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

Semester: Autumn 2026

Assignment No. 2 (Units 5–9)

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: Designing and Conducting a Survey on E-Leadership Among Head-Teachers (20 Marks)

How can a researcher design and conduct a survey about e-leadership prevailing among head-teachers of public and private schools?

Introduction

E-leadership means leading a school through and with digital technology: communicating with staff, parents and the district through digital channels, supervising teaching with the help of learning platforms and data dashboards, taking decisions from electronic records, and building a school culture in which technology serves learning. Since the pandemic years, when schools had to run through messaging groups, online classes and digital attendance, e-leadership has moved from a luxury to a core duty of the head-teacher. A researcher who wants to know how much e-leadership actually prevails among head-teachers of public and private schools — and whether the two sectors differ — will normally choose the survey method, because the question concerns the present state of a large population and asks for comparable, quantifiable

answers. This answer designs that survey step by step, from defining the problem to analysing the data, in a form a researcher could actually execute.

Step 1: Define the Problem, Objectives and Research Questions

The study begins with a precise problem statement: 'What is the level of e-leadership practised by head-teachers of public and private secondary schools, and does it differ by sector?' From it flow the objectives: (1) to measure the overall level of e-leadership among head-teachers; (2) to measure it dimension by dimension; (3) to compare public and private school head-teachers; and (4) to examine differences by gender, experience and school level where relevant. These become research questions, and the central comparison can also be stated as a null hypothesis — there is no significant difference in e-leadership between public and private head-teachers — which the data will test. Sharp objectives matter because every later decision, from questionnaire items to statistics, is justified by them.

Step 2: Build the Conceptual Framework of E-Leadership

A survey cannot measure a slogan; the concept must be broken into observable dimensions. Reviewing the literature on technology leadership (for example the ISTE standards for education leaders and recent studies of digital school leadership) suggests five dimensions suitable for this study: (1) digital vision and planning — setting technology goals for the school; (2) ICT competence and modelling — the head's own confident use of devices, office software, email and the school management system; (3) digital communication and collaboration — running official communication, meetings and parent contact through digital means; (4) technology-supported supervision and data use — observing online classes, using digital attendance and results data for decisions; and (5) digital ethics, safety and professional

development — ensuring safe, responsible technology use and arranging staff training. Each dimension will become a section of the questionnaire and a sub-score in the analysis.

Step 3: Choose the Design and Define the Population

The appropriate design is a descriptive, cross-sectional survey: data are collected once, from many respondents, to describe the existing level of e-leadership and compare groups. The population is all head-teachers of public and private secondary schools in the chosen study area — say one district or division, defined explicitly with the help of the district education authority's school list and the register of private schools. Because sector comparison is the heart of the study, the population is recorded in two strata from the start: public head-teachers and private head-teachers.

Step 4: Draw the Sample

Surveying every head-teacher in a large district is rarely feasible, so a sample is drawn by stratified random sampling: the population is divided into the public and private strata, and head-teachers are selected randomly from each stratum in proportion to its size, so both sectors are fairly represented. Suppose the district has 600 head-teachers — 420 public and 180 private — and the researcher, using a standard sample-size table for the desired margin of error, aims at 240 respondents. Proportional allocation gives 168 public and 72 private head-teachers (240 × 420/600 = 168; 240 × 180/600 = 72; 168 + 72 = 240, so the sample is exactly exhausted). Random selection from the official lists protects the study from the bias of surveying only accessible or enthusiastic schools, and a margin of extra names is drawn in advance to replace non-respondents without disturbing randomness.

Step 5: Develop the Instrument

The main instrument is a structured questionnaire in three parts: Part A collects background information (sector, gender, qualification, experience, school enrolment, availability of internet and computer facilities); Part B contains the e-leadership items, about six items per dimension — thirty items in all — answered on a five-point Likert scale from 'strongly agree' (5) to 'strongly disagree' (1), or on a frequency scale from 'always' to 'never' where the item describes behaviour; Part C holds two open-ended questions inviting examples and obstacles, which enrich the numbers. Sample items are given in the table below; they are illustrative drafts of the kind the researcher would refine through expert review.

Table 1: Illustrative questionnaire items by dimension of e-leadership

Dimension	Sample Item (5-point Likert scale)
Digital vision and planning	"Our school has clear goals for the use of digital technology in teaching and administration."
ICT competence and modelling	"I confidently use email, office software and the school management information system in my daily work."
Digital communication	"I conduct official communication with teachers and parents through digital channels (e.g., school groups, portals, SMS)."
Data-based supervision	"I use digital attendance and examination data when taking decisions about teachers and students."
Digital ethics and development	"I arrange opportunities for my teachers to improve their digital skills."

Validity is established by sending the draft to a panel of experts — research supervisors and experienced head-teachers — who judge whether the items cover the concept and are clearly

worded; items are revised on their advice (content and face validity). A pilot study with about twenty head-teachers outside the main sample then tests the questionnaire in real conditions: unclear items are reworded, timing is checked, and reliability is computed. A Cronbach's alpha of 0.70 or above for the total scale (and acceptable values per dimension) is taken as evidence that the instrument measures consistently; the pilot value is reported in the final study.

Step 6: Collect the Data

Data collection proceeds under permission from the district education authority and the management of private schools, with a covering letter explaining the study's purpose, the voluntary nature of participation, anonymity of responses and the researcher's contact details. In current Pakistani conditions a mixed delivery works best: an online form (for example Google Forms, distributed through official channels and school heads' groups) for connected urban schools, and printed questionnaires delivered and collected through scheduled visits for schools with weak connectivity — with the mode recorded so any difference can be checked. Polite reminders after one and two weeks raise the response rate; the researcher targets at least 70–80 per cent returns, logs responses by stratum daily, and draws replacements from the reserve list where a stratum lags. Ethical safeguards run throughout: no names of teachers or schools appear in the data file, and results are reported in aggregate so no head-teacher can be identified or embarrassed.

Step 7: Analyse the Data and Report

Returned questionnaires are screened (incomplete forms removed), coded and entered into statistical software such as SPSS. Analysis follows the objectives: frequencies and percentages describe the background variables; the mean and standard deviation of each dimension and of

the total scale describe the prevailing level of e-leadership, interpreted against the scale's range (for instance, means of 4.20–5.00 very high, 3.40–4.19 high, 2.60–3.39 moderate, and so on, with the bands declared in advance); and an independent-samples t-test compares the public and private means, with the significance level set at 0.05 and the effect size reported so that 'significant' is not confused with 'large'. Further tests (for example ANOVA by experience groups) are added only where objectives demand them. Findings are reported dimension by dimension — a sector may, for instance, score high on digital communication but low on data-based supervision — and the open-ended responses are summarised thematically to explain the numbers. The report closes with limitations (self-reported behaviour, one district, one point in time) and recommendations for the education department and school owners, which is the practical harvest of the whole exercise.

Conclusion

A survey of e-leadership among head-teachers is designed by moving in an unbroken chain: a defined problem and objectives, a literature-based framework of dimensions, a descriptive cross-sectional design, a stratified random sample that fairly represents both sectors, a validated and pilot-tested questionnaire, ethically managed data collection with a strong response rate, and analysis matched exactly to the objectives, crowned by an honest statement of limitations. Followed carefully, this procedure converts a vague curiosity — 'are our heads digital leaders?' — into dependable evidence on which training programmes and technology policy can be built.

Question 2: Interviews Versus Questionnaires as Research Tools (20 Marks)

When and why do researchers prefer to use interviews instead of questionnaires? Explain the strengths and weaknesses of both tools.

Introduction

The questionnaire and the interview are the two most used tools of data collection in educational research, and at first glance they do the same job: both ask questions and record answers. In reality they suit different problems. The questionnaire is a written, standardised set of questions answered by the respondent alone, usually at a distance; the interview is a purposeful conversation in which the researcher asks, listens, probes and records. Choosing between them is not a matter of fashion but of fit between the tool, the research question, the respondents and the resources available. This answer explains when and why researchers prefer interviews, and then sets out the strengths and weaknesses of both tools so the choice can be made intelligently.

When and Why Researchers Prefer Interviews

Researchers prefer interviews whenever the needed data are deep, personal, complicated or fragile in ways a written form cannot carry. The main situations are these.

- **The topic needs depth and explanation.** When the question is not merely 'how many?' but 'why?' and 'how?' — why heads resist a reform, how teachers experience a new curriculum — the interview's follow-up questions ('Can you give an example?' 'What happened next?') uncover reasons, sequences and meanings that fixed written answers cannot.

- **Respondents cannot handle a written form.** Young children, respondents with low literacy, elderly participants and busy senior officers may be unable or unwilling to complete a questionnaire but will talk readily and richly. In parts of Pakistan where some parents or community members cannot read, the interview is not a preference but the only workable tool.
- **The subject is sensitive.** Topics such as corruption in postings, harassment, household poverty or a teacher's real opinion of her head are unlikely to be answered honestly on paper that feels permanent and traceable. A skilled interviewer builds trust, guarantees confidentiality in person and notices when an answer needs gentle pursuit.
- **The sample is small and expert.** When only fifteen people hold the needed knowledge — district officers, vice-chancellors, master trainers — each person's evidence is precious, and the flexibility of the interview extracts far more from each than a standard form could.
- **Answers need clarification.** In an interview, misunderstanding is visible and correctable on the spot; ambiguous answers can be probed; contradictions can be explored. The researcher also records tone, hesitation and emphasis — data in themselves.
- **The research is exploratory or qualitative by design.** Case studies, phenomenological and grounded-theory studies, and the qualitative strand of mixed-methods research are built on interviews, because their purpose is understanding from the participant's viewpoint.

Strengths and Weaknesses of the Interview

Table 1: The interview as a data-collection tool

Strengths	Weaknesses
Produces deep, detailed and contextual data; the	Time-consuming: scheduling, travelling, conducting and transcribing take days per

'why' behind the 'what'	respondent
Flexible: questions can be rephrased, reordered and probed according to the answers	Costly in money and researcher time, so sample sizes stay small
Works with any respondent: children, low-literacy and busy participants alike	Interviewer effect: the researcher's manner, status, gender or reactions can bend the answers
High response rate; few refusals or blank answers once rapport is built	Answers are hard to standardise and compare across respondents, especially in unstructured formats
Non-verbal cues (tone, silence, emotion) add a second channel of evidence	Analysis is laborious and interpretive; coding transcripts demands skill and invites subjectivity
Clarifies misunderstandings immediately, protecting data quality	Respondents may give socially desirable answers face-to-face, hiding unpopular truths

Strengths and Weaknesses of the Questionnaire

Table 2: The questionnaire as a data-collection tool

Strengths	Weaknesses
Reaches large, scattered samples quickly and cheaply — hundreds of schools by post or online form	Shallow data: fixed choices cannot reveal reasons, feelings or unexpected issues
Standardised: every respondent faces identical wording, so answers compare and quantify cleanly	Low and uneven response rates; those who return forms may differ from those who do not
Respondent answers at leisure and without an interviewer present, aiding honesty on some topics and anonymity	Useless where literacy is low or the language of the form is not the respondent's own
Data are easy to code, enter and analyse statistically	Misunderstood questions are answered wrongly with no chance to clarify; careless and half-completed forms are common
No interviewer bias; economical of researcher time after design	Cannot probe: an interesting or contradictory answer cannot be followed up
Suitable for factual and measurable variables at scale (enrolment, facilities, frequencies)	Rigid: a poorly designed questionnaire locks the study into its designer's assumptions

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Making the Choice in Practice

The comparison yields a practical rule. Choose the questionnaire when the variables are clear and measurable, the sample is large and literate, comparisons and statistics are the goal, and time and money are limited — the typical survey of practices, facilities or opinions across many schools. Choose the interview when understanding is the goal, the respondents are few, young, low in literacy or expert, the subject is sensitive, or the study must discover what the important questions even are. Very often the strongest design uses both in sequence: interviews first to discover the issues and draft good questionnaire items, or questionnaires first to map the pattern and interviews afterwards to explain it — for example, surveying 240 head-teachers on e-leadership and then interviewing twelve of them to learn why data-based supervision lags. The tools are rivals only for the careless; for the thoughtful researcher they are complements.

Conclusion

Researchers prefer interviews over questionnaires when the research problem demands depth, explanation, trust, flexibility or access to respondents whom a written form cannot reach. The interview's strengths — richness, adaptability and human contact — are purchased with time, cost, small samples and the risk of interviewer influence; the questionnaire's strengths — scale, economy, standardisation and easy analysis — are purchased with shallowness, non-response and rigidity. Sound methodology consists in knowing this exchange rate and choosing, for each study, the tool whose weaknesses the study can afford and whose strengths the research question actually needs.

Question 3: Simple Random Sampling and Stratified Random Sampling (20 Marks)

How is simple random sampling different from stratified random sampling? Explain why researchers use one or the other.

Introduction

Sampling exists because research rarely can study everyone. A district may hold thousands of teachers, yet a well-chosen sample of a few hundred, properly drawn, can describe them all within a known margin of error. The trustworthiness of that miracle depends entirely on how the sample is drawn. Two probability techniques dominate educational research: simple random sampling and stratified random sampling. Both rest on chance, which is what frees them from the researcher's bias, but they organise chance differently, and that difference decides cost, precision and the kinds of conclusions each can support. This answer defines both techniques, works a numerical example, compares them directly and explains why a researcher chooses one rather than the other.

Simple Random Sampling

In simple random sampling (SRS), every member of the population has an equal and independent chance of selection, and every possible sample of the chosen size is equally likely. The procedure is mechanical: obtain or construct a sampling frame — a complete list of the population; number every member; then select the required number using a lottery, a table of random numbers or a computer random-number generator, without replacement. If a researcher needs 200 teachers from a district list of 4,000, she generates 200 random numbers between 1 and 4,000 and studies exactly those teachers. The virtues of the method are its

fairness, its simplicity and its firm statistical foundation: because selection is purely by chance, sampling error can be calculated and results generalised to the population with stated confidence. Its weakness appears when the population is heterogeneous and contains small but important groups: pure chance may, in an unlucky draw, include very few private-school heads, or none from a remote tehsil, leaving the study silent about groups it was meant to describe — and slightly less precise overall, because the sample must 'average out' all the population's variety by itself.

Stratified Random Sampling

Stratified random sampling first divides the population into subgroups called strata — groups that are internally similar but different from one another on a relevant characteristic, such as sector (public/private), school level (primary/secondary), gender or location (urban/rural) — and then draws a simple random sample from within each stratum. The researcher thereby guarantees that every important group is represented, and in its correct weight if allocation is proportional.

A worked example makes the arithmetic plain. A district has 1,200 head-teachers: 840 in public schools and 360 in private schools. The researcher wants a sample of 300. Proportional allocation gives: public stratum, 300 × (840/1,200) = 210; private stratum, 300 × (360/1,200) = 90. Cross-check: 210 + 90 = 300, exactly the required sample, and the sample's sector proportions (70 per cent public, 30 per cent private) mirror the population exactly. Within each stratum the 210 and 90 names are then chosen by simple random selection from the respective lists. Sometimes a researcher deliberately uses disproportional allocation — for example, taking 150 from each sector so that the smaller private group can be analysed on its own — and then

weights the results back when combining the strata, a legitimate refinement that must be reported.

Direct Comparison

Table 1: Simple random sampling versus stratified random sampling

Basis	Simple Random Sampling	Stratified Random Sampling
Basic procedure	Random selection directly from the whole population list	Population divided into strata; random selection within each stratum
Representation of subgroups	Left to chance; small groups may be missed in an unlucky draw	Guaranteed; every stratum appears in the sample
Precision for the same sample size	Lower when the population is heterogeneous	Higher, because strata are internally homogeneous; sampling error is reduced
Subgroup comparison	Possible only if chance supplied enough cases in each group	Designed for comparison; each stratum can be analysed separately
Information needed in advance	Only a complete population list (sampling frame)	The frame plus the stratum identity of every member before sampling
Complexity and cost	Simplest and cheapest probability method	More planning, listing and field organisation; slightly costlier
Best suited population	Fairly homogeneous populations, or when subgroup identity does not matter	Heterogeneous populations with important, identifiable subgroups

Why Researchers Use One or the Other

The choice is governed by the population and the research questions. A researcher uses simple random sampling when the population is reasonably homogeneous with respect to the variables studied — for instance, all candidates of one examination board drawn from one list

— or when no reliable information exists to form strata, or when the study makes no claims about subgroups and resources favour the simplest defensible method. Its honesty is its strength: nobody can accuse a lottery of favouritism, and its statistics are the foundation on which the rest of sampling theory is built.

A researcher uses stratified random sampling when any of three conditions holds. First, the population is visibly heterogeneous and the strata differ on the very thing being studied — public and private head-teachers differ in resources and technology, so a study of e-leadership that left sector to chance would risk a distorted picture. Second, the study intends to compare subgroups or report results for each. stratification guarantees each group enough cases for its own statistics. Third, precision matters and the budget fixes the sample size: stratification squeezes more accuracy out of the same number of respondents, because variation within homogeneous strata is smaller than variation in the population at large. Against these gains stand its demands — the researcher must know every member's stratum in advance and organise separate random draws — so where the frame lacks that information, or strata would be arbitrary, simple random sampling remains the right tool.

Conclusion

Simple random sampling and stratified random sampling are both probability methods that replace the researcher's preferences with chance, but they differ in organisation: the first draws from the population in one act, the second divides the population into homogeneous strata and draws within each. Stratified sampling guarantees representation of important groups, supports subgroup comparison and yields greater precision in heterogeneous populations, at the price of more prior information and organisation. Researchers therefore choose simple

random sampling for homogeneous populations and straightforward questions, and stratified sampling when the population's known differences are part of the story the research must tell.

Question 4: Essential Components and Distinctive Features of Educational Research (20 Marks)

What are the essential components and features of educational research that are different from other domains?

Introduction

All genuine research shares a common skeleton: a problem, a systematic method, evidence and conclusions that others can examine. Educational research has that skeleton, but the body built on it is distinctive, because its subject matter is distinctive. It studies learning and teaching — processes carried on by conscious, developing human beings, inside institutions shaped by culture, policy and values, aimed at outcomes that are partly invisible and slow to mature. A chemist's material does not get bored, conspire, drop out or feel humiliated by the experiment; a class of adolescents does all of these. This answer first sets out the essential components of educational research, then explains the features that mark it off from research in the natural sciences and, more subtly, from neighbouring social domains.

The Essential Components of Educational Research

Whatever its topic, a complete piece of educational research contains the same working parts. (1) An educational problem: a focused question arising from teaching, learning, curriculum, administration or policy, narrowed until evidence can actually answer it. (2) A theoretical and literature base: the concepts and previous findings that define the variables and justify the

study, because education research builds cumulatively or not at all. (3) Objectives, research questions and, where the design requires them, hypotheses that state expected relationships in testable form. (4) A defined population and a defensible sample of learners, teachers, institutions or documents, chosen by a stated method. (5) Valid and reliable instruments fitted to educational constructs — achievement tests, attitude scales, observation schedules, interview guides — usually developed or adapted for the local language and context. (6) A systematic data-collection procedure conducted under ethical safeguards, especially where children are involved. (7) Analysis appropriate to the design, quantitative, qualitative or mixed. (8) Interpretation that returns to the educational setting: what the findings mean for classrooms, institutions or policy. (9) A report written for its audiences — scholars, but also teachers, administrators and policy-makers who must act on it. Remove any component and the study limps: findings without literature float in air, instruments without validity produce confident nonsense, and analysis without educational interpretation is statistics in search of a purpose.

Features That Distinguish Educational Research from Other Domains

1. Its subjects are active, self-aware human beings

Students and teachers interpret the research situation and react to it: they guess what is expected, try harder because they are observed (the Hawthorne effect), resist treatments they dislike, or perform a role. Variables cannot be fully controlled because the 'material' has memory, motive and will. Natural scientists control their variables; educational researchers negotiate with theirs, and their designs — randomisation, blinding where possible, careful field relations — are shaped by that fact.

2. Multicausality and context-dependence

An achievement score is the joint product of ability, home background, language, teacher quality, curriculum, peers, resources and chance, all interacting. Isolating one cause is therefore slow and its effect usually modest and conditional: a method that works in urban girls' secondary schools may fail in rural multigrade classrooms. Findings in education are thus typically probabilistic and context-bound, generalising cautiously — unlike a physical law, which holds wherever its conditions hold.

3. Its central constructs are latent and hard to measure

Education trades in qualities that cannot be seen directly: understanding, motivation, attitude, creativity, leadership, school climate. They must be inferred from indicators — test items, scale responses, observed behaviours — so measurement is indirect, approximate and permanently open to argument about validity. No thermometer exists for curiosity; building and defending such instruments is a major branch of the field with no parallel urgency in domains whose quantities are directly measurable.

4. It is value-laden and improvement-oriented

Research in education is rarely neutral about its object: it exists to make education better, and its very questions ('effective teaching', 'quality', 'equity') carry values that must be owned and examined. Its findings feed directly into contested public decisions — budgets, examinations, language of instruction — so the educational researcher works in a political environment in which results have stakeholders, winners and losers, a pressure largely absent from, say, botanical research.

5. Ethical constraints are unusually tight

Much educational research involves minors, who cannot fully consent for themselves, and captive populations — a class cannot easily refuse its own teacher's study. Harmful treatments may not be tested on children even to gain knowledge; a control group may not be denied a promising instruction without ethical scrutiny. Parental consent, institutional permission, confidentiality and the power imbalance between teacher-researcher and pupil are structural features of the field, not paperwork added to it.

6. Time behaves differently

Educational effects are slow and delayed: early-grade reading instruction shows its worth years later, and leadership reforms mature over cohorts, not weeks. Longitudinal designs are therefore prized and difficult, and short studies risk measuring novelty rather than learning. In many other domains effects declare themselves on the experiment's own timescale.

7. The investigator is often an insider

Uniquely among domains, education expects its practitioners to research their own practice: action research by teachers and head-teachers is a recognised genre, and much published work is by insiders studying their own institutions. This brings unmatched access and relevance, at the price of bias risks that the field must manage through reflexivity, triangulation and critical friends — a methodological conversation other domains conduct far less.

8. It is irreducibly interdisciplinary

An educational problem rarely belongs to one discipline: it draws simultaneously on psychology (learning), sociology (institutions and inequality), philosophy (aims and values), economics (costs and returns) and the subject discipline itself. Educational research is therefore

methodologically plural — experiments, surveys, ethnographies, histories and philosophy all legitimately coexist — whereas a mature natural science converges on a narrower methodological core.

A Compact Comparison

Table 1: Educational research compared with research in other domains

Feature	Educational Research	Natural-Science Research (for contrast)
Subject matter	Conscious, developing persons in social institutions	Material and organisms studied under controlled conditions
Control of variables	Partial; complete control impossible and often unethical	High; laboratory isolation of variables is the norm
Measurement	Indirect, of latent constructs (motivation, achievement, climate)	Direct measurement of physical quantities with standard instruments
Nature of findings	Probabilistic, modest effects, context-bound generalisations	Law-like generalisations holding across contexts
Ethics	Minors, consent, captive groups and power relations are central	Ethics important but subjects rarely rights-bearing participants in this sense
Time scale of effects	Slow, delayed, cohort-dependent	Usually observable within the study's own duration
Role of values	Explicit; research openly serves improvement and equity	Aims at value-neutral description of nature

Conclusion

Educational research possesses the essential components of all research — problem, literature, design, instruments, ethical data collection, analysis, interpretation and reporting — but its features are its own: self-aware human subjects, multicausal and context-bound phenomena, latent constructs, tight ethics around children, slow effects, insider researchers, value-laden

purposes and interdisciplinary methods. Recognising these features is not an excuse for loose work; it is the precondition of rigorous work, because it tells the researcher which designs are honest in this domain and how far its hard-won conclusions may properly travel.

Question 5: Review of a Research Report Published on the HEC Portal: The Annual ORIC Self-Assessment Evaluation Report (20 Marks)

Review a research report published on the HEC portal and discuss the quality features of the report.

Introduction

The Higher Education Commission (HEC) of Pakistan publishes a large body of research and evaluation reports on its official portal (hec.gov.pk), covering university rankings, quality assurance, funding programmes and research performance. This answer reviews one such report — the Annual ORIC Self-Assessment Evaluation Report for the Financial Year 2022–2023, issued by HEC's Research and Innovation Division — summarises what it contains, and then discusses, feature by feature, the qualities that make it a credible research report, together with a brief note on its limitations. The purpose is to learn, from a real national example, what 'quality' in a research report actually consists of.

The Report in Brief

ORICs — Offices of Research, Innovation and Commercialization — are the units HEC requires universities to maintain in order to support quality research and carry it towards commercialization with industry and other stakeholders. Universities apply for HEC recognition of their ORICs after meeting the prerequisites of the HEC ORIC Policy 2021; recognised ORICs

become eligible for overhead funding on HEC-sponsored research grants, capacity-building initiatives and national and international collaborations. Each year every recognised ORIC completes a self-assessment on a prescribed scorecard, submitted through HEC's Research for Innovation (RFI) web portal; HEC then reviews and validates the submissions and publishes the evaluation report, including performance rankings that determine the overhead percentage each ORIC earns on HEC grants.

The scorecard at the report's centre is organised into four weighted domains: Human Resource and Operations (10 marks), Research Excellence (45 marks), Innovation and Commercialization (30 marks), and Sustainability and Capacity Building (15 marks) — a total of 100 (10 + 45 + 30 + 15 = 100, exactly the prescribed ceiling). For FY 2022–2023, a total of 78 ORICs were considered for evaluation; 70 submitted their scorecards on time, while the remainder failed to comply and are recorded as 'non-complying'. Beyond scoring, the report describes supporting activity, including HEC's Academia-Industry-Government Linkages portal on the RFI webpage, through which academia can collaborate in real time with industry and government, and a series of 'Innovation and Commercialization' and 'Train the Trainers' capacity-building workshops held for recognised ORICs from July to December 2023.

Table 1: The HEC ORIC evaluation scorecard, FY 2022–2023

Domain	Key Performance Focus	Marks
A. Human Resource & Operations	Staffing, structure and functioning of the ORIC office	10
B. Research Excellence	Research output, grants and research support activity	45
C. Innovation & Commercialization	Industry linkage, commercialization and	30

	innovation activity	
D. Sustainability & Capacity Building	Financial sustainability and staff/university capacity development	15
Total	—	100

Quality Features of the Report

1. A clear mandate anchored in published policy

The report does not invent its own authority: every judgement in it traces back to the HEC ORIC Policy 2021, whose recognition prerequisites and annual evaluation requirement are stated openly. A quality report can always answer the question 'by what right, and against what standard, do you judge?' — this one can, on its first pages.

2. Standardised, transparent criteria with declared weights

All 78 ORICs were measured with the same scorecard, and the weighting — Research Excellence dominating at 45 of 100, Innovation and Commercialization next at 30 — is printed for every reader to see and challenge. Transparent weighting is a core quality feature because it exposes the evaluators' values to scrutiny: one may argue that commercialization deserves more or less weight, but one cannot claim the judgement was arbitrary or hidden. The four domains also show comprehensiveness: the scorecard refuses to judge an ORIC by publications alone, and instead balances inputs (human resources and operations), core performance (research excellence), application (innovation and commercialization) and future health (sustainability and capacity building).

3. A two-stage, evidence-based method: self-assessment plus validation

The report's method mirrors good research practice. Data are first self-assessed by each ORIC against prescribed key performance indicators, then reviewed and validated by HEC before rankings are issued. This separation of reporting from verification is exactly what distinguishes an evaluation from a publicity exercise, and the report describes the process rather than merely presenting its results, so readers can judge the evidence chain for themselves.

4. Complete population coverage and honest treatment of non-compliance

The report accounts for the whole population it claims to cover: 78 ORICs considered, 70 timely submissions, and the non-complying offices named as such rather than silently dropped. Complete accounting — including the embarrassing cases — is a hallmark of trustworthy reporting, because selective reporting is the commonest way official documents mislead. Percentages and counts can be cross-checked by the reader (70 of 78 is an 89.7 per cent compliance rate), and the consequences of non-compliance are real, since rankings feed funding decisions.

5. Consequential, decision-linked findings

The report's rankings are not decorative: they determine the overhead percentages universities receive on HEC research grants and govern inclusion in capacity-building and collaboration programmes. A quality report earns its keep by informing decisions, and this one's chain from evidence to consequence is explicit. Its follow-through is also visible in the same document: the workshops and the Academia-Industry-Government Linkages portal show findings being answered with support, not only with judgement.

6. Regularity, comparability and open publication

Because the exercise repeats annually on a stable scorecard, results are comparable across years — a university can see whether its ORIC is genuinely improving, and HEC can see whether national research-commercialization capacity is growing. Publishing the report openly on the HEC portal completes the quality chain: the evidence, the criteria and the verdicts are all public, open to correction and citation by any researcher, including students of this course.

Limitations Noted in Fairness

A critical review should also mark where quality could rise. First, the foundation remains self-reported data: validation reduces but cannot eliminate the temptation to present one's office generously, and the report could say more about how evidence was verified on the ground. Second, the scorecard leans towards activity and capacity indicators; the ultimate outcomes of the ORIC system — research actually commercialized, revenue earned, problems solved for industry and society — deserve still greater weight as the system matures. Third, a single scorecard is applied to institutions of very different size, age and region; some differentiation of expectations, or at least published discussion of it, would strengthen fairness. These are refinements to a sound structure, not fatal defects.

Conclusion

The Annual ORIC Self-Assessment Evaluation Report FY 2022–2023, published on the HEC portal, displays the quality features expected of a serious research report: a mandate anchored in published policy, standardised criteria with transparent weightings summing exactly to their declared total, a two-stage method of self-assessment checked by independent validation, complete and honest coverage of its population including non-compliance, findings tied to real

funding and support decisions, and open publication that permits annual comparison and public scrutiny. Its limitations — reliance on self-reported data and an activity-heavy scorecard — are the kind a critical reader should note, but they do not overturn the verdict: as an official research report, it is methodical, transparent and useful, and it models the standards our own research reports should meet.

Source

Higher Education Commission, Research and Innovation Division. Annual ORIC Self-Assessment Evaluation Report 2022–2023. Islamabad: HEC. Published on the HEC portal: https://www.hec.gov.pk/english/services/universities/ORICs/Documents/ORIC Annual Evaluation Report FY 2022-2023.pdf

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