

**Contextual Task Analysis**

Human and Computer Interaction (CS-E)

FAST National University

**Submitted to**

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# **Task Analysis Documentation**

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| **Actor(s)** | **Use Case** | **Scenario** | **Observations/Issues** |
| Children of 4-7 age group | To identify the number | 1. Teacher draws or demonstrates a number of objects belonging to similar category. 2. Teacher asks the student(s) to count the total number of objects. 3. Student(s) responds to the question. 4. Teacher appreciates the student(s) on giving the correct answer otherwise teacher announces and explains the correct answer. | 1. Teacher may not be good at drawing. 2. Teacher might not be able to convey his/her message to the student(s). 3. Student(s) might not hear teacher’ question(s) clearly. 4. Student(s) may not be able to see the board/projector clearly. 5. Student(s) might not be able to comprehend the question. 6. Student(s) might interrupt the teacher frequently by asking questions. 7. Student(s) may not be able to answer loudly. 8. Student(s) may not know the answer. 9. Student(s) might not respond at all. 10. Student(s) might have wrong counting concepts. 11. Student(s) may give multiple answers instead of one. 12. Student(s) may have limited time to answer the question. |

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| **Actor(s)** | **Use Case** | **Scenario** | **Observations/Issues** |
| Children of 4-7 age group | To learn arithmetic operator(s) concept | 1. Teacher writes two numbers on the white board separated by an arithmetic operator or shows two sets of objects. 2. Teacher demonstrates multiple times how to perform the arithmetic operation. 3. Teacher asks the student(s) to repeat after her. 4. Student(s) responds to the teacher accordingly. 5. Teacher appreciates the student(s) on giving the correct answer otherwise teacher announces and explains the correct answer. | 1. Teacher might have illegible hand writing. 2. Teacher might have wrong concepts. 3. Teacher may be incompetent to demonstrate the concept to the student(s). 4. Teacher may not be able to speak loudly. 5. Student(s) may not be able to see the board clearly. 6. Student(s) might not be able to comprehend the teaching strategy. 7. Student(s) may interrupt the teacher frequently by asking questions. 8. Student(s) might not be able to hear teacher clearly. 9. Concept of arithmetic operator(s) might not be clear to the student(s) at the end. 10. Student(s) may not answer in a loud voice. 11. Student(s) might not respond at all. 12. Time may be limited to perform the overall activity. |

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| **Actor(s)** | **Use Case** | **Scenario** | **Observations/Issues** |
| Children of 4-7 age group | To solve the quiz | 1. Teacher gives student(s) a question paper. 2. Student(s) attempts all the questions by applying the strategy followed from step 3 to 7. 3. Student(s) reads the question. 4. Student(s) comprehends what is being asked in the question. 5. Student(s) compares the question with what was learnt previously. 6. Student(s) finds best answer that matches with previous data. 7. Student(s) writes the answer. | 1. Student(s) may ask for hint(s) by calling the invigilator. 2. Student(s) may ask invigilator to explain the question(s). 3. Student(s) might not understand what is being asked in question(s). 4. Student(s) might not be able to recall or remember anything related to the question(s). 5. Student(s) might know the answer already. 6. Student(s) might not be able to find the correct answer. 7. Student(s) may forget to attempt any question(s). 8. Student(s) might not be able to attempt the paper on time. 9. Student(s) may look around for his friend(s) for help. 10. Student(s) might waste time by skipping question(s) back and forth in spite of attempting them. |

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| **Actor(s)** | **Use Case** | **Scenario** | **Observations/Issues** |
| Children of 4-7 age group | To analyze progress report | 1. Student(s) goes to the teacher on result day. 2. Teacher asks the student(s) his/her roll number. 3. Teacher shows detailed progress report along with the checked paper to student(s).    1. If marks are too low, teacher warns and directs towards another quiz retake.    2. If marks are on average, teacher advises about practicing more problems and informs about other operator(s) need to be covered in class.    3. If marks are above average, teacher appreciates student(s) and updates about other operator(s) need to be covered in class. | 1. Student(s) may misinterpret the further instructions of teacher. 2. Student(s) might show non-serious attitude towards the progress report and instructions being given. 3. Paper might not be checked until the result day. 4. Marks may not be calculated correctly. 5. Statistics shown on progress report does not truly reflect the marks obtained in quiz. 6. High-achiever(s) may forget the previously learnt arithmetic operator. 7. Average student(s) might not practice his weak areas. 8. Poor student(s) may lose the confidence and do not continue. 9. Teacher might not clearly update the progress report to student(s). |

# **Work Environment Analysis**

1. Noisy classroom
2. Enough light in classroom
3. Presence of teacher for guidance
4. Availability of books and stationery items
5. Study table for studying i.e. for placing books and computer/laptop
6. Class mates’ disturbance
7. Distraction of colorful pictures and charts on class walls
8. Projector for visual aids deployed in classroom and white board for writing
9. Moderate to cool temperature of classroom
10. No gender discrimination
11. Psychological effect of classroom atmosphere e.g. competition