WORKING & LEARNING AT THE BOUNDARIES OF KNOWLEDGE

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Increasingly, knowledge workers have to generate new and unknown knowledge as part of their day to day work. For example, in the finance industry changes to regulations necessitate agile innovation, creating new intelligence. Rapid innovation requires personalized and continual learning. Established training and development approaches are no longer effective. To learn effectively, professionals have to self-regulate their own learning through successive cycles of forethought, performance and self-reflection (Zimmerman, 2000).
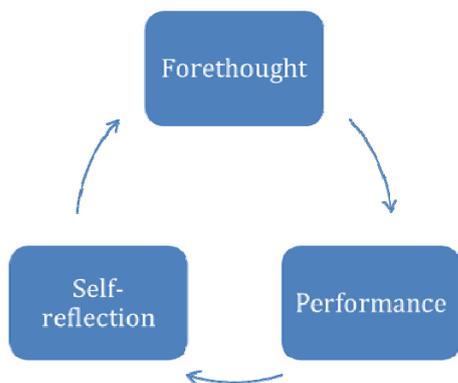
*Zimmerman's 3-Phase SRL Cycle*

CONTEXT AND METHOD

We explored how finance professionals self-regulate their learning in the context of work, focusing on the behaviours (sub processes) that underpin self-regulation: for example motivation, planning, help-seeking and self-evaluation. The study was with the Chartered Institute of Securities & Investments, and the Chartered Banker Institute who helped us identify knowledge workers in 19 organisations. We measured finance professionals' Self-Regulated Learning (SRL) profiles using an SRL questionnaire then examined how they self-regulate their learning through semi-structured interviews, classifying learners as High- or Low-SRL.

RESEARCH QUESTIONS AND FINDINGS

What SRL sub-processes influence learning behaviours in the workplace?
People who have high ability to self-regulate their learning are more able to take advantage of learning opportunities afforded by their job. We found evidence of their greater engagement in informal learning activities in their work, such as asking questions of colleagues or reflecting on how knowledge learned could extend to other areas of work. Three key factors influencing SRL were identified: *task interest/value* (a person's motivation to carry out a task), *task strategies* (the range and quality of approaches to learning employed), and *self-evaluation* (reflection about learning), as illustrated below:
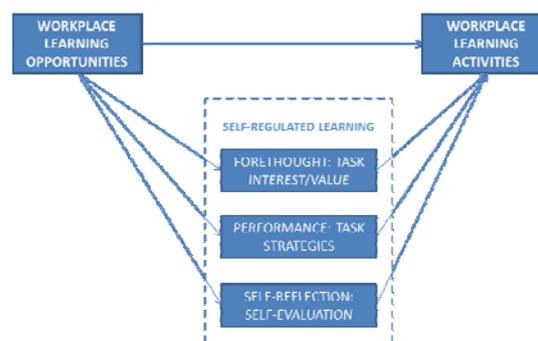
SRL behaviours enhance learning activity.

How do professionals plan, implement, and reflect on their learning goals in the context of their work?
There are internal and external triggers for learning. The professionals we interviewed primarily felt that learning is prompted by something 'external', for example a change in their work, a different role, a new process/tool, or organisational change. High-SRL also described intrinsic motivations for learning, recognising how learning might benefit their career, or lead to improved performance.

Almost everyone we interviewed said they plan their learning, whether High or Low-SRL. They identify what they need to learn through a 'gap analysis', or by talking with colleagues. Low-SRL do both equally. They are somewhat dependent on external regulation from line managers. However, High- SRL favour gap analysis, relying on their own ability to judge what they need to learn. High- SRL learners tend to carry out more detailed planning. Some articulate complex learning goals extending beyond the core task. Others plan more specific goals.

How do professionals interact with others to self-regulate their learning?
Everyone we interviewed relies on others in their professional network to support or facilitate their learning. High-SRL people tend to have a broader network than Low- SRL. H-SRL have outward facing networks with significantly lower reliance on line

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managers, slightly lower reliance on immediate team members, and more links to colleagues from different offices and other organisations, who may provide access to novel or innovative practices. Both High & Low SRL use social networking sites (SNS), mainly Twitter and LinkedIn. SNS are used to source information and make connections with other people. High-SRL use more social tools than Low-SRL and are more likely to use LinkedIn.

How do professionals use technology to support their self-regulated learning?
Technology is an integral part of work for everyone we interviewed. People seamlessly use technology to mediate their learning. However we found little evidence of specific use of tools for planning, implementing, and reflecting on learning goals. During 'performance', 'Google' is routinely used as a starting point to source information for their learning. They use this information and – in the process – create outputs. For L-SRL, the artefacts created are usually formal documents (e.g. internal reports). H-SRL are more likely to adopt a different approach, sharing notes, ideas, and resources, with others, particularly other team members and line managers.

SRL PROFILES
One way to illustrate self-regulated learning behaviour is to develop profiles of fictional figures exhibiting SRL traits. The following two profiles attempt to describe a high- and low-self regulator. It is important to highlight that low self-regulators are not necessarily less intelligent or less able employees. SRL is also context dependent, so an individual who is able to self-regulate their learning may not do so in a given context, perhaps through lack of opportunity, motivation, etc. These factors have been largely left out in the following profiles. Finally, SRL can be fostered and encouraged and so Low self-regulators can be assisted in developing SRL behaviours.

JEAN: EXHIBITING HIGH-SRL
Jean is a risk analyst working at the head office of a high street bank with responsibility for risk across all operations. A key challenge in her role is dealing with new regulations introduced across the sector, understanding their implications for different operations within the bank as well as advising on and devising new processes that are required.

Jean is **motivated** by these challenges in her job. As part of her day to day practice, she **monitors** her tasks and responsibilities, to identify any new problems arising. Perhaps a colleague in another office is leaving, which may mean taking additional responsibility for a short time. Challenges may also crop up outside her current team: for example, an announcement of planned international expansion by the chief executive may indicate a new set of finance regulations that need to be implemented.

Planning is a natural part of Jean's work, and is routine in the finance industry. When Jean identifies a new challenge, she **outlines** key factors (timescales, triggers, implications) that form the basis of an action plan. Depending on timescales and importance, this outline may be saved as a note, or may prompt an **informal discussion** with her line manager. This, in turn, may trigger more **detailed planning** where Jean defines the **gaps** in her knowledge and formulates a plan of action with **goals** and timescales, noting implications for her other responsibilities.

Jean is naturally **intrinsically motivated**, and immediately sees the benefit **of investing time to learn** for her role and for her future career. As she recognises that international expansion is a focus of the CEO, she plans not just for the opening of a new operation in a specific country, but collects together a set of resources which will allow her to **create a template for reuse** in similar situations: she includes links to internal company databases that link to finance regulatory bodies in all countries worldwide; and she **reuses** some documentation and emails from a previous expansion and **notes down names of colleagues** in other offices who may possess key information.

For the new expansion that is going ahead, Jean **reads some articles** on FT.com and in other trade journals about the country. Some of her former colleagues are now working for another organisation in the new country, but **she has kept in touch with them on LinkedIn** and sends them a message to ask if they can point her to some good local sources of information and tacit knowledge about the regulatory systems in the new country. She **asks a question on the company's internal network** to see if anyone else has any experience of working in that country. Then she sends an email to the leader of the expansion project **asking to meet to plan how her team's work will fit** with the overall project, **providing suggestions** about people in other parts of the organisation who may have expertise that could be used in the project.

Some months later, the expansion is complete and the project finished, Jean **revisits her notes** and streamlines them, **removing resources** which

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ultimately weren't useful and noting particular **strategies that had proved successful**. She makes a one page summary that is posted on her team's intranet. At her annual development review, she **summarises the learning task** to her line manager, **articulating what went well and what she could have done better**. She suggests that, given that the CEO is keen on expansion, perhaps they should write an article for the company internal magazine to describe their experience.

JOHN: EXHIBITING LOW SRL

John is a risk analyst working in the head office of a high street bank with responsibility for risk across all operations. A key challenge of his role is dealing with new regulations being introduced across the sector, understanding the implications for different operations within the bank as well as advising on and devising new processes that are required. **John works hard and is considered reliable and professional.**

John is responsible for four ongoing projects: one is just starting, two are nearing completion, and his main project is to lead a project which refines and implements a new regulatory process in the company's credit card fraud division. John **doesn't like juggling these projects**; he would prefer to spend all his time on his main project. The fraud project has regular conference calls at which John and his co-workers report progress and determine next steps. John **works with an administrator to plan the meetings**, making sure that all relevant documents are prepared and distributed in advance. The meetings are productive. An action list is produced each time, which John uses to plan his time and activity between meetings. Participants in the meetings are encouraged to keep in touch between meetings using the action list as a reference of current priorities. A shared folder on the company's intranet holds all the documents relevant to the project. **John meets with his manager every two weeks to give an update on his projects.** He uses the project action lists to report how each project is progressing and asks for advice about any problems. John has worked under the same manager for five years and they have a strong relationship. John feels supported by a strong and loyal team and has strived to keep them together over the years.

As he prepares for his annual development review, John looks over the meeting notes and action plans, **producing a summary of his main achievements, supported by formal project documents**. John looks to the organisation's intranet to identify training which he thinks may be useful over the coming year. He **identifies a management course which looks interesting**. In his development review, John and his manager celebrate another round of objectives achieved.

HELPING JOHN EXHIBIT MORE SRL

Ultimately, SRL is an individual characteristic and SRL behaviours must originate in the individual, but anyone can be supported to develop and utilise SRL behaviours either through mentoring, advice, or adjustments to role or organisational context. In the example above:

- John's line manager could encourage him to look for learning opportunities in his everyday work. For example, john could be encouraged to identify commonalities across his four projects. At their fortnightly meetings, they could discuss whether there are recurring challenges and whether problems encountered might benefit from new approaches.

- John could be encouraged to develop connections beyond his team. He would benefit from talking to other managers in other divisions, and even outside his organisation. There he would encounter new practices and approaches to management and delivering his objectives.

- At development review, John could be encouraged to reflect on his career, or at least on how his work (and his team's work) contributes to the organisation.

- John could be encouraged to reflect more on his learning, and develop a portfolio demonstrating his skills.

IMPLICATIONS

This study evidences that a great deal of learning happens 'on the job', illustrating how finance professionals self regulate their learning. Employers and professional bodies like CISI can help professionals improve their ability to self-regulate their learning. For example, changes to development planning can encourage people to reflect on their learning, and view their continual informal learning in a broader context. The study highlights the value of inter-organisational networks that provide peer-support and learning opportunities through sharing innovative practices.