

ICTPD 23 Clusters Research project

INSTRUCTIONS AND CODES/DEFINITIONS FOR OBSERVATIONS

1. Speak with the teacher before the observation to establish answers to the first section of questions.
2. Complete the questions on the learning environment **after** the technical and cognitive skills have been rated.
3. Ask child(ren) to 'think aloud' while they work on the computer.
4. **Technical skills**
Questions 1 to 9 relate to the **technical computer or ICT skills** of the child/ren.

The space following each rating is for a statement of the **evidence** of technical skills that the child/ren exhibit.
5. The codes for the ratings are as follows:
(Note the relative simplicity or complexity of the task required as well)
 1. **Very competent, confident, practised.** Already knows it. Ability to solve new technical problems immediately.
 2. **Competent, confident, practised.** Ability to solve problems already practised.
 3. **Trial and error but perseveres.** May seek help eventually, but some evidence of strategy & perseverance.
 4. **Has difficulty - Random problem solving. Seeks help or solves problem 'by accident'.**
 5. **Very inept - gives up quickly.**

N/A **Not applicable**
6. **Cognitive skills**
Questions 10 to 13 relate to the **cognitive skills** of the child/ren.
7. **Working in groups at the computer**
Use the following definitions to describe the co-operative working relationship of the group (Q17)
 1. ***Very co-operative:***
All members interacted and contributed equally to the task.
 2. ***Mostly co-operative:***
Most members interacted and contributed to the task. One member tended to contribute more (or less) than the others.
 3. ***Quite co-operative:***
The interaction and contribution of members were somewhat limited with one member making minimal contributions (i.e. was reasonably passive).
 4. ***Not very co-operative:***
The group was largely dominated by one member or a subset of the members.
 5. ***Not at all co-operative:***
The group was totally dominated by one member. No interaction and contribution by others, or only after teacher intervention.
8. **Interviews with children**

Select up to 3 children to discuss a 'project' that they have already completed and for which they used the computer. The purposes of the interviews are to determine:
 - The extent to which the child used ICT to complete it;
 - The assistance s/he received in completing it (other people. Home computer, resources etc)
 - The child's attitudes towards using ICT;
 - The child's view of what s/he learned through doing the project.

23 ICTPD Clusters Research OBSERVATION SCHEDULE

Researcher: _____ Date: _____ Visit No.: _____

Cluster _____ Teacher _____ School _____

Class/Year _____ Subject: _____ Start time: _____ Finish time: _____

Child 1 _____ Gender _____ Child 2 _____ Gender _____

Child 3 _____ Gender _____ Child 4 _____ Gender _____

Discuss with the teacher...

Curriculum objective(s) for the activity to be observed. Any particular skills to be developed/concentrated on during this lesson?

What have the children done before? Role of the ICT in the context of this topic/ how this lesson relates to previous lessons.

1 What ICT(s) is/are being used?

- | | | | |
|---------------------------------------|---|------------------------------------|--------------------------------|
| <input type="checkbox"/> Computer | <input type="checkbox"/> fax | <input type="checkbox"/> telephone | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Video camera | <input type="checkbox"/> digital still camera | <input type="checkbox"/> scanner | <input type="checkbox"/> _____ |

What software is being used?

- | | | | |
|--------------------------------------|---|--|--|
| <input type="checkbox"/> tutorial | <input type="checkbox"/> drill and practice | <input type="checkbox"/> DTP | <input type="checkbox"/> word processing |
| <input type="checkbox"/> spreadsheet | <input type="checkbox"/> database | <input type="checkbox"/> WWW | <input type="checkbox"/> e-mail |
| <input type="checkbox"/> simulation | <input type="checkbox"/> multimedia authoring | <input type="checkbox"/> e-reference (Encarta etc) | |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | |

Name(s) of software: _____

2 Rate the *technical skills* demonstrated – 1-5 in box (see definitions)

- | | |
|--|--|
| <input type="checkbox"/> opens program | <input type="checkbox"/> uses menus |
| <input type="checkbox"/> opens new file | <input type="checkbox"/> uses keyboard to enter data |
| <input type="checkbox"/> locates existing file | <input type="checkbox"/> point and click |
| <input type="checkbox"/> edits using delete key | <input type="checkbox"/> edits using select process |
| <input type="checkbox"/> stores/saves to specified location | <input type="checkbox"/> prints |
| <input type="checkbox"/> multi-tasks (takes info from one application to another; adds info. from other source (eg audio, graphics etc.) | |
| <input type="checkbox"/> transforms information using technical features (graph, spell check, columns) | |

Describe:

Other software features used:

3. COGNITIVE ABILITIES

Indicate cognitive skills observed in the classroom by ticking each episode or example and describing evidence

Cognitive Skill	What was intended?	What did you see?	Levels before/after?
<p>Knowledge Recall of facts, dates, names, definitions</p> <p>(Defines, describes, identifies, labels, lists, matches, names, outlines, reproduces, selects, states)</p>			
<p>Comprehension Understanding the meaning of remembered material</p> <p>(Converts, defines, distinguishes, estimates, extends, generalises, gives examples, infers, paraphrases, predicts, rewrites, summarises)</p>			
<p>Application Using information in a new context to solve a problem, to answer a question</p> <p>(Changes, computes, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses)</p>			
<p>Analysis Breaking a piece of material into its parts and explaining the relationship between the parts</p> <p>Breaks down, diagrams, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, points out, relates, selects, separates, subdivides</p>			
<p>Synthesis Putting parts together to form a new whole, pattern or structure</p> <p>Categorises, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organises, plans rearranges, reconstructs, relates, reorganises, revises, rewrites, summarises, tells, writes</p>			
<p>Evaluation Making a judgement based on a set of criteria</p> <p>(Appraises, compares, concludes, contrasts, criticises, describes, discriminates, justifies, interprets, relates, summarises, supports)</p>			
<p>Creativity Trying out new and innovative ideas</p> <p>(ingenious, inventive, clever, imaginative, novel, original)</p>			

4. ESSENTIAL SKILLS Indicate which of the following Essential Skills you observed in the classroom. (A =skills at computer, B = skills in the unit of work generally)

A B		A B	
	<p>Communication Skills</p> <ul style="list-style-type: none"> • communicate confidently and competently by listening, reading, speaking & writing and other forms of communication. • convey & receive information, instruction, ideas & feelings in a range of social and cultural contexts. • skills of discrimination and critical analysis in relation to the media, and to aural and visual messages from other sources. • argue a case clearly, logically and convincingly. • become competent in using new ICTs, including augmenting communication for people with disabilities. 		<p>Numeracy Skills</p> <ul style="list-style-type: none"> • calculate accurately • estimate proficiently and with confidence. <p>Use calculators and a range of measuring instruments confidently and competently.</p> <ul style="list-style-type: none"> • recognise, understand, analyse, and respond to information which is presented in mathematical ways, for example, in graphs, tables, charts, or percentages. • organise information to support logic and reasoning. • recognise and use numerical patterns and relationships.
	<p>Information Skills</p> <ul style="list-style-type: none"> • identify, locate, gather store, retrieve and process information from a range of sources. • organise, analyse, synthesise, evaluate & use information. • present information clearly, logically, concisely and accurately. • identify, describe, and interpret different points of view, and distinguish fact from opinion. • use a range of information-retrieval and information processing technologies confidently and competently. 		<p>Self-management and Competitive Skills.</p> <ul style="list-style-type: none"> • set evaluate and achieve realistic personal goals. • manage time effectively. • show initiative, commitment, perseverance, courage and enterprise. • adapt to new ideas, technologies and situations. • develop constructive approaches to challenge, stress, conflict, competition success and failure. • develop the skills of self-appraisal and self-advocacy. • achieve self-discipline and take responsibility for actions and decisions. • develop self-esteem and personal integrity. • take increasing responsibility for their own health and safety. • develop a range of practical life skills such as parenting, budgeting, consumer transport and household maintenance skills.
	<p>Problem Solving Skills.</p> <ul style="list-style-type: none"> • think critically, creatively, reflectively and logically. • exercise imagination, initiative, and flexibility. • identify, describe, and redefine a problem. • analyse problems from a variety of different perspectives. • make connections and establish relationships. • inquire and research, and explore, generate and develop ideas. • try out innovative and original ideas. • design and make. • test ideas, and solutions, and make decisions on the basis of experience and supporting evidence. • evaluate processes and solutions. 		<p>Social and Cooperative Skills</p> <ul style="list-style-type: none"> • develop good relationships with others and work in cooperative ways to achieve common goals. • take responsibility as a member of a group for jointly decided actions and decisions. • participate appropriately in a range of social and cultural settings. • learn to recognise, analyse and respond appropriately to discriminatory practices and behaviours. • acknowledge individual differences and demonstrate respect for the rights of all people. • demonstrate consideration for others through qualities such as integrity, reliability, trustworthiness, caring or compassion (aroha), fairness, diligence, tolerance (rangimaarie) and hospitality or generosity (manaakitanga). • develop a sense of responsibility for the well-being of others and the environment. • participate effectively as responsible citizens in a democratic society. • develop the ability to negotiate and reach consensus.
	<p>Physical Skills</p> <ul style="list-style-type: none"> • develop personal fitness and health through regular exercise, good hygiene and healthy diet. • develop locomotor, non-locomotor and manipulative skills. • develop first-aid skills • develop specialised skills related to sporting recreational and cultural activities. • learn to use tools and materials efficiently and safely. • develop relaxation skills. 		<p>Work and Study Skills.</p> <ul style="list-style-type: none"> • work effectively, both independently and in groups. • build on their own learning experiences, cultural backgrounds and preferred learning styles. • develop sound work habits. • take increasing responsibility for their own learning and work. • develop the desire and skills to continue learning throughout life. • make career choices on the basis of realistic information and self-appraisal.

Comments/evidence

GENERAL COMMENTS

5. What is the relationship between the observed ICT activity and concurrent classroom activities?

6. How does the work with ICT observed contribute to the general sequence of lessons?

7. To what extent and in what ways is the use of the ICT integrated with the unit of work?

<i>Closely integrated</i>	1	2	3	4	5	<i>Not at all integrated</i>
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Complete Q8 and 9 if there was more than one child working with ICT

8. How co-operative was the working relationship of the group? (see definitions)

<i>Very co-operative</i>	1	2	3	4	5	<i>Not at all co-operative</i>
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9. How successfully was the task completed by the group?

<i>Very successfully</i>	1	2	3	4	5	<i>Not at all successfully</i>
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9a. Peer Interaction

- None
- Formal preplanned peer help (1 to 1)
- Formal preplanned group work
- Informal collaboration/interaction

9b. How beneficial is the interaction to the learning?

<i>Contributes positively</i>	1	2	3	4	5	<i>Interferes with task</i>
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10. THE COMPUTER LEARNING ENVIRONMENT

Sketch (or photograph) a plan of the classroom noting particularly the location/arrangement of ICT.

Number and location of computers

Stand alone Pod Lab Library/suite etc

Underlying pedagogy

common task different or individual task

What arrangements have been made for children to use the computer(s)?

What other technologies are available to the children in the class/school?

Describe the involvement of the teacher in the students' use of the computer (*e.g. collaborative - involves the active participation of all children, defers to children's knowledge, 'hands off' approach...*)

Indicate which of the following behaviours you observed in the classroom in general.

Behaviour	Evidence
Socially interactive learning (team-work/co-operation, individual learning etc)	
Goals set (Set by teacher, set by student)	
Reflection/thinking (time to think, discuss, explore)	
Feedback (from teacher, peers, other adults)	
Learning environment (inter personal relationships)	
Interaction between children (T intervention, peer initiated etc)	
Teacher –children interaction (collaborative, instruction, encouragement etc)	
Participation of children (active, passive, sustained etc)	
Direct computer instruction from teacher	
Teacher use of ICT? (modelling, demo etc?)	
Teacher skill level required	

11. THE STUDENTS: ATTITUDES, SKILLS, PRODUCTS

With the product/project in front of you and the child, direct questions in the three following areas:

1. Background

Tell me about this [project...]. How did you find the information for it? How did you create it?

2. Assistance and opportunities to use ICT

Did you ask anyone to help you with it? Who was that? What sort of things did they help you with? Did you do it mostly at home or at school?

3. Personal satisfaction

Did you enjoy doing this project? What did you enjoy most about doing it? What do you think you learned most from doing it? What was especially good about doing this project?