of senior teachers, inherited practices and unquestioned routines. This answer first describes the traditional sources of knowledge, then the scientific sources, and

then compares the two point by point so that the difference becomes clear and usable for a researcher.

Traditional Sources of Knowledge

Traditional sources are those in which knowledge is accepted because of who gives it, how old it is, or how deeply it is felt, rather than because it has been tested. Four traditional sources are usually identified in research textbooks.

Authority. Knowledge is accepted because it comes from a person or institution regarded as authoritative — a religious scholar, a king, a famous philosopher, a senior professor or a sacred book. In medieval Europe the statements of Aristotle and the Church settled questions about nature for centuries; in a school today, a directive from the head office or the opinion of the most senior teacher often settles a question in the same way. Authority is efficient and sometimes right, but it is accepted without independent checking.

Tradition and custom. Practices continue because 'this is how it has always been done.' Annual examinations, morning assemblies, corporal discipline in earlier times, and the lecture method itself survived for generations mainly through custom. Traditional knowledge of this kind carries the accumulated experience of a community, but it also preserves its errors, because age is treated as proof of truth.

Intuition and revelation. Some knowledge claims rest on an inner feeling, a dream, insight or a revealed truth that the knower experiences as self-evident. Intuition can be a genuine spark of discovery, but it is private: two people can have opposite intuitions about the same problem, and tradition provides no public method for deciding between them.

Personal experience and common sense. People generalise from what they themselves have seen: a teacher concludes that 'punishment improves discipline' because it worked in her class last year. Experience is a real source of practical wisdom, but uncontrolled experience is selective — we notice confirming cases, forget exceptions, and cannot separate the effect of one factor from the many others acting at the same time.

Scientific Sources of Knowledge

Scientific knowledge is produced by a method, not by a person. Its sources are systematic observation, controlled experiment, measurement and logical reasoning, organised into the well-known cycle of the scientific method: identifying a problem, reviewing what is already known, framing a hypothesis, collecting data under controlled conditions, analysing the data, and accepting, rejecting or modifying the hypothesis. Three features define these sources. First, they are empirical: claims must be tied to observable evidence that others can inspect. Second, they are public and repeatable: the procedure is reported openly so that any competent researcher can repeat the study and check the result. Third, they are self-correcting: a scientific claim is always provisional and must be abandoned or revised when better evidence appears.

In education, scientific sources include controlled experiments on teaching methods, standardised achievement tests, systematic classroom observation schedules, validated questionnaires and peer-reviewed research journals. When a researcher today asks whether cooperative learning improves science achievement, she does not ask the oldest teacher in the school; she designs a study, gathers data and lets the evidence decide.

Point-by-Point Difference Between the Two Sources

Table 1: Scientific and traditional sources of knowledge compared

Basis of Comparison	Traditional Sources	Scientific Sources
Foundation of acceptance	Status of the source: authority, age, custom or inner conviction	Quality of the evidence: observation, measurement and testing
Method of reaching conclusions	Acceptance, inheritance and personal impression	Systematic inquiry: hypothesis, controlled data collection and analysis
Testability	Claims are usually not open to testing; questioning them may be discouraged	Every claim is testable and, in principle, falsifiable
Objectivity	Subjective and personal; varies from person to person and culture to culture	Strives for objectivity; procedures are designed to remove personal bias
Verification	No public procedure for checking; truth rests on trust	Replication by independent researchers is the standard of verification
Attitude towards change	Conservative; old knowledge is preserved because it is old	Progressive; knowledge is revised whenever new evidence demands it
Treatment of error	Errors can survive for centuries because nothing challenges them	Error is actively hunted through peer review, criticism and re-testing
Precision	Stated in vague, everyday language; difficult to measure	Stated precisely, often in measurable and quantitative terms
Universality	Bound to a particular community, era or believer	Aims at generalisations that hold across persons, places and times
Role of doubt	Doubt is treated as disobedience or disbelief	Organised doubt (scepticism) is the starting point of inquiry

The table summarises the contrast, but three differences deserve emphasis because they matter most in research. The first is the direction of proof. In traditional knowledge the burden of proof lies on the questioner, who must show why an accepted belief should be disturbed; in

science the burden lies on the claimant, who must produce evidence before a claim deserves acceptance. The second is the fate of disagreement. Tradition resolves disagreement by rank — the senior person's view prevails — whereas science resolves it by further evidence, and a junior researcher with better data can overturn a famous name, as young scientists repeatedly overturned established authorities in physics, medicine and psychology. The third is cumulativeness. Scientific knowledge builds on itself in an organised way: each study reviews, uses and extends earlier studies, so knowledge grows. Traditional knowledge accumulates sayings and practices, but without a testing mechanism it cannot steadily separate the true from the false, so growth is slow and accidental.

Relevance for Educational Research

This difference is not an insult to tradition. Traditional sources carry values, aims and practical craft knowledge without which a school cannot run, and scientific research itself begins from problems noticed in everyday experience. The point for the researcher is about justification. When a claim is to guide policy, spending or the treatment of children — for example, class size, medium of instruction or assessment policy — it must rest on scientific sources: defined concepts, collected data and tested conclusions. A PGD-ELM graduate managing an institution will meet both kinds of knowledge daily: the staffroom's inherited wisdom and the research report's tested findings. Professional competence lies in respecting the first as a source of hypotheses and context, while demanding the second as the basis for decisions.

Limitations of the Scientific Sources

Balance requires admitting that scientific sources have limits. They answer questions of fact and effect — what works, how much, for whom — far better than questions of value, such as what

education is for. Measurement in education deals with human beings who react to being studied, so complete objectivity is an ideal approached rather than fully reached. Scientific findings are also provisional and sometimes misused when a single small study is treated as final proof. These limits, however, are known and managed inside the scientific tradition itself through ethics review, replication and cautious generalisation; they do not return us to accepting claims merely because they are old or loudly asserted.

Conclusion

Scientific and traditional sources of knowledge differ in foundation, method and spirit. Traditional knowledge is accepted on authority, custom, intuition and uncontrolled experience; it is conservative, subjective and largely untested. Scientific knowledge is produced by systematic observation, controlled inquiry and logical analysis; it is empirical, public, replicable, precise and self-correcting. For educational research the conclusion is practical: tradition may suggest what to study and what a community values, but only scientific sources can justify claims about what is true and what works in education.

Question 2: Basic, Applied and Action Research (20 Marks)

Explain the difference between BASIC, APPLIED & ACTION research with suitable examples.

Introduction

Research is classified in several ways, and one of the most useful classifications is by purpose — by what the researcher intends the knowledge to do. On this basis research is divided into basic (also called fundamental or pure) research, applied research and action research. The three types use many of the same tools, yet they differ in aim, in who carries them out, in how widely

their results apply, in time scale and in the way their quality is judged. Confusing them leads to poor research decisions: a head-teacher who needs to fix next term's attendance problem does not need a theory of motivation, and a theorist building a model of learning should not be hurried into a classroom remedy. This answer defines each type, states its main features, gives suitable examples from education, and then sets the three side by side.

Basic (Fundamental) Research

Basic research is inquiry undertaken to expand knowledge and build or test theory, without any immediate practical application in view. Its driving force is curiosity about how things work. The researcher asks 'why' and 'how' questions: How does memory develop in children? What is the structure of intelligence? How do adolescents form their self-concept? The product of basic research is a principle, a model or a theory that enriches a discipline's stock of knowledge, whether or not anyone uses it this year.

Its main features are: (1) the goal is theoretical — adding to organised knowledge; (2) it is usually carried out by scholars in universities and research institutes; (3) it allows the longest time scale and the most rigorous controls, often in laboratory-like conditions; (4) its results are meant to generalise widely, across settings and populations; and (5) it is judged by the scholarly community through publication and peer review. The classic educational example is Piaget's work on the stages of cognitive development: he was not trying to improve any particular school, yet his theory later transformed curricula worldwide. A current example would be a university study testing whether working memory capacity predicts reading comprehension in ten-year-olds, designed purely to refine a theory of reading.

Applied Research

Applied research takes the theories and principles produced by basic research and uses them to solve a recognised, real-world problem of policy or practice. The question is narrower and the client is clearer: a ministry, a district, a university or an organisation wants an answer it can act on. Where basic research asks 'how does memory work?', applied research asks 'does this remedial reading programme raise the achievement of weak Grade 5 readers in our district?'

Its main features are: (1) the goal is a usable answer to a specific problem; (2) it is commissioned or at least addressed to decision-makers; (3) it works in real field settings rather than laboratories, accepting less-than-perfect control; (4) its findings generalise to a defined population or programme, not universally; and (5) it is judged by usefulness — did it inform a sound decision? Examples include an evaluation of the effect of a school feeding programme on enrolment in rural primary schools; a study commissioned by a provincial education department on why trained teachers leave government service; or a university's investigation of whether its new blended-learning model improves postgraduate completion rates. Note that applied research still follows scientific method carefully — sampling, instruments and analysis remain systematic — only its purpose has changed.

Action Research

Action research is research carried out by practitioners themselves, in their own workplace, to improve their own practice. The term was shaped by Kurt Lewin in the 1940s and brought into education by Stephen Corey and later Lawrence Stenhouse and John Elliott. The teacher, head-teacher or administrator is simultaneously the researcher and the person who will act on the

findings. Its purpose is not to produce general theory or even a district-wide answer, but local improvement here and now.

Action research proceeds in a repeating cycle: plan (identify a problem in one's own setting and devise a change), act (introduce the change), observe (collect evidence on what happens) and reflect (judge the result and plan the next cycle). Its features are: (1) the problem is small-scale and owned by the practitioner; (2) methods are practical and often simple — observation notes, attendance registers, short questionnaires, interviews with one's own students; (3) findings are applied immediately by the same person who produced them; (4) results are not claimed to generalise beyond the setting; and (5) it is judged by whether practice actually improves and by the professional learning of the practitioner.

A suitable example: a head-teacher notices that Grade 8 attendance falls every Friday. She studies the register (observe), interviews students and parents, forms the hypothesis that transport and weekly-bazaar work are the causes (plan), arranges a Friday activity period and parent meetings (act), tracks Friday attendance for a term (observe again) and finds it improved but not fully, so she begins a second cycle with adjusted strategies (reflect and re-plan). A classroom example is a teacher who experiments with peer tutoring to improve her own class's mathematics homework completion, keeping a reflective diary as evidence.

Comparison of the Three Types

Table 1: Basic, applied and action research compared

Feature	Basic Research	Applied Research	Action Research
Main purpose	To build, extend or test theory and general knowledge	To solve a specific practical or policy problem	To improve the researcher's own practice in a local

			setting
Who conducts it	University scholars and research specialists	Researchers, consultants and evaluation teams	Practitioners: teachers, head-teachers, administrators
Setting	Laboratory or carefully controlled conditions	Real field settings: schools, district, programmes	The researcher's own classroom or institution
Time horizon	Long; no immediate deadline for use	Medium; tied to a decision or programme cycle	Short and continuous; repeated cycles within a term or year
Generalisability	High; aims at universal principles	Moderate; applies to a defined population or programme	Low by design; findings belong to the local context
Typical output	Theory, model or principle published in journals	Report with recommendations for decision-makers	Changed practice and a reflective account
Criterion of quality	Rigour and contribution to knowledge	Rigour plus usefulness of the answer	Improvement achieved and credibility of the evidence
Example	Testing a theory of how working memory develops in children	Evaluating a remedial reading programme across a district	A head-teacher's cycle of steps to raise Friday attendance in her own school

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How the Three Types Are Related

The three types are different, but they are not rivals; they form a chain. Basic research produces the theories; applied research tests those theories against real problems and turns them into programmes and policies; action research adapts the results to the unique conditions of one classroom or school and, in doing so, often raises new questions that travel back up the chain. A reading theory (basic) becomes a phonics programme evaluated across a district (applied), which a teacher then adjusts for her multilingual classroom (action). Weakness at any

level harms the others: without basic research, practitioners borrow fashions; without action research, proven programmes fail on contact with real classrooms because no one adapts them thoughtfully.

Which Type Should an Educational Leader Use?

For a student of educational leadership and management the practical rule is to match the type to the decision. Questions of institutional policy — admissions, resource allocation, programme adoption — deserve applied research with a proper sample. Questions of one's own daily practice — my meetings, my supervision, my school's discipline — are the natural home of action research, which is cheap, fast and directly owned. Basic research is mainly consumed rather than produced by practitioners: leaders read it to understand the theories beneath the techniques they use, and they should be able to judge whether a fashionable technique has any theoretical and empirical support at all.

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Conclusion

Basic, applied and action research differ in purpose, performer, setting, time scale and generalisability. Basic research seeks general truth and builds theory; applied research seeks a dependable answer to a defined practical problem; action research seeks improvement of the practitioner's own local practice through cycles of planning, acting, observing and reflecting. All three are scientific in method and all three are needed: together they connect the deepest questions of the discipline to the Monday-morning problems of a real school.

Question 3: Validating Sources of Data in Historical Research (20 Marks)

How can you validate the sources of data in historical research, after so many years?

Introduction

Historical research studies the past through what survives of it: documents, inscriptions, buildings, photographs, official records, newspapers, letters and the memories of witnesses. Unlike the experimenter, the historical researcher cannot observe the event, cannot repeat it, and cannot question most of the people involved — they are dead, and decades or centuries may separate the researcher from the evidence. This creates the central methodological problem of the field: how can we trust material produced so long ago, often by interested parties, sometimes forged, damaged or copied with errors? The answer developed by historians is a disciplined process of source criticism — external criticism and internal criticism — supported by corroboration among independent sources. This answer explains each safeguard and shows how a researcher in education can validate old data before building conclusions on it.

The Kinds of Sources to Be Validated

Validation begins by knowing what one is holding. Primary sources are materials produced at the time by participants or witnesses: an original order or notification, an enrolment register, a head-teacher's log book, a contemporary newspaper report, a photograph, a student's exercise book. Secondary sources are later accounts based on primary material: a history of the institution written fifty years afterwards, a textbook summary, a commemorative magazine. Primary sources stand closer to the event but are not automatically true — a contemporary

official report can lie — while secondary sources are easier to read but add their authors' selection and errors. The researcher therefore validates primary sources directly and treats secondary sources as guides to them, checking every important claim back against the primary record wherever it survives.

External Criticism: Is the Document Genuine?

External criticism establishes the authenticity of a source — whether it really is what it claims to be, written when, where and by whom it claims. After many years this is a technical task, and historians use several tests.

- **Authorship and provenance.** Who produced the document, and through whose hands has it passed to the archive? A continuous, documented chain of custody strengthens trust; a document that appears suddenly with no history invites suspicion.
- **Date and place.** Internal clues — names of rulers or officials, references to events, administrative vocabulary — are checked against known chronology. A document dated 1890 that mentions a department created in 1920 exposes itself as false or misdated.
- **Material tests.** Paper, ink, handwriting, typefaces, seals and watermarks are compared with authenticated specimens of the period. Modern paper or a ballpoint signature on an allegedly nineteenth-century record settles the matter at once.
- **Language and style.** Vocabulary, script conventions and official formats change over time. Anachronistic words or a format introduced decades later indicate forgery or later copying.
- **Original or copy.** If only a copy survives, the researcher asks who copied it, when and why, and whether other copies agree, because every copying can introduce changes.

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In educational research these tests are practical, not antiquarian. A scholar studying the growth of girls' schooling in a district may be shown a 'century-old' school register in private hands; checking the paper, the printed form's design, the names of inspectors recorded in it and the consistency of enrolment figures with the district's published annual reports is exactly external criticism, and it protects the study from building on a fabricated or misdated record.

Internal Criticism: Is the Content Credible?

A document can be perfectly genuine and still tell lies: an authentic inspection report may flatter a school because the head-teacher hosted the inspector well. Internal criticism therefore examines the credibility and meaning of the content itself.

- **Competence of the author.** Was the writer in a position to know? A clerk recording daily attendance knows the figures; a visiting dignitary recording impressions of teaching quality may not.
- **Purpose and bias.** Why was the document produced — to inform, to justify a budget, to praise a patron, to blame a rival? Court chronicles glorified kings; departmental reports written to secure grants may exaggerate enrolment or success. Knowing the purpose tells the researcher in which direction the account is likely to bend.
- **Time gap.** Was the account written during the event, days later, or from memory after thirty years? Memoirs written long afterwards are valuable for reflection but unreliable for dates, figures and sequences.
- **Internal consistency.** Does the document contradict itself — in figures, names or sequence of events? Contradictions locate the weak points that need outside checking.

- **Meaning in context.** Words change meaning. Terms like 'school', 'trained teacher' or 'literacy' did not mean in 1900 exactly what they mean now, so content must be interpreted in the language and administrative usage of its own time.

Corroboration: The Strongest Validation of All

Neither test, alone, can fully validate old data, because each document may pass every material test and still be a lone, biased voice. The decisive safeguard is corroboration — the agreement of independent sources. When an enrolment figure appears in the school register, is repeated in the district's annual report compiled from a different office, and is consistent with the census of the same period and with a contemporary newspaper's account of the school's expansion, the researcher can use it with confidence, because it is practically impossible for four independent records to share the same error or lie. Where sources disagree, the disagreement itself is information: the researcher weighs which source was closer, more competent and less interested, explains the discrepancy in the report, and avoids resting any major conclusion on a single contested figure. Modern technology assists this old method: digitised archives, cross-searchable newspaper collections and union catalogues let a researcher trace the same event across many repositories in days instead of years.

A Working Procedure for the Researcher

Table 1: Validating historical sources — what is checked and how

Stage	Question Asked	Typical Checks
Provenance	Where has this source been since it was created?	Archive records; chain of custody; collection history
External criticism	Is it genuine — right author, date, place and material?	Handwriting, ink, paper, seals; chronology of names and offices; language of the period

Internal criticism	Is what it says believable?	Author's competence and bias; purpose of writing; time gap; internal consistency
Corroboration	Do independent sources agree?	Cross-checking registers, reports, newspapers, census and private papers
Interpretation	What did it mean in its own time?	Period meanings of terms; administrative and social context

Two final disciplines complete the validation. First, the researcher keeps a critical record: for every key source, a note of its provenance, the tests applied and the degree of trust assigned, so that readers can audit the judgements. Second, the researcher reports uncertainty honestly — distinguishing in the final write-up between facts established by converging evidence, probable reconstructions and points the surviving record simply cannot settle. Historical research does not promise the certainty of a laboratory; it promises conclusions no stronger than the validated evidence allows, and stating those limits is part of the validation itself.

Conclusion

Sources of data in historical research are validated, even after many years, by method rather than by trust. External criticism confirms that a document is genuine in authorship, date, place and material; internal criticism tests whether its content is competent, unbiased and consistent; corroboration across independent sources confirms or corrects what any single document claims; and careful interpretation restores the meaning the words carried in their own time. Applied together, these procedures let the researcher separate the authentic from

the forged and the credible from the merely surviving — and to build a history of education that later scholars can themselves check and trust.

Question 4: Experimental Research in Educational Leadership (20 Marks)

When and how does it become possible to conduct experimental research in educational leadership? How does it help in enhancing empirical knowledge?

Introduction

Experimental research is the most powerful design for establishing cause and effect, because the researcher deliberately introduces a change (the independent variable), holds other conditions as steady as possible, and measures what follows (the dependent variable). In the physical sciences this is routine. In educational leadership it is harder: the 'treatments' are programmes, training courses and management practices applied to proud, busy human beings in living institutions that cannot be sealed like laboratories. Yet experimental research in leadership is both possible and increasingly practised, provided certain conditions are met. This answer first states what an experiment requires, then explains when those conditions exist in educational leadership, then describes how such experiments are actually conducted — designs, controls and safeguards — and finally shows how they enhance empirical knowledge beyond what surveys and case studies can offer.

What an Experiment Requires

Three elements define a true experiment. First, manipulation: the researcher, not nature, decides who receives the treatment — for example, a six-month instructional-leadership

training for head-teachers. Second, comparison: a control or comparison group experiences everything except the treatment, so that the treatment's effect can be separated from the effect of time, attention and ordinary institutional life. Third, random assignment: participants or schools are allocated to groups by chance, so that the groups start out equivalent in motivation, experience, resources and every unmeasured quality, and later differences can be credited to the treatment. Around these sit supporting requirements: measurable outcomes defined in advance (teacher performance ratings, student achievement, retention, climate scores), reliable instruments, a treatment delivered faithfully and uniformly (fidelity), and ethical clearance, because experimenting on people's working lives touches their rights and careers.

When Does It Become Possible in Educational Leadership?

Experimental research becomes possible in this field when several conditions come together. The first is a well-defined, standardisable intervention. Leadership itself is too broad to be a treatment, but a specified programme can be: a training curriculum with fixed modules, a structured supervision protocol in which heads observe classrooms and give feedback on a set schedule, a distributed-leadership model with defined roles, or a data-use routine for school improvement teams. If the treatment cannot be described precisely enough for two sites to deliver the same thing, an experiment is not yet possible and pilot development work must come first.

The second condition is a sufficient number of comparable units. Leadership treatments are usually delivered to whole schools, so experiments need tens of schools, not tens of individuals — which is why leadership experiments typically require a district, a school chain or a ministry

as partner. The third condition is measurable outcomes on a realistic time scale: leadership effects reach students slowly, through teachers, so the design must allow months or a year of follow-up and must measure intermediate outcomes (changes in leadership practice and teaching) as well as final ones. The fourth condition is ethical and political feasibility: it must be acceptable to delay the treatment for the control group — commonly solved by a wait-list design in which control schools receive the programme after the study — and leaders must consent without their careers being judged by participation. The fifth condition is stability: if a major reform, transfer wave or examination change is about to sweep the system, its effects will swamp the treatment's, and the experiment should wait or be redesigned.

How It Is Conducted: Designs Used in Leadership Research

Table 1: Experimental and quasi-experimental designs in educational leadership research

Design	How It Works	Typical Leadership Example
Randomised controlled trial (cluster RCT)	Whole schools are randomly assigned to treatment or control; outcomes compared after the programme	40 schools randomly split: 20 heads receive instructional-leadership training, 20 continue usual practice
Pretest-posttest control group design	Both groups measured before and after; only the treatment group receives the intervention	Leadership practice scores measured in both groups before training and one year later
Wait-list (delayed treatment) design	Control group receives the programme after the first results are collected	District trains half its heads this year and the other half next year, comparing the first year
Quasi-experimental (non-equivalent groups)	Intact groups are used without randomisation; groups matched or pretests used to adjust differences	Comparing a private school chain that adopted coaching for heads with a similar chain that did not
Solomon four-group design	Four groups, with and without pretests, to separate the effect of testing itself from the	Used when the pretest questionnaire itself might change leaders' behaviour

	treatment	

Whatever the design, competent execution follows the same steps: state hypotheses in advance; secure permissions and informed consent; measure baseline outcomes; assign groups; train and support the treatment group while monitoring fidelity (visits, logs, attendance) to prove the treatment actually happened; keep the control condition honest and record any contamination, such as control heads obtaining the training materials informally; collect post-test and follow-up data with the same instruments; and analyse with the school, not the individual teacher, as the unit where assignment was by school, using appropriate statistical tests and reporting effect size, not only significance. Threats to validity must be actively managed: history (outside events), maturation, differential dropout of schools, and the Hawthorne effect, in which any group improves merely because it feels observed — one reason attention-control arrangements, giving the control group some neutral activity, are used in careful studies.

How Experiments Enhance Empirical Knowledge

The unique contribution of the experiment is causal knowledge. A survey can show that schools whose heads practise instructional leadership have higher achievement, but it cannot show whether the leadership caused the achievement, whether successful schools simply attract strong heads, or whether a third factor — funding, location, parental support — produced both. Only manipulation with random assignment breaks these rival explanations. This matters enormously in a field flooded with advocacy: leadership fashions, training packages and

consultancy models compete for scarce public money, and experimental evidence separates what genuinely changes practice and learning from what merely sounds inspiring.

Experiments also refine theory. When a leadership programme built on a theory (say, that feedback-focused supervision improves teaching) succeeds or fails under controlled conditions, the theory itself is tested and improved — empirical knowledge grows in the strict sense: organised, evidence-tested understanding rather than accumulated opinion. Experiments further provide effect sizes, telling leaders not only that a programme works but how much it works and at what cost, which is exactly the information a district needs to choose between training heads, hiring coaches or reducing class size. Finally, published experiments can be replicated in other districts and cultures, and replications either strengthen the finding into dependable knowledge or reveal the conditions on which it depends — knowledge either way.

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Limitations and Cautions

Honesty requires noting the costs. Leadership experiments are expensive, slow and administratively demanding; they simplify rich leadership practice into a deliverable programme, so something of the art of leadership escapes them; and results from one system may not transfer to another with different authority structures and resources. For these reasons experiments complement rather than replace surveys, case studies and action research — but where the question is 'does this leadership intervention cause improvement?', no other design answers as convincingly.

Conclusion

Experimental research in educational leadership becomes possible when the intervention is precisely defined, enough comparable schools are available, outcomes are measurable over a

realistic period, ethical arrangements such as wait-list controls are in place, and the environment is stable enough for effects to show. Conducted through randomised or carefully controlled quasi-experimental designs, with fidelity checks and validity safeguards, such research converts leadership claims into tested causal knowledge. It thereby enhances empirical knowledge in the deepest way available to our field: by showing not merely what successful leaders look like, but what leadership actions actually produce success.

Question 5: Critical Review of a Research Article on Educational Institutions Management (20 Marks)

Review a research article of a Pakistani Scholar regarding Educational Institutions Management and develop a critical review report.

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Introduction: Purpose of This Review

This report presents a critical review of a published research article by Pakistani scholars on the management of educational institutions. A critical review is not a summary alone: it describes the article accurately, judges the quality of its research decisions, and assesses its value for theory, policy and practice. The article selected concerns how the heads of a public university — its campus principals and divisional directors — actually lead and manage their institution, a topic at the heart of educational institutions management and directly relevant to the PGD in Educational Leadership and Management.

Bibliographic Details of the Article Reviewed

Table 1: Article selected for review

Item	Details

Authors	Amin, Muhammad; Tatlah, Ijaz Ahmad; Islam, Muhammad (Pakistani scholars)
Title	Leadership Styles of the Campus Principals and Divisional Directors in a Public University of Pakistan
Journal	Bulletin of Education and Research (Institute of Education and Research, University of the Punjab, Lahore)
Year / Volume / Pages	2018, Volume 40, Issue 1, pp. 155–181
ISSN / Indexing	ISSN 0555-7747; indexed in ERIC (Record No. EJ1209689)
Topic area	Leadership and management of an educational institution (a public sector university)

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Summary of the Article

The study set out to identify the leadership styles exercised by the campus principals and divisional directors of a public university in Pakistan. Following Bass and Avolio's full-range leadership model, it examined three styles — transformational, transactional and laissez-faire — across their nine dimensions. Philosophically the authors place the study in the post-positivist paradigm and adopt a quantitative approach; by type it is descriptive research executed through the survey method.

The population consisted of the faculty members of the university, and all 287 faculty members were included — in effect a census rather than a small drawn sample — so that every academic unit's experience of its leader could be captured. Data were collected with the Multifactor Leadership Questionnaire (MLQ), the standard international instrument for this model, in which followers rate their leader's behaviours. The data were analysed with descriptive statistics

(mean and standard deviation) to establish how frequently each style and dimension was practised, and with a one-tailed t-test for the comparisons the authors wished to make.

The findings were clear in direction. The transformational style was the most frequently exercised by the campus principals and divisional directors, followed by the transactional style, while laissez-faire leadership — the passive avoidance of leadership — was the least practised. Among the nine dimensions, inspirational motivation obtained the highest mean, making it the key dimension through which these institutional heads lead; idealized influence (behaviour) and management-by-exception (active) also played a pivotal role in shaping the leaders' style profile. In plain terms, the university's middle-level academic managers lead mainly by motivating and modelling, supported by active monitoring of standards, and only rarely by absenting themselves from leadership altogether.

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Critical Appraisal: Strengths of the Article

- **A significant and well-chosen problem.** How public universities are actually led is a first-order management question in Pakistan, where universities have expanded rapidly. The study addresses practising institutional managers (principals and directors) rather than only top leadership, filling a genuine gap.
- **A sound theoretical frame.** Anchoring the study in the full-range leadership model gives the concepts precise definitions and connects a local study to an international body of comparable research.
- **A validated, standard instrument.** Using the MLQ rather than a home-made questionnaire gives the measurements established reliability and allows the results to be compared with studies from other countries.

- **A complete population.** Including all 287 faculty members removes sampling error within the institution and ensures small units are not silently excluded from the picture.
- **Transparent, replicable reporting.** Paradigm, design, population, instrument and statistics are all stated plainly, so another researcher could repeat the study in another university — a basic quality mark of quantitative research.

Critical Appraisal: Weaknesses and Limitations

- **A single institution.** One public university, however completely studied, cannot represent the management of Pakistan's many public and private universities, which differ in resources, governance and culture. The authors' conclusions travel beyond their evidence when read as statements about Pakistani universities generally.
- **Perceptions, not observed behaviour.** The MLQ measures how followers perceive their leaders. Perceptions matter, but they are filtered through satisfaction, personal relations and halo effects; the study contains no observation, document analysis or leader self-assessment against which to triangulate them.
- **Common-source bias.** All data come from one questionnaire, one respondent group and one point in time. Correlations among dimensions measured this way tend to be inflated, and the cross-sectional snapshot cannot show whether leadership is improving or deteriorating, nor link styles to outcomes such as departmental performance or student results.
- **Statistical choices need more defence.** The one-tailed t-test assumes a predicted direction; the article would be stronger with explicit justification, reported effect sizes and confidence

intervals, and with the instrument's reliability coefficients in this population stated, since the MLQ was developed in other cultural settings.

- **Limited disaggregation.** With a complete faculty census available, richer comparisons — by faculty, by campus, by respondents' seniority — were possible and would have made the findings far more useful to the university's own management.
- **No qualitative depth.** The numbers tell us that inspirational motivation scores highest, but not what these principals actually do on Monday morning to inspire — the very knowledge a training programme for institutional managers would need.

Relevance and Usefulness for Educational Institutions Management

Despite these limitations, the article earns its place in the literature. For university management it carries a practical message: the institution's academic middle managers already lean toward transformational behaviours, so leadership development should build on that strength — formalising mentoring, vision-building and intellectual stimulation — while correcting the residual reliance on management-by-exception, which intervenes only when standards slip. For the Higher Education Commission and university syndicates, the study offers a baseline profile against which later leadership initiatives at the same institution could be judged. For students of this course it is also a clean teaching example of a descriptive survey executed with a standard instrument, and its limitations are themselves instructive: they show exactly what the next study — multi-university, mixed-method, outcome-linked — should add.

Recommendations Arising from the Review

Three recommendations follow. First, replication across several public and private universities, with the sample and context described fully, would establish whether the transformational

profile is national or local. Second, a mixed-methods follow-up should interview principals, directors and faculty to explain the statistical profile in behavioural terms. Third, future work should connect leadership styles to institutional outcomes — accreditation results, research output, student satisfaction — because management research persuades decision-makers when it shows consequences, not only styles.

Overall Assessment and Conclusion

Judged as a whole, Amin, Tatlah and Islam (2018) is a competently designed, clearly reported descriptive study that gives dependable evidence about leadership styles within one Pakistani public university and a useful foundation for wider work. Its strengths — a relevant problem, an established theory, a validated instrument and a complete population — are real; so are its limits — a single site, perceptual single-source data and a snapshot design. A critical reader therefore accepts its findings for the institution studied, treats wider generalisations cautiously, and values the article both for what it establishes and for the better-designed studies it invites. That balanced verdict — neither worshipful nor dismissive — is precisely what a critical review report is meant to deliver.

Reference

Amin, M., Tatlah, I. A., & Islam, M. (2018). Leadership styles of the campus principals and divisional directors in a public university of Pakistan. Bulletin of Education and Research, 40(1), 155–181. (ERIC No. EJ1209689)

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