

**Case Studies in Design Informatics 1 & 2**  
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Lecture 16:  
Reflection:  
What have you got to say for yourself?

<http://www.inf.ed.ac.uk/teaching/courses/cdi1/>



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**Structure of the lecture**

1. Final part of the course
  - Lectures (apart from this one) are In service of CDI2 students, testing out ideas for their Assignment 3.
2. Assignments
  - CDI1 Assignment 3
  - CDI2 Assignment 3
3. Reflection
  - The Reflection Cycle
  - Reflective writing

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CDI1 Assignment 3

- The aims of the assignment are to:
  - Build a personal data capture system - or a system for obfuscating personal data, and capture and analyse a small dataset.
  - Reflect on learning content, and identify points of connection between the case studies.
  - Reflect on learning process, and identify points for improvement in personal performance.
  - Identify additional skills to be developed, at both domain level and professional level.

CDI1 Assignment 3

- Your task:
  - Using the skills developed in maker days and workshops over the semester, specify and implement your own simple physical OR VIRTUAL system that captures or obfuscates personal data.
  - Analyse the resulting data set.
  - Identify and summarise strong and weak points in group collaborative activities, and changes from Assignment 1 to Assignment 2.
  - Identify skills needs for further developing the proposed system, and for participating more effectively in groups.

## CDI2 Assignment 3

- The aims of the assignment are to:
  - Contribute to scholarship
  - Reflect on teamwork.
  - Reflect on leadership.
  - Identify additional skills to be developed, especially at the professional level.

## CDI2 Assignment 3

- Your task:
  - Identify and summarise materials describing the state-of-the-art in at least one subarea of design informatics (design by, with, or from, data).
  - Identify and describe at least one active or recent project that supports interesting insights in the subarea you have chosen.
  - Develop a slide set that engages students in the subarea and project you have selected, and provides pointers to further work.
  - Provide a critical evaluation of the successes and failures of the team you have mentored.
  - Provide a reflective analysis of learning points for team leadership in the future.

## The reflection cycle

- CDI1
  - Reflect on learning content, and identify points of connection between the case studies.
  - Reflect on learning process, and identify points for improvement in personal performance.
- CDI2
  - Reflect on teamwork.
  - Reflect on leadership.
- Both
  - Identify additional skills to be developed, especially at the professional level.
- Consider the purpose of reflection, the reflection cycle, and reflective writing in particular.

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## Why reflect?

- *'It is not sufficient simply to have an experience in order to learn.*
- *Without reflecting upon this experience it may quickly be forgotten, or its learning potential lost.*
- *It is from the feelings and thoughts emerging from this reflection that generalisations or concepts can be generated.*
- *And it is generalisations that allow new situations to be tackled effectively.'*
- (Gibbs 1988)

Quoting from <http://www.exeter.ac.uk/fch/work-experience/reflective-writing-guidance.pdf>

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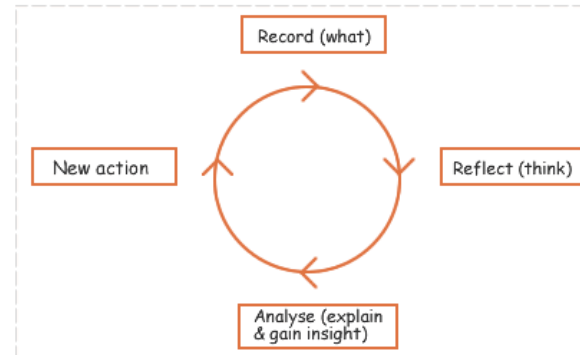
### The nature and content of reflection

- [D]efinition of reflection ... offered by Moon (1999):
  - '... a form of mental processing with a purpose and/or anticipated outcome that is applied to relatively complex or unstructured ideas for which there is not an obvious solution'. (Moon 1999 pp23)
- ... some of the purposes for reflection:
  - Consider the process of our own learning – a process of metacognition
  - Critically review something - our own behaviour, that of others or the product of behaviour (e.g. an essay, book, painting etc.)
  - Build theory from observations: we draw theory from generalisations - sometimes in practical situations, sometimes in thoughts or a mixture of the two
  - Engage in personal or self development
  - Make decisions or resolve uncertainty ...
  - Empower or emancipate ourselves as individuals (and then it is close to self- development) or to empower/emancipate ourselves within the context of our social groups.'

Quoting from <http://www.exeter.ac.uk/fch/work-experience/reflective-writing-guidance.pdf>

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### Reflection cycle



Quoting from [https://www.dlsweb.rmit.edu.au/lsu/content/2\\_AssessmentTasks/assess\\_tuts/reflective%20journal\\_LL/cycle.html](https://www.dlsweb.rmit.edu.au/lsu/content/2_AssessmentTasks/assess_tuts/reflective%20journal_LL/cycle.html)

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### Record

- Recording involves writing about what happened, when it happened and who was involved in order to understand the context.
- Useful questions for recording
  - What happened?
  - Who was involved?
  - What was their involvement?
  - When did it happen?

Quoting from [https://www.dlsweb.rmit.edu.au/lsu/content/2\\_AssessmentTasks/assess\\_tuts/reflective%20journal\\_LL/cycle.html](https://www.dlsweb.rmit.edu.au/lsu/content/2_AssessmentTasks/assess_tuts/reflective%20journal_LL/cycle.html)

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### Reflect

- Reflection involves thinking about and interpreting the experience.
- Reflecting involves thinking about the values, beliefs and assumptions you are writing about.
- The reflection aims to show the development of your ideas over time.
- Useful questions for reflection
  - Why did this happen in this way?
  - How could it be improved? How could I improve the way I did things?
  - How could the situation be improved?
  - What effects would these improvements have?
  - What values, beliefs, assumptions would explain this behaviour / incident / occurrence etc.

Quoting from [https://www.dlsweb.rmit.edu.au/lsu/content/2\\_AssessmentTasks/assess\\_tuts/reflective%20journal\\_LL/cycle.html](https://www.dlsweb.rmit.edu.au/lsu/content/2_AssessmentTasks/assess_tuts/reflective%20journal_LL/cycle.html)

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### Analyse

- Analysis in a reflective journal may involve three things:
  - Analysis of experience or content
  - Integration of experience with theory
  - Demonstration of improved awareness and self development
- Useful questions for analysis
  - What are the advantages / strengths / disadvantages / weaknesses?
  - How could the weaknesses / disadvantages be improved?
  - What are the similarities & differences between this and theory?
  - How could this experience / theory contribute to improving this?

Quoting from [https://www.dlsweb.rmit.edu.au/lsu/content/2\\_AssessmentTasks/assess\\_tuts/reflective%20journal\\_LL/cycle.html](https://www.dlsweb.rmit.edu.au/lsu/content/2_AssessmentTasks/assess_tuts/reflective%20journal_LL/cycle.html)

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### What is reflective writing?

- Reflective *writing* is evidence of reflective *thinking*. In an academic context, reflective thinking usually involves:
  - Looking back at something (often an event, i.e. something that happened, but it could also be an idea or object).
  - Analysing the event or idea (thinking in depth and from different perspectives, and trying to explain, often with reference to a model or theory from your subject).
  - Thinking carefully about what the event or idea means for you and your ongoing progress as a learner and/or practising professional.
- Reflective writing is thus more personal than other kinds of academic writing.
- We all think reflectively in everyday life, of course, but perhaps not to the same depth as that expected in good reflective writing at university level.

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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### Example of basic reflective writing

- Specific tasks were shared out amongst members of my team. Initially, however, the tasks were not seen as equally difficult by all team members. Cooperation between group members was at risk because of this perception of unfairness. Social interdependence theory recognises a type of group interaction called 'positive interdependence', meaning cooperation (Johnson & Johnson, 1993, cited by Maughan & Webb, 2001), and many studies have demonstrated that "cooperative learning experiences encourage higher achievement" (Maughan & Webb, 2001). Ultimately, our group achieved a successful outcome, but to improve the process, we perhaps needed a chairperson to help encourage cooperation when tasks were being shared out. In future group work, on the course and at work, I would probably suggest this.
- Reference
  - Maughan, C., & Webb, J. (2001). *Small group learning and assessment*. Retrieved August 01, 2007, from the Higher Education Academy website: [www.ukcle.ac.uk/resources/temp/assessment.html](http://www.ukcle.ac.uk/resources/temp/assessment.html)

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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### A possible structure for reflective writing

- Reflective *thinking* – especially if done in discussion with others – can be very 'free' and unstructured and still be very useful.
- Even reflective *writing* can be unstructured, for example when it is done in a personal diary.
- In assignments that require reflective writing, however, tutors normally expect to see carefully-structured writing.
- The example of basic reflective writing on the previous [slide] can be broken down into three parts:
  - description,
  - interpretation and
  - outcome.

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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## Description (keep this bit short!)

- What happened?
- What is being examined?
- *Specific tasks were shared out amongst members of my team. Initially, however, the tasks were not seen as equally difficult by all team members.*

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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## Interpretation

- What is most important / interesting / useful / relevant about the object, event or idea?
- How can it be explained e.g. with theory?
- How is it similar to and different from others?
- *Cooperation between group members was at risk because of this perception of unfairness. Social interdependence theory recognises a type of group interaction called 'positive interdependence', meaning cooperation (Johnson & Johnson, 1993, cited by Maughan & Webb, 2001), and many studies have demonstrated that "cooperative learning experiences encourage higher achievement" (Maughan & Webb, 2001).*

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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## Outcome

- What have I learned from this?
- What does this mean for my future?
- *Ultimately, our group achieved a successful outcome, but to improve our achievement, we perhaps needed a chairperson to help encourage cooperation when tasks were being shared out. In future group work (on the course and at work), I would probably suggest this.*

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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## Reflective writing: summary

- This is just one way of structuring reflective writing.
- ... try to bear in mind the following four key points:
  1. Reflection is an exploration and an explanation of events – not just a description of them.
  2. Genuinely reflective writing often involves 'revealing' anxieties, errors and weaknesses, as well as strengths and successes. This is fine (in fact it's often essential!), as long as you show some understanding of possible causes, and explain how you plan to improve.
  3. It is normally necessary to select just the most significant parts of the event or idea on which you're reflecting. ... If you try to 'tell the whole story' you're likely to use up your words on description rather than interpretation.
  4. It is often useful to 'reflect forward' to the future as well as 'reflecting back' on the past.

Quoting from <http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf>

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#### Case studies: A broader view

- CDI1 and 2, the courses, will benefit from
  - a broader range of case studies,
  - at the interface between informatics and design,
  - which allow us to ask “how would you do it differently?”
- Typical pattern:
  - An informatics project that could be re-directed via an injection of design thinking.
- Your suggestions welcome!

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#### Reflection references

- Gibbs, G. Rust, C. Jenkins, A. Jaques, D. 1994, *Developing Students' Transferable Skills*. Oxford Centre for Staff Development.
- Moon, J., 1999, *Learning Journals: A Handbook for Academics, Students and Professional Development*. Kogan Page

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