

7.1.1 Research Methods

Syllabus 2026 - 2028

WHAT YOU NEED TO KNOW

- Characteristics, uses, advantages and disadvantages of the research methods: observation, interviews, questionnaires and examination of existing documents

The analysis stage

A new system is developed by following the **systems life cycle**. The first stage is **analysis**: finding out how the current system works and what is needed from a new one. The analyst collects information using **research methods**.

Figure 16: The systems life cycle, and where analysis fits

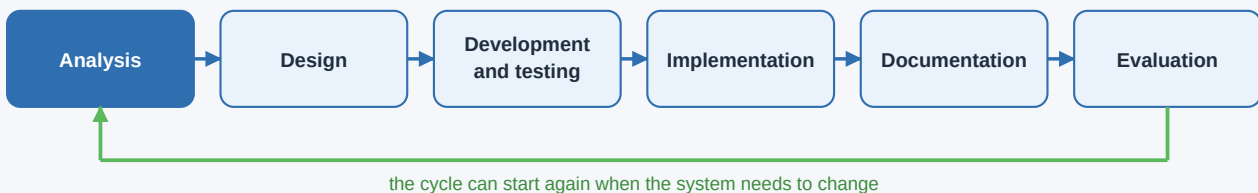
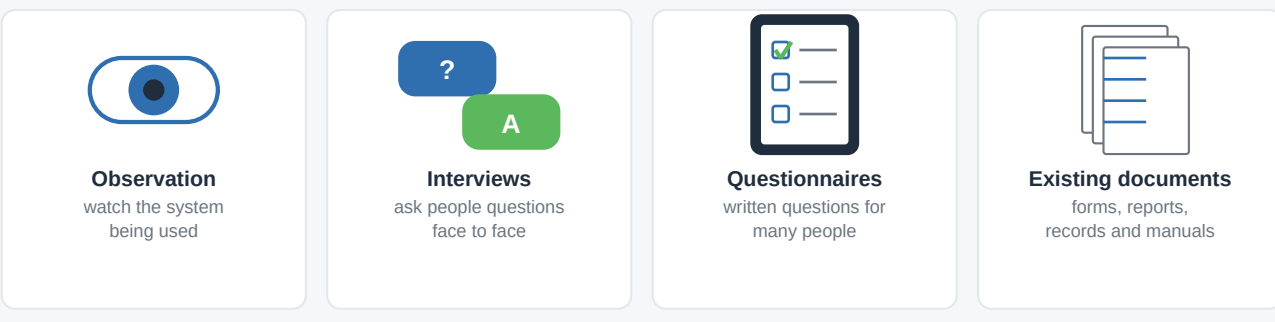


Figure 17: Methods of researching the current system



Method	Characteristics and uses	Advantages	Disadvantages
Observation	The analyst watches the system being used and people doing their work. Used to see how tasks are really done, how long they take and where problems happen.	First-hand, reliable information; shows what really happens; can see the whole process; no need for people to fill in forms	People may behave differently when watched; time-consuming; only a small sample is seen; can disturb the workers; some tasks cannot be watched
Interviews	The analyst asks questions face to face (or by phone or video) of managers and users. Used to get detailed views from a few key people.	Can ask follow-up questions; detailed answers; can clear up misunderstandings; body language can be seen	Time-consuming and costly; only a few people can be asked; people may not be honest because they are not anonymous; hard to compare and analyse answers

Method	Characteristics and uses	Advantages	Disadvantages
Questionnaires	A set of written questions given to many people. Used when a lot of people must be asked quickly.	Many people can be asked at low cost; answers can be anonymous, so more honest; easy to analyse (tick boxes)	People may not return them; cannot ask follow-up questions; people may misunderstand or give false answers; poorly written questions give poor data
Examination of existing documents	The analyst looks at forms, reports, manuals, records and files used in the current system. Used to see what data is input and output and how it is laid out.	Shows exactly what data is used and how; gives background about the system; does not disturb the staff	Time-consuming; documents may be out of date or not show how things are really done; some are confidential; does not show people's opinions

Choosing a method

- **Observation:** best when you need to see exactly how people work
- **Interviews:** best when detailed opinions are needed from a small number of people
- **Questionnaires:** best when many people, in different places, must be asked
- **Documents:** best for finding the data and forms that are used
- Analysts often use **more than one method** so that one method's weakness is covered by another

EXAM TIP

Never say a method is 'good' or 'bad'. Give a specific point, for example 'questionnaires can be answered anonymously, so people may be more honest'. Be ready to **compare** two methods in the same sentence.

Key terms

Term	Meaning
Systems life cycle	The stages followed to develop a new system.
Analysis	Finding out how the current system works and what is needed.
Analyst	The person who researches the current system and plans the new one.
Observation	Watching the system being used.
Interview	Asking people questions face to face.
Questionnaire	A set of written questions given to many people.
Existing documents	Forms, reports and records already used in the system.
Anonymous	Without giving a name.

Practice questions

Answer each question in full sentences. Command words used: State (give a short answer), Describe (say what it is like), Explain (give reasons), Analyse (break it down and examine it), Suggest (apply your knowledge to a situation), Compare and contrast (similarities and differences), Evaluate (weigh up and reach a judgement).

No.	Question	Marks
1	State two methods of researching a current system.	[2]
2	Describe how an analyst would use observation to research a school's library system.	[3]
3	Explain one disadvantage of using interviews instead of questionnaires.	[2]
4	Analyse why an analyst might examine existing documents before interviewing staff.	[3]
5	Suggest a suitable research method for finding the views of 500 learners and give a reason.	[2]
6	Compare and contrast questionnaires and interviews.	[4]
7	Evaluate the use of observation as a method of researching a current system.	[5]

Total: 21 marks