

RAINFLOWER RESEARCH PAPER PROPOSAL

Water at School: Comparing Drinking and Handwashing Access in Two Secondary Schools

Thirsty Classrooms: Counting Water Points, Queues and Soap in Two Schools

> In two named secondary schools, how many enrolled students share each working drinking water point and handwashing station, and how long do students report waiting at these points during the morning break?

2–5 students TEAM	**~48** HOURS EACH	**13** WEEKS
1,000 raindrops ($2) REWARD PER STUDENT	**BDT 3,200** EXPENSE BUDGET	**5,000–10,000 words** PAPER LENGTH

A student team compares drinking-water and handwashing access in two secondary schools, counting water points, timing queues, surveying ~80 students, interviewing staff, and photographing infrastructure. The study aims to find whether schools with fewer working water points per student report longer waits and lower trust in water safety. Findings are reported as 'School A' vs 'School B' without naming the real schools.

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01 Summary

This project asks: in two secondary schools in the same area, how many students share each working drinking water point and handwashing station, and how long do students wait at these points during the morning break? The student team will count and photograph every water point and handwashing station in both schools, run a student survey on AKTI Survey (about 80 responses), time queues during a break, and interview teachers, caretakers and students. The two schools should differ in an obvious way the team chooses, for example one government and one private school, or one in a crowded area and one with more space. At the end, the team will be able to say, for these two named schools, how water-point density, queue time, soap availability and student trust in the water compare, and whether denser infrastructure actually means shorter waits.

02 Why this matters

In almost every school in Bangladesh, water is somewhere between the classroom and the playground: a tube well in the corner, a tap by the toilet block, maybe a cooler with a jar. Students rarely talk about this water, but it matters every day. If there are too few working taps, children miss drinking water in a hot classroom, or rush and miss part of the break. If soap is missing at the handwashing station, routine advice

from teachers ("wash your hands before tiffin") has no way to be followed. Girls may face extra difficulty if there is no separate or private water point. None of this shows up in a textbook; it shows up only if someone walks around the school, counts the taps, times the queue, and asks the students and staff who actually live with it every day. A student team that does this for their own school, or two schools they can visit, produces something no published report has: an exact, dated picture of water access in that one building.

03 Background

- National school WASH (water, sanitation and hygiene) coverage figures exist at a broad level: government or UNICEF/WHO WASH-in-schools monitoring reports [verify].
- Guidelines on recommended student-to-water-point or student-to-toilet ratios in schools: Directorate of Primary/Secondary Education or DPHE school WASH standards [verify].
- General research on handwashing and disease reduction in schools: public health literature on school-based hygiene interventions [verify].
- Reports on gender-specific WASH needs in schools (privacy, menstrual hygiene management): UNICEF or BRAC WASH programme reports [verify].
- Studies on arsenic marking of tube wells (paint colour codes) and public understanding of them: DPHE arsenic mitigation reports [verify].
- News or NGO reports on broken water infrastructure in rural or urban schools: local newspaper archives or NGO case studies [verify].
- General behavioural research on queueing and perceived versus actual wait time: psychology or operations-research literature on waiting lines [verify].
- Local government data on number of registered secondary schools and their water source type, if published by the Upazila or District Education Office [verify].

04 Research question and hypothesis

Primary question: In two named secondary schools, how many enrolled students share each working drinking water point and handwashing station, and how long do students report waiting at these points during the morning break?

Secondary questions:

1. How does the ratio of working water points (and handwashing stations) per 100 enrolled students compare between the two schools?
2. Do students who report longer waits also report lower trust in the water's safety and lower satisfaction with facilities, and does this pattern differ by school or by gender?

Hypothesis: The school with fewer working water points per student will show longer reported queue times and lower satisfaction scores. A null result would be: queue times and satisfaction are similar across the two schools even though point density differs — this would suggest that break length, student habits, or staff supervision matter more than raw infrastructure count. Either result is a useful, reportable finding.

05 Who should do this

Team size: 2 to 4 students work best, because the project needs people inside two schools at once, plus someone managing the survey and someone managing photos and the field diary. A team of 2 can still do it by visiting the schools on different days. The team can have up to 5 students.

Regional fit:

- **Dhaka:** compare a crowded government school with a smaller private school, or a slum-adjacent school with a school in a better-off area.
- **Chittagong:** compare a hill-area school with a school near the port or city centre, where water infrastructure often differs sharply.
- **Noakhali:** compare a coastal school relying on a pond sand filter with one using a deep tube well.
- **Sylhet:** compare a haor-area school reachable mainly by boat with a town school on a main road.

Role split for a team of 4:

- Survey lead: builds and manages the AKTI Survey, tracks response numbers per school.
- Interview lead: schedules and records the interviews, manages consent forms.
- Photo and map lead: takes geo-tagged photos, keeps the photo log, sketches a simple map of each school showing water points.
- Data lead: keeps the field diary up to date, enters queue-timing data, and starts simple counts early so problems are caught before week 8.

06 Evidence plan

Evidence type	What it shows for this question	How much is enough	Why it fits
AKTI survey	Students' self-reported water source, wait time, soap availability, trust and satisfaction, compared across the two schools	At least 40 completed responses per school (80 total), spread across grades 9-12	Large enough to compare the two schools and to break results down by gender
Video interviews	Staff and student explanations of why infrastructure is the way it is, what has broken, what has been tried	6 to 8 interviews, covering at least 3 roles per school	Explains the "why" behind the counts and survey numbers
Geo-tagged photos	A dated, located record of every water point, handwashing station and its condition in both schools	All working and broken water points and handwashing stations photographed at least once, plus break-time queue photos	Lets the team and reviewers see the infrastructure, not just hear about it

Evidence type	What it shows for this question	How much is enough	Why it fits
Field diary	Dates, times, weather, who was present, and anything observed but not captured elsewhere	One entry per field visit (at least 10 entries)	Shows the study is dated and lets the paper discuss season or timing effects honestly

07 Survey design

Target platform: AKTI Survey (survey.aktiful.com). All questions are anonymous; no names, phone numbers or class sections that could identify an individual are collected.

1. Which school are you answering this survey for today? — Single choice: School A / School B *(the team assigns these labels privately; real school names are never typed into the public survey or the paper)*
2. What is your grade level? — Single choice: Grade 9 / Grade 10 / Grade 11 / Grade 12
3. What is your gender? — Single choice: Girl / Boy / Prefer not to say
4. On a normal school day, how many times do you drink water from a source at school? — Number (0 to 20)
5. Where do you usually get your drinking water at school? — Single choice: Tube well at school / Tap connected to pipe supply / Filter or purifier machine / Water cooler with jar water / I bring water from home / Other
6. If you usually bring water from home, why? — Multiple choice: Taste is better at home / I don't trust the school water / Not enough water points at school / No particular reason / Other *(shown only if Q5 = "I bring water from home")*
7. How often do you use a handwashing station at school? — Single choice: Several times a day / Once a day / A few times a week / Rarely / Never
8. The last time you wanted to wash your hands at school, was soap available? — Single choice: Yes / No / There was a dispenser but it was empty / I don't remember
9. During the morning break, how long do you usually wait in line to get drinking water? — Single choice: No wait / Under 1 minute / 1 to 3 minutes / 3 to 5 minutes / More than 5 minutes / I don't get water at school
10. How would you rate the taste of the water at school? — Scale 1 to 5 (1 = very bad taste, 5 = very good taste), plus option "I don't drink it"
11. Do you think the water at school is safe to drink? — Single choice: Yes / No / Not sure
12. Why do you think that? — Short text
13. Has the school's water point ever stopped working this term? — Single choice: Yes / No / I don't know
14. If yes, about how many days was it not working? — Number *(shown only if Q13 = Yes)*
15. Have you seen any colour mark (for example red or green paint) on the school's tube well showing whether the water has been tested for arsenic? — Single choice: Yes, I have seen a mark / No mark that I know of / I don't know what this means

16. Is there a separate water point or toilet area for girls at your school? — Single choice: Yes / No / I don't know
17. Where is the nearest working water point compared to your classroom? — Single choice: Same room or corridor / Same floor / Different floor / Different building / Outside the main building / I don't know
18. On days when it rains heavily, does getting water or washing hands at school become harder? — Single choice: Yes, much harder / A little harder / No different / Not sure
19. Overall, how would you rate the water and handwashing facilities at your school? — Scale 1 to 5 (1 = very poor, 5 = excellent)
20. Any other comment about water at your school? — Short text (optional)

Target respondent: students in grades 9-12 at School A and School B, with parental/guardian consent on file. **Response target:** 40 per school (80 total), roughly balanced across grades 9-12 and between genders if possible. **Recruitment:** work with a class teacher to announce the survey, distribute the parental consent slip at least one week before the survey day, and offer the survey during a supervised period (for example, a free period or homeroom) so students are not pulled out of lessons. **Pilot plan:** before full collection, give the survey to 3-5 students from your own class. Watch for: do they understand "working water point" and "handwashing station"? Do they understand the difference between Q9 (reported wait time) and Q17 (distance)? Is any question skipped often (a sign it is confusing)? Fix wording, then lock the survey before the first full sample.

08 Sampling and limits

Choose School A and School B in advance, based on an obvious contrast (government/private, urban/rural, large/small). Within each school, aim to survey one full section (classroom group) from each of grades 9, 10, 11 and 12, asking every present and consenting student to answer — this avoids picking only "easy" or friendly students. If a grade has more than one section, pick the section using a simple rule decided in advance (for example, the first section on the attendance list), not by preference.

What this sample can claim: a description of water access and student opinion for these two named schools, on the dates surveyed. **What it cannot claim:** that findings apply to all schools in the district, division or Bangladesh, or that queue-time self-reports are exactly accurate (they are estimates by students, not stopwatch measurements, unless paired with the optional timing protocol in Section 12).

Obvious bias and reduction: students absent on the survey day are left out (often the same few students each time) — note the absentee count in the field diary. Students may answer favourably if a teacher is standing nearby — administer the survey with minimal adult presence and explain that answers are anonymous and will not affect grades.

09 Interview guide

Roles to interview (aim for at least 3 per school, 6-8 total):

1. Head teacher or assistant head teacher
2. School caretaker or peon who manages the water point or tube well

3. A teacher who supervises breaks or hygiene lessons
4. A student council member or class prefect
5. An older student (grade 11 or 12) not already surveyed, for a longer view
6. A parent who regularly prepares a child's water bottle or tiffin
7. A tube-well mechanic or plumber who has serviced the school's water point, if known
8. A local DPHE, union parishad or NGO WASH field worker, if the school has had any NGO-installed water or handwashing system [verify local contact]

Interview questions (8–12):

1. How long has this water point / handwashing station been at the school?
2. Who is responsible for keeping it clean and working?
3. Has it ever broken down? What happened, and how long did it take to fix?
4. Is there a budget or fund for repairing or maintaining school water facilities?
5. Do you think the current water points are enough for the number of students? Why or why not?
6. Is soap usually available at the handwashing station? Who buys it?
7. Do girls and boys have equal and comfortable access to water and handwashing facilities?
8. Has any organisation (NGO, DPHE, WASA) ever tested, repaired or installed water facilities here?
9. What happens at this water point when it rains heavily or during a very hot month?
10. Have you noticed any colour marking on the tube well about arsenic testing? What does it mean to you?
11. What would you change first, if you could, about water facilities at this school?
12. Is there anything about school water that students or visitors usually do not notice?

Consent script

English: "Hello. We are students doing a school research project about water facilities at school, for the Rainflower programme. This is not a test and has nothing to do with your grades or position. First, I want to ask: are you willing to take part in a short interview about water at school? [wait for answer] Second, are you willing to let me record this conversation on my phone? [wait for answer] Third, is it okay if we use what you say, without your name, in our written report, which may be read by teachers and researchers outside the school? [wait for answer] You can stop at any time or ask us not to use something you said. Thank you."

Bangla: "আসসালামু আলাইকুম। আমরা শিক্ষার্থী এবং Rainflower প্রোগ্রামের একটি স্কুল গবেষণা প্রকল্পে কাজ করছি, যা স্কুলের পানি ব্যবস্থা নিয়ে। এটি কোনো পরীক্ষা নয় এবং আপনার ফলাফল বা পদের সাথে এর কোনো সম্পর্ক নেই। প্রথমে জিজ্ঞাসা করি, আপনি কি স্কুলের পানি নিয়ে একটি ছোট সাক্ষাৎকারে অংশ নিতে রাজি আছেন? দ্বিতীয়ত, আপনি কি আমাদের ফোনে এই কথোপকথন রেকর্ড করার অনুমতি দেবেন? তৃতীয়ত, আমরা কি আপনার নাম ব্যবহার না করে আপনার বলা কথা আমাদের লিখিত প্রতিবেদনে ব্যবহার করতে পারি, যা স্কুলের বাইরের শিক্ষক ও গবেষকরাও পড়তে পারেন? আপনি যেকোনো সময় থামতে পারেন বা কোনো কথা ব্যবহার না করতে বলতে পারেন। ধন্যবাদ।"

Recording tips: find a quiet corner of the school (staff room corner, under a tree, empty classroom) away from passing traffic noise. Hold the phone landscape (sideways). Keep each recording 3–8 minutes. At the start, say the date and the person's role out loud (for example, "12 October 2026, school caretaker, School

A"), never their name. If someone prefers not to be filmed, record audio only or film their hands/the water point instead of their face.

10 Photo and observation plan

1. Each working drinking water source in the school (tube well, tap, filter, cooler) — shows what infrastructure actually exists.
2. Each broken or unused water point, if any — shows gaps between what should work and what does.
3. Each handwashing station, close enough to see if soap is present — directly answers the soap-availability question.
4. The queue at a water point during the morning break (wide shot, no identifiable faces) — shows real crowding, not just a count.
5. Any signage about hygiene, handwashing, or water safety on school walls — shows what messages students receive.
6. Any colour marking (paint) on a tube well related to arsenic testing — links to Q15 of the survey.
7. The distance/path a student walks from a typical classroom to the nearest water point — supports Q17.
8. The girls' toilet or water area entrance (exterior only, no people) — supports the separate-facility question.
9. Storage containers (jars, buckets, drums) kept near the office or near classrooms, if any — shows backup water practices.
10. General condition of the area around the water point (standing water, mud, drainage) — shows upkeep.
11. A simple hand-drawn map of the school marking every water point and handwashing station, photographed as a document.
12. The school entrance/signboard area, photographed without naming the school in the publicly shared caption (use School A/School B internally).

Location tagging: on the phone camera settings, turn on "Location" or "GPS tag" for the camera app before the first visit; confirm by checking that a new photo shows coordinates in its file details.

Photo log (fill in for every photo): photo number, date, time, place type (for example "tube well, School A courtyard"), short description of what it shows.

Rules: never show a child's face without explicit permission from the parent/guardian for that specific photo; never photograph inside a toilet block if anyone is present; always ask the head teacher before photographing the interior of offices or staff areas; store any photo that does show a recognisable minor's face in the private evidence package only, not in the public paper.

11 Optional measurements

- **OPTIONAL — stopwatch queue timing.** During one break per school, time how long five different students actually wait from joining the line to filling their bottle, using a phone stopwatch. This checks

whether the survey's self-reported wait times (Q9) match reality. If this is skipped, the study still works using only the self-reported survey data, clearly labelled as self-reported.

- **OPTIONAL — TDS meter reading.** If a TDS (total dissolved solids) meter is available, record one reading at each water source, described as a rough indicator only. This never proves water is safe or unsafe to drink; it only adds a described number for later comparison. If unavailable, skip entirely — the study does not need it.
- **OPTIONAL — soap/dispenser count over time.** Visit each handwashing station on three different days (spread across different weeks) and simply note "soap present / absent" each time, to see if availability is a one-time problem or a pattern. If only one visit is possible, note that this is a single snapshot in the paper.

12 Timeline

Stage	Weeks	What the student does for this topic	Submitted at end of stage
1. Choose and plan	1-2	Pick School A and School B; agree on the contrast (government/private, urban/rural, etc.); draft research question; list all water points by a first walk-through	One-page plan naming both schools (internally), the contrast chosen, and the question
2. Permission, checklist and pilot	2-3	Get written permission from both head teachers; distribute parental consent slips; build survey in AKTI; pilot with 3-5 students; pilot one interview	Signed permission letters, consent slip template, piloted survey link, coordinator checklist passed
3. First sample and advisor review	3-4	Collect first 15-20 survey responses from one school; do first 2 interviews; take first round of photos	First-sample summary, advisor review, adjustments made
4. Full data collection	5-8	Reach 40+ survey responses per school; complete all interviews; photograph every water point/station; do queue observation (optional timing)	Full survey dataset, all interview recordings, full photo log
5. Analyse	9-10	Count water points and students per school; calculate ratios; summarise survey answers; build charts; compare schools	Draft tables and charts, written notes on patterns found
6. Write	11-12	Write the paper sections using the outline below; add AI-use statement; cite background sources	Full paper draft
7. Final review and submit	13	Coordinator checklist review; fix gaps; prepare evidence package; final submission to Rainflower	Final paper and evidence package

13 Analysis plan

Counts to make:

- Number of working water points per school; number of broken water points per school.

- Number of working handwashing stations per school, and number with soap present at time of photo.
- Enrolled students per school (ask the head teacher), used to calculate "students per working water point" and "points per 100 students."
- Survey response counts by grade and gender, per school.

Comparisons to make:

- School A vs School B: points-per-100-students, average/median reported wait time, soap-availability rate, average taste rating, average overall satisfaction rating.
- Girls vs boys within each school: reported wait time, trust in water safety, views on separate facilities.
- Self-reported wait time (Q9) vs any stopwatch-timed queue data (if collected).

Charts to draw:

- Bar chart: water points per 100 students, School A vs School B.
- Bar chart: distribution of reported wait-time categories (Q9), School A vs School B, side by side.
- Pie chart: drinking water source type (Q5), one per school.
- Bar chart: soap availability "Yes / No / Empty dispenser" (Q8), School A vs School B.
- Bar chart: overall satisfaction rating (Q19), School A vs School B.

Worked example (example, not a result): Suppose School A has 950 students and 4 working water points (0.42 points per 100 students), and School B has 500 students and 5 working points (1.0 points per 100 students). Suppose the survey shows 60% of School A students report waiting "3-5 minutes" or more, versus 20% at School B. This pattern would support the hypothesis that fewer points per student means longer waits. If instead both schools showed similar wait times despite the different ratios, that null-style result would suggest break length or student discipline matters more than point count — equally worth reporting.

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14 Ethics and safety

Three permissions, asked separately, for every survey respondent and interviewee: (1) willingness to take part, (2) willingness to be recorded (audio/video/photo), (3) willingness to have anonymised material shared publicly. Permissions are recorded before any data collection, using the script in Section 10 and an equivalent short written line on the survey's opening screen.

Under 18: every student survey respondent and every student interviewee needs a parent or guardian's signed consent slip in advance, collected through the school at least one week before the survey/interview day. Students without a returned slip are not surveyed or interviewed, but can still be invited to the group photo log or helping count (non-data roles) if the school agrees.

Head teacher permission: a written permission letter from each head teacher is required before any fieldwork begins in that school; this doubles as the gatekeeper check for the coordinator's pre-field checklist.

Physical safety: all fieldwork happens inside school grounds during school hours, in daylight, with a teacher or staff member aware of the team's presence. Do not enter staff-only areas, the school's water

tank/overhead storage, or any mechanical room without an adult present. Stay clear of any open well, tube-well platform edge, or wet/slippery area near a water point.

Data privacy: real school names, teacher and student names, and any identifying photo of a minor's face stay in the private evidence package only (seen by the coach, coordinator, advisor and Rainflower). The public paper uses "School A" and "School B" and describes people only by role (for example, "the school caretaker, interviewed 14 October 2026"). Raw survey data, recordings and photo files are kept in the private evidence package for the length of review and up to 12 months after final submission, then deleted by the student team or Rainflower coordinator.

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15 Expected outcomes and limitations

Open questions the data could answer:

- Does the school with fewer water points per student really show longer self-reported waits, or does break length/supervision matter more?
- Is soap actually available when students need it, or is there a gap between "a dispenser exists" and "soap is there"?
- Do girls report different experiences (trust, separate facilities, comfort) than boys at the same school?
- Does a rainy day genuinely make access harder, by students' own account, even though the study itself does not depend on rain?

A null result (no real difference between the two schools) is still valuable: it would suggest that water access problems, where they exist, are not simply about counting taps.

Limitations (stated in advance):

1. Only two schools are studied; results describe these two schools only, not all schools in the region.
2. Wait times from the survey (Q9) are self-reported estimates unless paired with the optional stopwatch timing.
3. Students absent on survey day, or without returned parental consent slips, are missing from the sample, which may skew results (for example, if those students specifically dislike the water and avoid school activities related to it).
4. Field visits happen on a few specific dates; conditions (heat, rain, exam period) on those dates may not represent the whole year, and this should be discussed honestly in the paper.

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16 Paper outline

- **Abstract** (150–200 words): the question, the two schools (as School A/B), method summary, headline finding.
- **Introduction**: why school water access matters, the research question, the two schools' basic contrast (without naming them).
- **Methods**: survey design and respondents, interview roles, photo/count protocol, dates of data collection, any optional measurements used.

- **Results**: counts and ratios (points per 100 students), survey tables/charts, interview themes with short anonymised quotes, photo evidence referenced by number.
- **Discussion**: what the comparison suggests, how it connects to the hypothesis, what the interviews explain about the numbers.
- **Limitations**: the four points from Section 16, plus any that arose during fieldwork.
- **Conclusion**: a plain-language answer to the research question and one concrete suggestion for each school.
- **AI-use statement**: what AI was used for (grammar, formatting, explaining concepts) and what it was not used for (no invented data, quotes or conclusions).
- **Ethics statement**: permissions obtained, consent process, how privacy was protected.
- **References**: background sources listed with type and [verify] where not personally checked.

Figures/tables to include: water-point ratio bar chart, wait-time comparison bar chart, source-type pie charts, soap-availability bar chart, satisfaction rating bar chart, a simple map or diagram of each school's water points, a photo plate (selected geo-tagged photos with captions).

Word range: 5,000–10,000 words for the main text (excluding references and captions).

17 Budget

Item	Reason	Cost (BDT)
Printing consent slips and interview forms (200 sheets)	Parental consent slips and interview consent printouts for both schools	400
Local travel to second school (rickshaw/bus, ~10 round trips)	Visiting School B if it is not the student's own school	1,000
Mobile data top-up (3 months)	Uploading survey responses, photos, and accessing AKTI Survey	450
Notebook and pens	Field diary and photo log	150
Printing final photos for evidence package	A physical/printed set of key photos for the coordinator review	300
Light refreshment for interviewees (tea/biscuits, 8 interviews)	Local courtesy when interviewing staff and community members	600
Contingency (unexpected costs)	Covers small unplanned expenses	300
Total		**3,200**

Estimated hours per student: about 48 hours total across 13 weeks (each team member's own time, not summed across the team). Breakdown: Choose and plan (4 hrs), Permission/checklist/pilot (6 hrs), First sample (5 hrs), Full data collection (18 hrs), Analyse (6 hrs), Write (7 hrs), Final review (2 hrs).

18 Before-you-start checklist

- [ ] Both schools chosen, with a clear reason for the contrast between them
- [ ] Written permission obtained from both head teachers
- [ ] Parental consent slips drafted and ready to distribute at least one week before survey/interview days
- [ ] AKTI Survey account set up and the 20-question survey entered exactly as worded
- [ ] Survey piloted with 3-5 students and adjusted
- [ ] Phone camera location tagging turned on and tested
- [ ] List of interview roles confirmed, with at least one contact identified per role
- [ ] Field diary notebook ready, with a template for date/place/weather/notes
- [ ] Team roles assigned (survey, interview, photo/map, data)
- [ ] Coordinator pre-field checklist reviewed and passed
- [ ] Safety plan shared with family/guardian, including school visit days and times
- [ ] Budget advance collected and a simple expense log started

19 Glossary

- **Tube well (নলকূপ):** a hand- or power-operated pump that draws groundwater through a pipe.
- **Handwashing station:** a fixed place (sink, tap, or basin with a water container) set up for washing hands, ideally with soap.
- **WASH:** short for Water, Sanitation and Hygiene, a term used for these three topics together, especially in schools and public health.
- **Pond sand filter:** a simple community filter that passes pond water through layers of sand and gravel to make it clearer, mainly used in coastal areas.
- **Arsenic marking:** paint colour (often red or green) applied to a tube well after testing, showing whether its water has safe or unsafe arsenic levels.
- **DPHE:** Department of Public Health Engineering, the government body responsible for rural and small-town water supply.
- **WASA:** Water Supply and Sewerage Authority, the government body supplying piped water in big cities like Dhaka and Chittagong.
- **TDS meter:** a small device that measures total dissolved solids (a rough indicator of mineral content) in water; it does not test for germs or arsenic.
- **Geo-tagged photo:** a photo whose file includes the GPS location where it was taken.
- **Consent:** a person's clear agreement, given after understanding what will happen, before taking part in research.
- **Pseudonym:** a made-up label (like "School A") used instead of a real name to protect identity.
- **Field diary:** a dated written record of what the researcher did, saw, and noted during each visit.
- **Null result:** a finding showing no real difference or pattern between groups being compared.