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Skills for Computing

*Topic 1:
Learning to Learn*

Introduction

Goals of the 'Skills for Computing' module:

- To prepare you for further study on this programme and beyond
- To prepare you to work as a professional in the IT field
- To prepare you for a world in which lifelong learning and continuing professional development is expected

Goals of This Topic

- Understand and apply learning strategies to improve effectiveness and efficiency of learning.
- This includes...
 - approaches to learning
 - creative and active learning
 - self-reflection
 - the management of learning
 - time, task and space management
 - managing your own motivation

Learning Strategies

- C.R.E.A.M is a model for learning which helps you to:
 1. Get the most out of the time and effort you put into learning
 2. Focus that time and effort in a world where there are so many demands on your time

The C.R.E.A.M model

- **C** – Creative learning
- **R** – Reflective learning
- **E** – Effective learning
- **A** – Active learning
- **M** – Motivated learning
- To get the most out of our studies, we should strive to develop all five

C – Creative Learning

1. Use your imagination

- this is the route to **internalising** and **applying** what you have learned - rather than memorising and repeating

2. Be creative about learning

- Creativity leads to confidence in your own ability to:
 - Develop new skills and understanding
 - Respond to any situation

R – Reflective Learning - 1

- Three aims of reflective learning:
 1. Be able to ***analyse*** your experiences
 2. Be able to ***evaluate*** your experiences
 3. Be able to ***draw lessons*** from your experiences

R – Reflective Learning - 2

- Questions to ask yourself:
 1. What learning event has taken place? What happened?
 - Summarise learning events – whether you've been to a lecture or read an article – as soon as possible after they happen
 2. What was right and what was wrong?
 - what went well and what did not?

R – Reflective Learning - 3

3. Why did the things that went well, go well?
 - ...and why did the things that went wrong, go wrong?
4. How can the things that went well, go better?
 - ...and how can the things that went wrong, go better?

E – Effective Learning

- Organisation of:
 1. Space
 2. Time
 3. Priorities
 4. Resources

A - Active Learning

- Learning by doing; 'practice makes perfect'
- Personal involvement – both physically and mentally – in the act of learning
- You should not sit back and hope that you absorb the information

M – Motivated learning

- Be aware of your own desired outcomes;
 - why are you studying this programme?
 - what do you hope to achieve at the end of it?
- Set yourself clear goals and objectives
 - to help you through difficult times in your studies
- Set short-term and long-term goals
 - to complement your Effective Learning strategies

Exercise 1

- Think back to just before the beginning of this class. What activities did you expect to undertake this week which would further your learning? Make a list.
 - This might include ‘guided learning’ activities (i.e lectures, seminars and tutorials), as well as private study (reading, preparation) and informal meetings with classmates.

Exercise 1 (continued)

- Can any of those activities be classified in one of the 5 C.R.E.A.M. Categories?
 - Are they Creative, Reflective or Active?
 - Would your plans be Effective?
 - Is your learning Motivated?
- Discuss this list with others in your class. Did you all produce similar lists, or have your past experiences influenced what you had planned?
- Keep this list, you will need it again later.

Creative Learning through Creative Thinking

- Lateral thinking
- Metaphors
- Imagine alternatives

Creative Learning Strategies - 1

- Which of these apply to you?
 - I draw a diagram on a large piece of paper, linking everything I have learned on a subject.
 - I sort out my ideas in the shower, then no-one can hear me talking out loud.
 - I have a notebook and take it everywhere with me, then I can jot down ideas when they come to me.
 - I talk to my friends about learning... we share ideas... we work things out together

Creative Learning Strategies - 2

- I like a rigorous method; I work out the main ideas, then write my sub-headings, then make notes under each one.
- I imagine crazy pictures to help me remember things
- I scribble ideas down as fast as I can and see where my mind takes me

(Adapted from Cottrell, 2008: 58)

Reflective Learning: Self-evaluation and Learning Journals

- How do I develop my reflective learning?
- Try keeping a learning journal. Here are some tips:
 - Summarise feedback from your tutor, and keep it in a separate file.
 - Are your tutors telling you the same things again and again? Look back through your notes and feedback
 - Use self-evaluation questionnaires
- We will try this in the tutorial session, and there are some notes in your Student Guide

Reflective Learning: Learning from Feedback - 1

- What is feedback?
 - Feedback takes many forms, but in essence it means that someone has told you what (*in their opinion*) is good or bad about something you have produced.
 - In your studies, this may be comments from a tutor about your engagement in discussions, or written feedback on a piece of assessment.

Reflective Learning: Learning from Feedback - 2

- In your professional life, it could be feedback from a user/customer on a website or program you have developed, or feedback on your performance from a manager.
- Whatever the source - We can *always* learn from feedback

Exercise 2

- How many types or categories of feedback can you think of which you will receive during this module? Here's one to begin with:
 - Informal verbal feedback in tutorial – tutor gives feedback on our private study exercises.
- Discuss this in groups and then feed back your ideas to the class

Receiving Feedback

- Positive feedback can make people embarrassed.
- Negative feedback can make people defensive or even aggressive.
- With all feedback, always:
 - **WRITE** it down;
 - **THINK** about it;
 - **ACT** on it in future.

Receiving Positive Feedback

- The best way to receive positive feedback is:
 - Thank the person giving the feedback
 - Be polite and pleased by the positive comments, but don't show off
 - DON'T laugh because you're embarrassed, or shrug the compliment off. This means that you don't really take on board the feedback, and is also a rejection of the person giving it, however unintentional
 - **Remember:** we can learn as much from what we did well as from what we did badly.

Receiving Negative Feedback

- The best way to receive negative feedback is:
 - Thank the person giving the feedback
 - Say that you're sorry they were not pleased with the work, although don't feel you have to be overly apologetic if you've done your best.
 - If the feedback is constructive (includes suggestions for how to improve), thank the person and, later on, write a summary the suggestions for yourself, and consider them. You don't have to agree.
 - If the feedback is non-constructive, ask the person how they would have done it better.
 - **Remember:** that you will always find some people who are very good at being critical but can't be constructive!

Effective Learning: Task Management - 1

- Here's an easy and effective task management technique.
 1. Make a list of every task and job that you need to do. Some people like to restrict this to study-related tasks, others might include everything in their day-to-day life.
 2. Rank your list in order of **importance** – this means importance to you and to others. Think: what are the consequences if I don't do this today? When you're happy with the ranking, give a rank number to each item – 1 being the most important.

Effective Learning: Task Management - 2

3. Now rank your list again in order of **urgency**. What needs to be done today? What can wait until next week or next month.
4. Now add together the two numbers in a 'Total' column.
5. Order the tasks from lowest total to highest
6. Now you know what to do first. Your list should look something like this...

Effective Learning: Task Management - 3

Task	Importance	Urgency	TOTAL	Order
Prepare for tomorrow's lecture	4	2	= 6	3 rd
Buy replacement power lead for laptop before battery goes flat	1	1	= 2	1 st
Start planning final assignment for this module	2	3	= 5	2 nd
Join college social club	5	4	= 10	5 th
Find out class timetables for next semester	3	5	= 8	4 th

Effective Learning: Time Management - 1

- Once you have prioritised your tasks, think about how much time they will take. Think about all the other things in your life that take up – and waste – time.
- In the seminar session, we'll look at a techniques for planning your time.
- The key to all good time management, though, is *realism*.

Effective Learning: Time Management - 2

- When you look at a task and consider how much time you need to plan to complete it, make sure you're estimating how long it **will** take, and not how long **you would like** it to take!
- Be realistic about the size of a task - be realistic about other demands on your time - and you'll meet your deadlines.

Effective Learning: Space Management - 1

- Managing your paperwork and computer:
 - Always organise your paperwork as it arrives. Trying to organise months' worth of lecture notes at the end of a module is much harder than filing your notes every few days.
 - It's just as important to organise your computer files. Design and build a file structure at the start of the programme – you should know the module names already – and think about what you might want to refer to that's not module-specific.

Effective Learning: Space Management - 2

- Find or set up a comfortable working environment:
 - This will aid concentration.
 - It will also prevent discomfort (and in extreme cases, health problems) after long study sessions.
 - Remember - if you don't like spending time in your study space, you won't do much studying!

Active Learning Approaches

- Which of these best describes your approach to learning?

Passive	Active
I wait for the tutor to tell me what to do	I look for ways to be more involved in what I am learning
I think of the information I am given as separate units	I look for connections between different topics or ideas
I learn information by being able to repeat it word-for-word	I make a conscious effort to really understand the meaning of what I am taught
I only use what I have learned in order to pass the exam	I think about how my learning might apply to other subjects and areas in life
I expect to be reminded of tasks and deadlines	I manage my own tasks and time and take control of the learning process

Motivated Learning: Factors

1. Analyse your own motivations
 - Be honest!
2. Set goals and objectives
 - Both short- and long-term
 - Break goals down into achievable “mini-goals”
3. Celebrate your successes
 - It’s easy to be self-critical, but make sure you reward yourself for achieving your goals successfully (the reward may be as simple as half an hour watching TV!)

Personal Learning Plans - 1

- A ***Personal Learning Plan*** incorporates many of the strategies we have discussed so far.
- Any learning plan should contain the following elements:
 - Objectives and Success Criteria
 - Analysis of strengths and weaknesses in our learning
 - Plan of learning activities to meet short-term goals

Personal Learning Plans - 2

- Objectives – **Long Term**
 - What do you intend to achieve by following this programme?
 - Where will you be in 6 months? In one year? In five years?
 - How will your learning now help you get to where you want to go?
- Objectives – **Short Term**
 - What do you want to achieve this term or semester?
 - What do you need to achieve in order to be on the right path for your long term goals?
 - Is just passing good enough, or do you want to be the best?

Personal Learning Plans - 3

- Success Criteria
 - For each objective – ask yourself, ‘how will I know when I have successfully met this objective?’
 - Your answer to this question is a success criterion.
- Remember – an objective without success criteria is meaningless, as we will never know if we’ve achieved it!

Personal Learning Plans - 4

- Analysis of strengths and weaknesses
 - Make an honest assessment of them first.
 - Your plan should take into account that more time will need to be spent on weaker areas and less on stronger ones; without clear planning we often do the opposite, since our strongest areas are usually those we enjoy the most.
 - In the seminar session, we'll look at a self-evaluation form which will help to build a clearer picture of the strengths and weaknesses in your own learning.

Personal Learning Plans - 5

- Planning learning activities:
 - Learning Activities should always be ‘mapped’ to a goal or objective.
 - We should first plan learning activities which are mapped to short-term goals – then look at how these accumulate to meet the long-term objectives, and what else we need to do longer-term.

Personal Learning Plans - 6

- This is just for your use, you don't have to worry about anyone else reading it...
- ...which means you can (and should) be completely honest about your goals, and what is achievable.

References and Further Reading

- Cottrell, S. (2008). *The Study Skills Handbook*. Palgrave Study Skills.
 - See Chapter 4 in particular

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Any questions?



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