

Exploring Learning Ecologies

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INVITATION TO THE READER

This is the fifth chapter of my book 'Exploring Learning Ecologies'. I welcome suggestions for improving the content and readability and any additional or alternative perspectives that might be offered.

I also welcome additional narratives that illustrate the ecologies of disruption and inflection.

I am intending to complete the first draft of the book manuscript by November 1st 2015 so feedback before this date would be particularly helpful.

Please send your comments/suggestions to me at normanjjackson@btinternet.com

Thank you very much for any assistance you can give me

Norman Jackson version 1 14/09/15

CHAPTER 5

Learning Ecologies : Habitats for Self-Directed, Self-Regulated, Learning, Development & Achievement

Draft chapter from Exploring Learning Ecologies
<http://www.normanjackson.co.uk/learning-ecology.html>

A story of self-determined, self-directed & self-regulated learning

Naomi was a final year Biomedical Sciences undergraduate student when she wrote this story to explain how she challenged herself by organising and leading a small group of student volunteers to work in a village in Uganda.

Naomi's story

The volunteer trip I organised was something I had thought about for years and finally had the means to do. I approached the Students' Union and asked whether there was a programme already set up. I was referred to a local non-government organisation called Experience Culture, which was set up by two ladies from Guildford. They informed me about the relationship the town had with its twin town in Uganda called Mukono. I had no idea of the extent of the connection until I attended a few council meetings and had conversations with the members. I was inspired by the idea of contributing to this ongoing project.

I emailed the entire university asking who wanted to come with me and soon realised just how much I had bitten off! The response was overwhelming and I tried to be as fair as possible while only being able to choose five other students. Once the group was assembled I started to organise the next steps and fundraising. I soon found that while students are generous to causes, it is difficult to stir up enthusiasm towards raising money without pitching the idea in an incendiary manner. It took a lot of planning and long hours, often through the night, to try and make our fundraisers enticing and fun, while maintaining the focus on the cause itself. We came up with ideas such as the sale of sweets at student events, a decorated bake sale, a pub quiz, a giant dodgeball tournament and a music concert at the university, all of which took place over six months. Any money raised was to be a donation towards the Mukono Children's Home and Medical Centre where we would be working.

This was all a huge challenge to me as I am not naturally outgoing, and I had to really pull myself out of my shell in order to achieve the results I needed. Being the organiser and leader of a group was new to me and extremely daunting; this proved to be one of the most marked times of my life, during which I grew immensely as a person, and developed my confidence through a comforting sense of achievement.

We started work immediately upon our arrival in Uganda, and soon became immersed in a life wholly separate and unique to our own back home. Working so closely with the students, teachers, hospital workers and volunteers was a wonderful experience, and we soon came to view the world through their eyes, with emotional and profound results. The humble and earnest attitude they brought to all aspects of their lives, and the courage they showed in the face of extreme hardships were true testaments to the strength of the human spirit. At the children's home we taught lessons in and out of the classroom, sports and games, and sex education. This was probably where I was most at peace

while in Uganda, as the love and simple kindnesses the children bestowed upon us was almost magical. Their excitement towards learning was contagious and I looked forward to spending time with them every day. It was a sharp realisation to see the stark differences between the culture and attitudes in Uganda and those back home, where complacency and over-indulgence is rife.

At the Medical Centre we helped out at aids clinics, helped with filing, and went on 'field trips' out into rural communities to teach about HIV/Aids, sex education and health and nutrition. Our donations were spent on a library for the Children's Home, which we painted ourselves, shoes for the children, and mosquito nets for those in the communities. Seeing families actually living in conditions of extreme poverty and illness exposes a helplessness in a form so raw it takes your strength and composure away more swiftly than you could ever expect or prepare for. To shake the hands of someone who has lost their family, their health, and their independence, while knowing there is only so much you can do to change this changes you irrevocably. And yet, their strength, and their composure remain not only intact but more strikingly dignified than anyone you would meet under better circumstances.

One particularly draining day of work involved us going out into a community far away to try to obtain support for Sarah, an 11 year old girl abandoned by her family who was HIV-positive [because she had been raped]. She had walked 41km barefoot to the medical centre to ask for help. We negotiated with her family for four hours to try to get them to provide shelter and food for her in order for her to receive drug treatment from the Medical Centre. It was entirely surreal to be sitting under a tree in the African sun, fighting for someone's chance of survival, with the desperation and urgency of the conversation all too apparent. This drawn out and highly strung affair was absolutely worth it when they finally agreed, ultimately saving her life. I have since been co-sponsoring her schooling fees and trying to ensure her welfare from a distance, which requires careful budgeting and communication with our contacts. The knowledge that we can help at least one person in this way is something I cling to when it feels that we are just one drop in an ever-present ocean of suffering that often threatens to overwhelm us.

The experiences we had in Uganda spurred me on to try and make a bigger difference, and to sustain what we had started. I began compiling an education pack which would include information on sex education, HIV/Aids, health and nutrition, and simple translations from English to Luganda as well as simple maths sums such as calculating monetary transactions. The idea was to make these packs durable and simple, so that one literate worker or volunteer from the Medical Centre could go out into the communities and teach it to large groups. I felt that one of the key targets to improving their quality of life was education. However, while this is often a daily component of life for most, it is painfully scarce in third world countries, where it is seen as a luxury rather than a necessity. The children in the communities we visited were unable to attend any schools as they could not afford it. Therefore, I hoped to bring a simple platform for education to them in the form of these packs.

Upon arriving back in England, we completed a video diary as a summary of our experiences. I also organised a book drive parallel to one being held by the Borough Council, to try and gather suitable children's books for the new library at the Children's Home. This required good advertising, such as printing and putting up posters around the campus, promoting it before lectures, arranging pick-ups and drop-offs and setting up boxes around the university. I plan to raise more money to send to trusted contacts at the school so that they will be able to buy local books for the children, but by sending books from England I hope to help introduce different perspectives and ideals to the children, and lend a new realm of imagination to their learning.

In my second year at university I set up a new volunteering society with my sister. Pioneering this society was daunting to say the least, with every step unpaved, and layers of bureaucracy to overcome. We held an AGM to elect a committee, and soon began planning events and ways to draw students in and promote volunteering. Our original goal was to keep raising money for different

communities in and around Mukono, organise local volunteering opportunities for students, and send another group out to Uganda in addition to a volunteer trip to Thailand to work with children in slums and on an anti-trafficking project. This proved extremely trying, as university restrictions did not allow us to raise money for any charity or organisation ourselves, and also there were insurance restrictions on overseas university trips. As a result, we concentrated on local volunteering, and brought students together to participate in events such as 'Swim for the children', 'Tree O'Clock', and various YMCA overnight events among others.

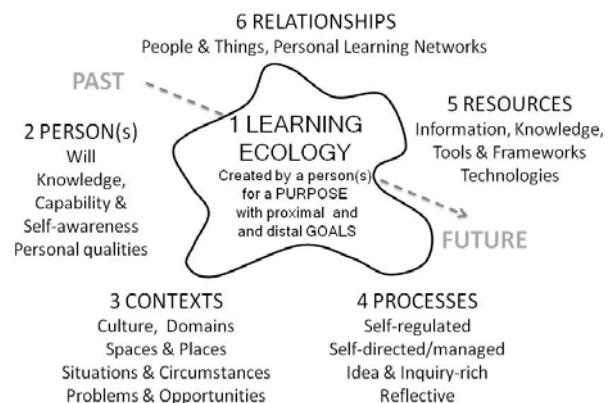
We planned the overseas trips on our own without the support other societies are able to lean on, and tried to prepare the students going on them as best we could by creating information booklets. These contained details on the respective languages and cultures of each destination, the projects they would be undertaking, helpful phrases and tips, and health and travel advice. I had not anticipated the immense amount of time required to run a society and plan events on this scale, and it is a credit to key members of the committee whose hard work and encouragement are really appreciated. Getting students involved in events that are purely voluntary is no easy task, and the skills I learnt through attempting this are truly invaluable. It took perseverance and optimism to make many of the events happen, and an incredible amount of committed time.

There were numerous moments when I felt disheartened or burnt-out, but the knowledge that we have started something to benefit others, which will carry on even after we leave university honestly makes it completely worth the effort. In my final year at university, I will be continuing the planning and support of the trip to Uganda and its communities with a new group of students, as well as an acting mentor of the volunteer society, which we have handed on to a new committee.

I cannot fully explain the feeling of wholeness that accompanies helping someone in a significant way. Every new experience adds to my person, and expands or alters my perspectives. I feel that it has helped me to grow in so many ways, especially in terms of confidence and my capabilities for dealing with unfamiliar situations and create new opportunities for myself and others. I feel spurred on to continue what we started and more, and truly believe that I am now much better equipped to achieve these goals. Through the various activities I have undertaken I have an improved understanding and insight into myself, and others. I have acquired skills such as time management, leadership and the ability to communicate ideas to other people, and very importantly, the outlook that while an idea may start as just an idea, or may seem like just a drop in a vast ocean, it can manifest itself as a wonderful accumulation of events; a tidal wave whose ripple effects extend continuously outwards.

Naomi's ultimate goal is to become a doctor and she was planning to apply to medical school after completing her biosciences degree. This was her ambition, her *distal goal* that shaped her everyday living in and experience of the world and drove her to create more immediate *proximal goals* towards achieving her ambition. In searching for something meaningful to do she discovered a new purpose - to help people in small town in Uganda. This became her *proximal goal*

and she was willing to dedicate a significant part of her life to the project alongside her academic studies. In committing to this goal she had effectively created an *inflection point* in her life which had a significant impact on her development as a person, 'this proved to be one of the most marked times of my life, during which I grew immensely as a person'.



Naomi created a *process* to enable her to achieve her ambition. There was nothing in a book to tell her what to do, she had to invent and improvise this process for herself in the contexts in which she was living. She appreciated the enormity of what she was doing and realised that she needed the help and support of others so she developed a strategy to search for and find a group of like-minded and motivated people (*new relationships*). She then set about developing the *resources* they needed to make their contribution. Together with her co-volunteers they restructured the environment to support the development of resources by creating a strategy containing numerous fund raising activities.

The second part of her story relating to her experiences in Uganda, involves putting herself into an entirely *unfamiliar context with unfamiliar problems and challenges* through which she learnt and developed. Through her conversations and other interactions with village people and participating in activities with them, she and her team of volunteers began to develop knowledge that was situated in their socio-cultural setting. Together they encountered many challenges - culture, language, poverty, difficult social situations and disease: all contributed to the rich environment in which they had to learn to adapt and perform. Through their efforts and willingness to learn they managed to accomplish some useful short term goals in Uganda and feel that they had made a positive difference to the lives of people they had met.

'Working so closely with the students, teachers, hospital workers and volunteers was a wonderful experience, and we soon came to view the world through their eyes, with emotional and profound results'

The third part of her story describes what happened on her return to university. It reveals the emotional impact the experience had on her. This new and different Naomi created new strategies for sustaining the work she had begun while in her second and third years at university. In this way the ecology she created for one set of situations developed into another ecology for another set of situations involving different people.

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A learning ecology is a 'person-in-environment', 'person-in-activity' concept. By this I mean that the person - their beliefs, attitudes, values, knowledge and capabilities, behaviours, actions, learning, development and achievements is influenced and shaped by the circumstances, situations and physical, social-cultural environments they inhabit. Naomi's involvement in her self-directed project and the involvement of others she engaged and connected with in the different contexts she encountered, constituted her ecology for learning, development and achievement. This ecology included: her own self-determined process to enable her to achieve her goals, and complex set of relationships, novel contexts, situated social action, personal and collaborative learning, and the structuring of the environment to create usable resources. Her self-determined project was driven by a desire to make a positive difference and also the desire to be a certain sort of person, and through her efforts and experiences she became a different person. The next part of this chapter will examine the idea and role of self-regulation in such self-determined processes before returning to Naomi's story to examine her experience through the lens of self-regulation.

Imaginings, Decisions, Actions, Effects & Reflections

the practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He *reflects* on the phenomena before him, and on the prior understandings which have been implicit in his behaviour. He carries out an experiment which serves to generate both a new understanding of the phenomena and a change in the situation.... He does not keep means and ends separate, but defines them interactively as he frames a problematic situation. He does not separate thinking from doing... Because his experimenting is a kind of action, implementation is built into his inquiry (Schön 1987:69)

Donald Schön's valuable insights enable us appreciate the complex ways in which our thinking, action and prior and current experience connect, interact and integrate to enable us to deal with uncertain and challenging situations. Somehow they collude to engage us in an iterative process of inquiry, decision making and action through which we learn to engage with, deal with and possibly exploit the situation. And by reflecting on and judging our experiences and the effects of our actions, we eventually make better sense of the uncertainties through which we have travelled. The complex process through which we decide what to do, then do it and reflect on it, when dealing with a new situation is called *self-regulation* and this process and its significance to the process of creating and maintaining a learning ecology, constitutes the theme for this chapter.

Self-regulation is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic [and other sorts of] skills. Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching. Self-regulation refers to self-generated thoughts, feelings, and behaviours that are oriented to attaining goals..... These learners are proactive in their efforts to learn because they are aware of their strengths and limitations and because they are guided by personally set goals and task-related strategies.....These learners monitor their behaviour in terms of their goals and self-reflect on their increasing effectiveness. This enhances their self-satisfaction and motivation to continue to improve their methods of learning. Because of their superior motivation and adaptive learning methods, self-regulated students are not only more likely to succeed academically but to view their futures optimistically (Zimmerman 2002: 65-6).

Self-regulation and academic achievement

Research has shown a link between the use of self-regulated learning strategies and academic achievement. Students who score highly on measures of self-regulated learning are more likely to achieve higher marks in examinations and assessments (Gettinger and Seibert 2002, Kitsantas et al 2008, Kornell and Metcalfe 2006). Self regulation is also important to the improvement of performance when moving from novice to more expert states in such diverse domains as sport (Cleary and Zimmerman 2001, Jonker et al 2011) musical performance (McPherson and Zimmerman

results show that elite youth athletes possess well-developed self regulatory skills, especially reflection, elite youth athletes reflect more on their past performance in order to learn and are making more effort to accomplish their tasks successfully. Moreover, the elite youth athletes in the pre-vocational system outscored their pre-university non-athletic counterparts on their ability to learn efficiently by means of reflection (Jonker et al 2011)

2002) and video gaming (Soylu 2014) suggesting that the theory of self-regulation can provide an overarching framework for explaining self-directed learning and development in many different contexts. Furthermore, there is some evidence, at least in sport, that high performing athletes with well developed self-regulatory skills are also more effective in their academic learning (Jonker et al 2011, Jonker 2011) inferring that self-regulation habits and skills are transferable between the domains of informal and formal learning.

Research also shows that self-regulatory processes are teachable and once learned can lead to increased motivation and achievement (Schunk and Zimmerman 1998). Learners who possess some self-regulatory habits can also practice and develop these orientations and capabilities through their own self-determined projects outside the academic environment, for example through hobbies and sport and these new understandings and capabilities might then be transferred back into the academic domain. However, according to Zimmerman (2002), few teachers effectively prepare students to learn on their own.

Students are seldom given choices regarding academic tasks to pursue, methods for carrying out complex assignments, or study partners. Few teachers encourage students to establish specific goals for their academic work or teach explicit study strategies. Also, students are rarely asked to self-evaluate their work or estimate their competence on new tasks. Teachers seldom assess students' beliefs about learning, such as self-efficacy perceptions or causal attributions, in order to identify cognitive or motivational difficulties before they become problematic. (Zimmerman 2002:69)

So the challenge to formalised education is how can we teach and encourage learners to develop the skills, attitudes and habits of self-regulation so that they can be more effective learners and achieve more of their potential. A number of approaches have been developed to encourage self-regulated learning in the academic environment. Examples are reported by Merino and Aucock (2014), who describe a series of enrichment tutorials in an accountancy degree course, Mahon and Crowley (2013) who describe a group-based training programme in a university study skills programme, and Nicol and Macfarlane-Dick (2005) who describe the use of formative feedback to improve self-regulated learning.

In considering curricular processes that help develop self-regulation Nicol (2010:4) argued that the main characteristic of autonomy or self-regulation in learning in the academic context is that students take significant responsibility for setting their own learning goals and for evaluating progress in reaching these goals.

Fundamentally, developing learner self-regulation requires that students have regular opportunities to:

- 1 critically evaluate the quality and impact of their own work during and after its production (for example, academic texts, problem solutions, designs)
- 2 critically evaluate the quality and impact of the work of their peers.

In the educational literature these two processes are often referred to as self and peer-assessment... In fact, peer-assessment and self-assessment should both be implemented for the development of learner self-regulation. (Nicol 2010:4)

Nicol (ibid 4-5) described these practices as 'high-impact assessment and feedback activities (HIAFAs) which involve students in:

- reflecting on and assessing the quality of their own work
- engaging in peer review of each other's work
- determining criteria to apply to their own work
- identifying their own learning needs and setting their own learning goals

- engaging in collaborative projects where they give each other feedback
- creating problems or issues that they go on to address
- reflecting on and evaluating their own learning to build a portfolio
- devising their own module (for example, in collaboration with academic staff).

Another approach used to develop self-regulation skills across UK higher education is known as Personal Development Planning (PDP). In fact I first became aware of the idea of self-regulation while I was involved in developing the higher education policy for Personal Development Planning (PDP) in 1999, and subsequently in the systematic review of evidence for PDP efficacy undertaken by Gough et al (2003). I believed that self-regulation provided an underpinning theory of thinking, action and learning for PDP, and good PDP processes and practices provide a concrete way of encouraging the development of self-regulatory skills, attitudes and thinking. The role of PDP in enabling students to practice and develop the habits of self-regulated learning will be examined later in the chapter.

(QAA 2002, 2009:5) defines PDP as, 'a structured and supported process undertaken by an individual to reflect upon their own learning, performance and / or achievement and to plan for their personal, educational and career development.'

Beyond the academic curriculum, the case for students developing skills, dispositions and habits of self-regulation to sustain them throughout complex learning lives, is neatly summarised by Barry Zimmerman.

Self-regulation is important because a major function of education is the development of lifelong learning skills. After graduation from high school or college, young adults must learn many important skills informally. For example, in business settings, they are often expected to learn a new position, such as selling a product, by observing proficient others and by practicing on their own. Those who develop high levels of skill position themselves for bonuses, early promotion, or more attractive jobs. In self-employment settings, both young and old must constantly self-refine their skills in order to survive. Their capability to self-regulate is especially challenged when they undertake long-term creative projects, such as works of art, literary texts, or inventions. In recreational settings, learners spend much personally regulated time learning diverse skills for self-entertainment, ranging from hobbies to sports (Zimmerman 2002:66).

Self-Regulation and Informal Learning

This brings us to the possible involvement of self-regulation in informal learning settings, a topic explored by Boekaerts and Minnaert (1999: 534) who drew attention to the fact that researchers 'have failed to explore self-regulatory processes in informal learning environments'. Through a literature review they identified ten attributes of informal learning which together produce a natural form of learning that gives a person the impression that they are learning spontaneously and without much conscious effort (Table 5.1). Informal learning settings in which people initiate and manage their own participation and learning contrast markedly in their capacity for self-regulation with formal learning environments. The latter are bounded by intended learning outcomes defined and assessed by the teacher, content that is controlled by a syllabus or curriculum, learning activity that is initiated, directed or guided by the teacher who determines the goals of the learning enterprise and what learning will be recognised through her assessment instruments.

Self-regulation, in the true sense of the word, will only emerge when students are allowed to learn in a context where they can weigh the feasibility and desirability of alternative actions and goals (Heckhausen & Gollwitzer, 1987), using their own criteria. The perception of freedom of action (an appraisal which informs students that they can act according to their own wishes, expectations and needs) in a supportive context (where they can borrow resources when needed) will help them to translate their own needs, expectations and wishes into clear intentions..... The main point to be made is that students have a better chance of developing their own goals in accordance with their need structure when they are allowed to learn in a realistic context that they perceive as free from inappropriate social or evaluation constraints.formal learning contexts are not primarily geared to help students develop their own criteria vis-a`-vis objects, materials, persons, settings, and skills. Rather students are prompted to abide by the rules that make social interactions and assessment procedures run smoothly. In other words, in formal learning contexts students are expected to pursue teacher-defined and teacher-initiated goals and this calls for goal-maintenance, prompted by external regulation, rather than self-maintenance based on internal regulation (Boekaerts and Minnaert 1999: 542)

Table 5.1 Attributes of Informal Learning (Boekaerts and Minnaert 1999: 536)

- 1 The learning process is described as active, voluntary, self-discovering, self-determined, open-ended, non-threatening, enjoyable, and explorative.
- 2 Learners use a number of self-regulatory processes spontaneously, such as self initiating learning and self-monitoring their progress.
- 3 These self-regulatory processes make an explicit appeal to intrinsic motivation; conversely, intrinsic motivation facilitates self-regulatory processes.
- 4 Most informal learning is embedded in a social context, meaning that social cues are highly relevant and that students engage in cooperative learning activities. These socially situated learning activities are loosely structured, learner directed, and mediated by peers who often share the same values, attitudes, interests, and beliefs.
- 5 Informal learning situations utilize (realistic) objects, materials or settings that are highly contextualized.
- 6 The learning experience is more qualitative than quantitative, more process oriented than product oriented, more synthetic than analytic, and more flow-driven.
- 7 Time allocation in informal learning episodes is unhurried in nature, self-paced, and open-ended with relatively few time constraints.
- 8 Even when there is a kind of curriculum (e.g., a path in a museum to discover the life patterns of the ancient Greeks), it is a flexible one, signifying that the structure is non-linear and bottom-up.
- 9 There is no compulsory, individual testing or assessment procedure, but rather a collective, informal type of assessment or self-assessment based on feedback.
- 10 Set goals tend to be broader which may result in considerable variability in what gets learned.

But on this last point, broad fluid goals also open up greater possibility for what might emerge and therefore encourage an opportunistic orientation to learning. We are often surprised at the consequences when we engage informally with something new and this element of surprise is another aspect of the psychology of informal learning that reinforces motivation.

Building on these perspectives on the relationship between self-regulation and informal learning contexts, this chapter explores the role of self-regulated learning in personal learning ecologies that are developed outside the academic curriculum. The underlying proposition is that higher education can do much more to encourage student development in these forms of learning by developing strategies like PDP that encourage learners to be more conscious of the self-regulatory processes they are engaged in, when operating in informal learning contexts.

Theory of Self-Regulation

Self-regulated learning is defined as self-generated thoughts, feelings and actions that are systematically oriented towards achievement of the learner's own goals Zimmerman and Schunk (1989). Social cognitive researchers describe self-regulated learning in terms of self-processes and associated self-beliefs that initiate, change and sustain learning in specific contexts. These processes and beliefs are linked to three fundamental questions about learners' self-regulated approaches to learning (Zimmerman 2000)

How questions refer to students use of metacognitive processes such as planning, organising, self-instruction, self-monitoring and self-evaluating ones efforts to learn. **Where** questions pertain to behavioural processes such as selecting, structuring and creating learning environments that optimize growth. **Why** questions refer to processes and beliefs that motivate self-regulated students to learn, such as beliefs about their capabilities to learn, intrinsic interest in the task and satisfaction with their efforts...High levels of motivation are necessary to self-regulate when short term goals must be subordinated to long term goals and ultimate gratification must be delayed. In summary, self-regulation refers to metacognitive, behavioural and motivational processes and beliefs used to attain personal learning goals in specific contexts. (Zimmerman 2000:221)

Without the will to learn things that are difficult and complex, there can be no hope for learning (Barnett 2007). Learning and motivation are linked by a sense of personal agency: beliefs about possessing the requisite cognitive and behavioral processes (or means) to achieve desired environmental outcomes (or ends). Personal agency is connected to a belief in one's self-efficacy to learn or perform at certain designated levels (Bandura, 1986, 1997). Self-efficacy beliefs are distinctive because they refer to the process, rather than the outcomes, of learning. The distinction between process and outcome beliefs is central to a social cognitive perspective on learning and motivation (Zimmerman and Schunk 2008:323-4)

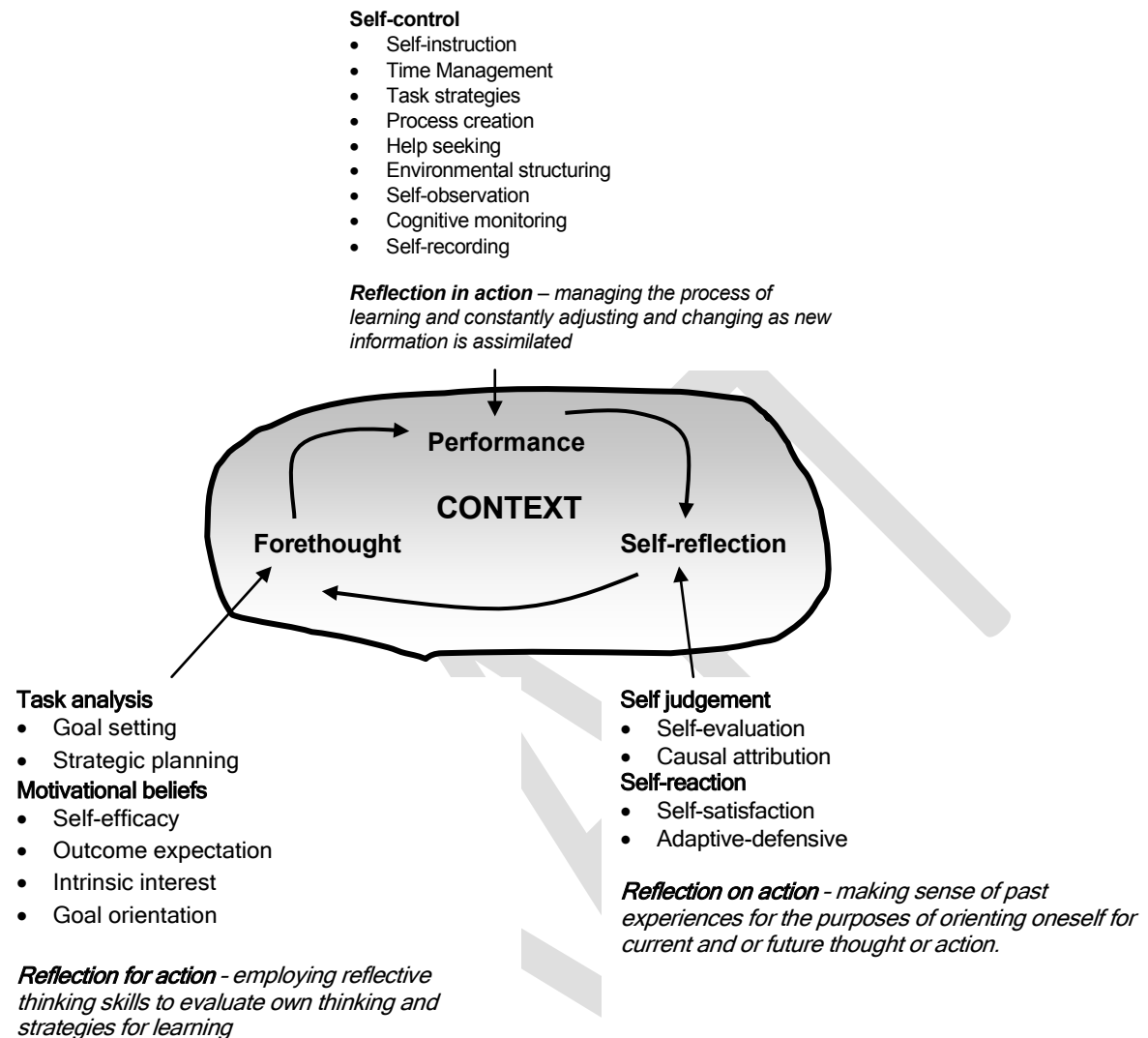
Will is the most important concept in education. Without a will, nothing is possible. At any level of education, a pupil, a student cannot make serious progress unless she has the will to do so. Unless she has a will, a will to learn, she cannot carry herself forward, cannot press herself forward, cannot come successfully into new pedagogic situations [including the situations she creates for herself] (Barnett 2007:15)

A learner who adopts a self-regulating approach to their own learning will be involved in a continuous process involving 1) forethought 2) action/ performance 3) self-reflection operating within a context specific environment that is structured by the learner to provide resources for learning and achieving specific goals (Schunk and Zimmerman 1994, 1997, 1998, 2003, Zimmerman 2000, 2002, 2003, 2008). Figure 5.1 taken from Zimmerman (2000) summarises the theoretical model.

Forethought

The thinking that occurs before decisions are taken about what to do involves thinking about the situation, context, problem, challenge or opportunity. Assessing the situation and imagining what might be done to deal with the situation (formulation of a goal or objective for action). Considering the sorts of actions or tasks that might be performed and the likely or possible effects and costs of such actions. Such thinking might involve 'assessing' an existing situation or 'imagining', based on past experiences or other knowledge, a situation that might unfold given the circumstances and contexts.

Figure 5.1 A model of self-regulated learning (Zimmerman 2000:226) coupled to notions of reflection Ertmer and Newby (1996).



The self-regulatory model identifies two subordinate categories - task analysis and self-motivational beliefs. People do not engage in tasks or set learning goals and plan and work strategically if they are not motivated by strong personal agency (Zimmerman 2000:226) the key features of which are self-efficacy - personal beliefs about having the means to learn and or perform effectively, and outcome expectations - personal beliefs that the outcomes will be worthwhile .

Role of Reflection: The role of reflection in the forethought stage is to enable us to think about past experiences or parts of experiences that might be related to the real or imagined situation we are encountering. This enables us to create mental models that help us make good decisions and plans about what to do. Reflection combined with our critical thinking helps us prepare mentally and practically for what lies ahead. As we begin to engage in the task of planning and making decisions about what we are going to do, reflective thinking can also help us test our planning against past experiences and enable us to refine our plans. Reflective

thinking combined with our analysis of the situation can help us build confidence in our preparation for action: it can feed our belief that that we are likely to be successful by implementing the intended approach.

Figure 5.2 Pictorial representation of the model of self-regulation emphasising the ways in which reflection can be involved in the three parts of the self-regulation model - thinking prior to action & experience, thinking during action & experience, and thinking after-action & experience.

These processes for thinking enable us to imagine the possible ecologies we might create in order to learn, develop, perform and achieve. Forethought is the home of imagination (idea generation) and creative thinking (how our own or other people's ideas might be combined to create a new approach for the particular circumstances). It is our ability to make sense of the contextual particularities and nuances of complex situations that enables us to create responses that stand a chance of succeeding. By combining our creative thinking, reflective thinking and critical thinking we can develop new solutions to deal with situations we have not encountered before, test those solutions against past experiences and evaluate critically the ideas in the specific contexts that they will be applied. In this way we can see how reflective thinking is not a stand-alone process rather it is fully integrated with other thinking processes and heavily influenced by the social-cultural in which decisions and actions are located.



Performing

The second part of the self-regulatory process is the action or performance through which we implement our plans to deal with, or create, new situations and experiences. It includes our capacities and attitudes to instruct our self and seek help to learn and accomplish our plan, our capacities for managing ourselves, our time and our tasks, the creation of processes for learning and the structuring of the environment in order to learn.

These processes and practices enable us to optimise our efforts to achieve our goals. They are the things we do in order to bring our ecologies for learning into existence - like finding, using and creating resources, extending our personal learning networks and creating new relationships for the exchange of ideas and knowledge, deal practically with the situations we are in or create, and the co-production of new knowledge or performance.

Role of Reflection: A second set of subordinate processes used during the performance phase is self-observation. It involves the cognitive monitoring of our own performance and the conditions that surround and influence our performance. This metacognitive process is also called reflection in action, and it enables us to adjust our actions and performance in response to our observations on the impact we are making and on our failures to achieve intended

results. But, when we are fully engaged in a situation there is little time available for reflection and most of our responses, will be reactive and intuitive rather than derive from reflective deliberation (Eraut and Hirsh 2008:42-3). However, where spaces permit (eg during a break in activity) we may immediately begin to think about recent events as a way of learning and refining immediate plans for action when we resume activity.

Self-Reflection

After we have engaged with, and performed in, a situation we can create new space for thinking about our actions and their effects, and the social and physical dynamics of the situation we were in. In this part of the self-regulation process reflection becomes the dominant thinking process as we think about the whole experience and try to make more sense and draw deeper understandings and meanings from it. Our thinking involves both self-judgements and self-reactions to those judgements (Zimmerman 2000, 2002) .

Self-judgement

The two key self-judgement processes are self-evaluation and attributing causal significance to the results. Self-evaluation involves comparing our perception of our performance with a standard, criteria or goal - *did what we did work well or not so well in helping us achieve our objective? Could we have done what we did better?* It might also involve comparing own perceptions of performance with the feedback given from other people involved in the situation, or even people who were not part of the situation who offered us their perspectives on it. Attributional judgements are pivotal to self-reflection because attributions to a fixed ability prompt learners to react negatively and discourage efforts to improve. By contrast attributions of poor performance to inappropriate learning strategies sustains perceptions of efficacy and motivations to engage in different ways in similar situations in future.

Self-reaction

Self-reaction includes judgements on self-satisfaction and adaptive inferences. Self-satisfaction involves perceptions and associated effects regarding one's own performance. Courses of action that result in satisfaction and positive effect are pursued. Whereas actions that produce dissatisfaction and have negative effects are avoided. Self-regulated learners condition their satisfaction on reaching their goals, and these self-incentives motivate and direct their actions.

Role of Reflection: Reflection - or thinking about the situation and the whole experience, is one of the three phases of the self-regulation model of learning. Reflection is an activity in which people mentally revisit and re-experience their experiences, think about them, feel some of the emotions they engendered, mull them over and evaluate and learn from them. They

- *Return to experience* - that is to say recalling or detailing salient events.
- *Attend to (or connecting with) feelings* - this has two aspects: using helpful feelings and removing or containing obstructive ones.
- *Evaluate experience* - this involves re-examining experience in the light of one's intent and existing knowledge etc. It also involves integrating this new knowledge into one's conceptual framework (Boud et al 1985:26-31).

Reflecting on and articulating the key lessons learned from experience, boosts our self-efficacy, which in turn has a positive effect on immediate learning and their motivations to deal with similar situations in future. Reflection also aids the codification of tacit knowledge - knowledge

that was embodied dealing with the situation (Di Stefano et al 2014). By extracting deeper meaning from the situation individuals are able to create new personal knowledge to guide their future planning and actions and also refine or generate self-theories of why certain things happen in certain situations. Such high level abstraction also helps us transfer what has been learnt from one context to another and one time to another. In this way lessons learnt during the implementation of one learning ecology can be brought to bear in a future learning ecology.

Reactive and proactive self-regulators.

Research into how people regulate themselves suggests that there are two forms of self-regulation (Zimmerman and Schunk 2008). Reactive learners avoid forethought and attempt to regulate functioning during and after performance whereas proactive learners engage in significant forethought, including reflecting-for-action, in order to improve the quality of their planning and performance.

Self-Regulation in an Emergent World

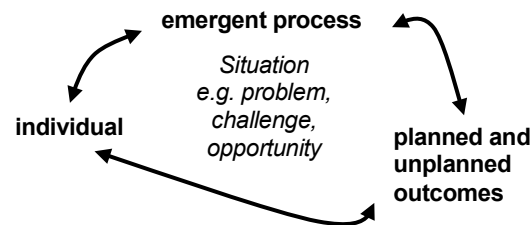
We might usefully add one further dimension to this explanation of how a person is actively engaged in learning and developing themselves through their self-determined life experiences. The model of the autodidactic (self-instructed) learner (Tremblay, 2000) incorporates the self-regulating model of learning but sets it in a context of emergence (Figure 5.3). A slightly modified version of Carl Rogers definition of personal creativity might be used to convey the idea.

Learning 'the emergence in action of a new relational *product* growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life' (Rogers 1960:350 - the word new has been substituted for novel).

An autodidactic process is heuristic, iterative and contextual. Situations may be orchestrated but they might equally be conditions of coincidence. An individual's learning project does not develop in a linear way and the actions necessary for the realisation of a task are not presented in a sequential and predictable manner. Knowledge and knowing emerge through action. The process is a continuous experiment in which action and reflection share the same space. Theory (self-theory) develops from action and the knowing that emerges through action. This is an appropriate conception of the way that people approach learning as a sustained experiment in which action and reflection on action and the shaping of future actions share the same space. Autodidactic learners are dependent on the resources for learning that are available in their immediate environment and learning projects are shaped through taking this into account. Autodidactic learners often do not plan to use particular resources but see and exploit opportunities as they arise; they seize every opportunity that chance offers them to learn.

Figure 5.3 The autodidactic model of learning (Tremblay 2000)

- The process develops without prior condition
- Knowledge emerges through action and the individual is open to recognising and exploiting its value
- The individual works with the process heuristically



- The individual creates her own rules and vocabulary for learning
- The individual is strongly self-regulating
- The individual and the environment are reciprocal determinants
- The individual gains knowledge through a complex, diversified and expanding web of resources

Social dimensions of self-regulation

The self-regulation model outlined above seems strangely individualistic given that we inhabit a social world. Figure 5.4 portrays a more social dimension to the self-regulation model in which individuals are connected to the social world they inhabit.

Within situations that are being co-created we receive feedback on our actions and the thoughts we share as we share the experience and these feed into our internal reflections sometimes in profound ways - how often does someone say something that really causes us to think again about something we have previously taken for granted. We also share our experiences and perceptions with people after the event: people who were often not involved and they might comment on our actions, or perhaps offer us a different perspective.



Figure 5.4 The social world of self-regulation

The Social Age (Stodd 2014) has added another dimension to our processes for reflection by enabling us to share our own experiences and our reactions and reflections on those experiences through websites, blogs and other forms of social

media and receive feedback from people we do not know. In this way self-regulation and our reflective processes have become even more social.

Mobile technologies and Social Media enable us to record and share events and experiences in real time in ways that would not have been possible even ten years ago and this creates a more dynamic and resource-rich and social environment which can be drawn upon for reflective purposes.

In January 2015 Tommy Caldwell and Kevin Jorgeson became the first people to climb the 1000m, sheer granite face known as the Dawn Wall of El Capitan in Yosemite National Park. The two climbers documented the entire endeavor in detail on Twitter, Facebook and Instagram so that people across the world could watch it unfold and share something of their experience.



The climbers used social media not only to chronicle the ups and downs of their journey (performance), but also to engage with their community of supporters and followers. They even held a question-and-answer session mid-way through the climb using Twitter. The Q&A covered everything from specifics about climbing techniques to choice of music and sleeping arrangements. This story simply illustrates how most experiences can be documented and shared in real time with others who are interested and that such acts can increase the social impact of an event and these shared resources can subsequently be used in the post event reflective process. The pioneering ascent came after five years of planning, preparation, training and many failed attempts on parts of the climb and the whole climb for both men. Their story of planning, practice, self-monitoring and reflection, and perseverance and resilience is exemplary in illustrating the forces of self-regulation in great human achievements.

Self-Regulation and Learning Ecologies

Returning to Naomi's story, can we see evidence of self-regulation in the ecology she created to fulfill her ambition to make a difference to people living in a small town in Uganda? While her objective was not explicitly to learn and develop herself - significant learning and personal development were bi-products of the activities she determined and engaged in order to achieve her goal.

Her interest in volunteering in the sort of situation she described, had been in her mind for a long time (distal goal) but it was only when she became a university student that she realised she had the means to achieve her ambition and the confidence to begin the process of planning and organising herself.

I feel that it has helped me to grow in so many ways, especially in terms of confidence and my capabilities for dealing with unfamiliar situations and to create new opportunities for myself and others. I feel spurred on to continue what we started and more, and truly believe that I am now much better equipped to achieve these goals. Through the various activities I have undertaken I have an improved understanding and insight into myself, and others. I have shown that I have acquired skills such as time management, leadership, the ability to communicate ideas to other people, and very importantly, the outlook that while an idea may start as just an idea, or may seem like just a drop in a vast ocean, it can manifest itself as a wonderful accumulation of events; a tidal wave whose ripple effects extend continuously outwards. (Naomi's reflective account)

Her *forethought* involved her in thinking about how to explore possibilities until she discovered and was inspired by a concrete idea that she believed could form her personal project around. In this way she appropriated an existing project and made it her own. Her attention then turned to involving others and she created a strategy to find and build relationships with like minded people so that they became part of the process of co-creating the ways and means of raising money to fund the experience and make donations to the medical centre. This task involved many different activities. It seems that she was in no doubt that she, with the help of others, could achieve their goal and their significant commitment demonstrated that they believed what they were doing would make a difference and be worthwhile : a commitment that carried on after she had returned to the UK.

Her *performance* was demonstrated through the tasks she set herself in contexts that were both familiar and unfamiliar with problems, challenges and opportunities that she had not encountered before. She searched for and found like-minded people to help her accomplish the goal she had set herself and structured her environment to develop the resources she needed to accomplish her task. She invented, with the help of others, numerous activities aimed at improving the lives of the children and adults involved in her activities. On her return she planned, organised and participated in activities to continue her project and involve other students and developed new resources to support the educational programme she had begun.

I felt that one of the key targets to improving their quality of life was education.....The children in the communities we visited were unable to attend any schools as they could not afford it. Therefore, I hoped to bring a simple platform for education to them in the form of these packs. Naomi

Her commitment to *reflection* is evident in the time she committed to this activity during her experience through her hand written diary, the film clips that recorded some of the events, people and the social-cultural and physical setting she worked in, and the summary narrative. She evaluated her own performance by comparing who she used to be with who she was after being involved in these experiences. There is also a sense in her writing that when she looks back at what she did and accomplished she is satisfied with her performance. Here are some the ways in which she expresses judgements about herself and her performance and achievements.

'Though there were numerous moments when I felt disheartened or burnt-out, but the knowledge that we have started something to benefit others, which will carry on even after we leave university honestly makes it completely worth the effort.'

'I grew immensely as a person, and developed my confidence through a comforting sense of achievement.'

'I feel that it has helped me to grow in so many ways, especially in terms of confidence and my capabilities for dealing with unfamiliar situations and to create new opportunities for myself and others'.

Naomi's inspiring story illustrates well the self-motivated, self-determined and self-regulated nature of a complex learning ecology which evolved over a significant period of time because she continually revisited and revised her goals as her understanding of the 'problem' and 'situation' changed. This continual refinement of proximal goals, framed within the distal goals of 'making a positive difference to the people of Mukono' and 'becoming a doctor', continually energised her to do more and drove the continuous development of her ecology for learning, developing and achieving.

Connecting Personal Development Planning (PDP) to Self-Regulated Learning and Learning Ecologies

Earlier in this chapter I drew attention to the use of Personal Development Planning (PDP) to support the development of self-regulatory skills and habits. PDP is particularly interesting phenomenon because it is the only approach to learning that has ever been mandated through policy in UK Higher Education. The purpose of policy which was introduced in 2000, is to encourage the development of approaches to learning that involve planning, action and reflection in all HE learning contexts and at all levels.

PDP is 'a structured and supported process undertaken by a learner to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development.'

The primary objectives of PDP are to enhance the capacity of learners to reflect, plan and take responsibility for their own learning and to understand what and how they learn.

PDP helps learners articulate their learning and the achievements and outcomes of HE more explicitly, and supports the concept that learning is a lifelong and lifewide activity. (QAA 2009)

The great strength of PDP policy is that permits and encourages diverse practices: quite rightly there is no prescribed way of doing PDP. Rather, teachers and institutions have the

responsibility for creating practices that are meaningful and useful in specific learning and learner contexts.

When expressed as a set of actions PDP processes contain a set of interconnected activities namely:

- *thinking and planning* - what to achieve and how to achieve it: setting goals
- *doing* - implementing plans with greater self-awareness so that more can be understood and learnt
- *recording* - thoughts, ideas, experiences and achievements both to understand better and to evidence the process and results of learning
- *reflecting* - thinking about what has happened, making more sense of it and creating deeper meaning
- *evaluating* - making judgements about self and own work and determining what needs to be done to develop/improve/move on
- *using the personal knowledge gained* to change thinking, beliefs, behaviours; learning from the experience

From this we can generate a process-based definition of PDP i.e. Approaches to learning that connect planning (specific goals for learning), doing (aligning actions to learning goals), recording (self-evidencing learning) and reflection (reviewing and evaluating learning and actions and their effects).

Doing - The idea of learning through reflection is meaningless unless it is rooted in the experiences of learning or past experiences of learning. Learning through the experience of doing enhances self-awareness and self-motivation. In the context of PDP the doing is connected to the action planning. To obtain benefit people have to be conscious of what they were doing

Planning and setting goals - The capacity to plan a strategy for learning and then align subsequent actions to personal plans is an essential part of the process. However, life is very complicated and such plans should be seen as guides to be modified and refined rather than checklists that have to be adhered to. This requires people to be conscious of the effectiveness of their strategies in realising their goals and to plan in a way that enables changes to be made should this be necessary.

Recording - The extent to which recording is a feature of PDP varies according to the context. We naturally learn through reflection without recording anything but the discipline of recording helps us understand what we have learnt and provides us with evidence and a personal record of our own development. Developing the habit and skill of codifying one's own learning is a useful skill in a world that creates new explicit knowledge from the tacit knowledge of people. But the requirement to keep records can become the driver for PDP and lead to a bureaucracy that impedes learning and stifles enthusiasm. care must be taken to define the rationale for recording information and how this is integrated into learning processes and facilitative conversations with tutors.

Reflecting (Reviewing and Evaluating) - The idea of metacognition or self-awareness brought about by thinking about situations that have been experienced and trying to making sense of them, is central to the idea of learning in this way. PDP can be thought of as a way of building knowledge about self and through this a stronger sense of self-identity. The idea of evaluating requires people to make judgements about their own learning and performances. It requires people to develop the knowledge and skills in creating and using reference points and feedback mechanisms in order to enable themselves to make evaluations that are realistic and helpful.

Learning through reflection is central to developing self-awareness. Reflection is a necessary part of the process of trying to assimilate and understand new knowledge and to relate it to what is already known modifying existing knowledge in the process and creating new meaningful learning. Reflective learning will already be incidental in the academic activities of most students but deliberate strategies for its use will make students more conscious of it so that it can become an integral part of their approach to learning. PDP tends to emphasise reflection on action and performance after the event or experience. In reality reflective deliberation occurs in the planning stage of the process (reflecting on similar situations in the past in order to plan for the future) and in the performance stage (I messed that up didn't I how can I avoid doing that in future?).

Using personal knowledge - The strength of PDP is that it is a method of creating knowledge about self. Ultimately the real benefit is to the individuals who create this knowledge and who are able to draw upon it and use in ways that are meaningful and useful to themselves. Such knowledge might be used in an instrumental way eg being able to relate personal knowledge and skills to the needs of an employer. Or it may be used in more profound ways to modify conceptions, attitudes, behaviours that lead to personal change. PDP therefore encourages people to learn about themselves and to act up on this learning by fostering and supporting the habit of personal change.

Do people learn through the processes that PDP promotes?

A key question for PDP policy makers was whether the actions, attitudes and behaviours that PDP promotes actually result in positive learning outcomes and improved achievement. While there is an extensive anecdotal and self-reported literature to this effect, scientific evidence derived from researcher manipulated studies, is hard to come by. Gough et al (2003) conducted a systematic review and mapped the field of knowledge relevant to the research question - *what evidence is there that processes that connect reflection, recording, planning and action improve student learning?*

An initial trawl of the English language world literature since 1982 resulted in 14,271 potentially relevant studies being identified. The abstracts and titles of these documents were evaluated using a range of criteria developed by a 'PDP user group' in collaboration with the research team and 982 documents were identified as being worthy of further analysis. 813 of these documents were accessed and read and evaluated using the criteria developed and of these 158 documents were subject to more rigorous analysis and key wording to produce a map of the research field. Twenty five experimental researcher-manipulated studies, considered to provide the best research evidence on the impact of this type of learning, were subject to detailed analysis and data extraction. Nineteen of the experimental studies had a moderate or

high quality rating using quality assessment criteria developed by the research team. Seventeen of these studies provided evidence of positive impact on students' learning.

PDP & Self-Regulation

It is self-evident from the descriptions above that there is a strong and positive connection between the self-regulation theory and PDP processes and practices. Indeed, many if not all the researcher manipulated studies identified in the systematic review were concerned with aspects of self-regulation in teaching and learning practices.

The model of self-regulated learning provides a scientific explanation of the processes that underlie PDP and helps us understand how the actions, behaviours, attitudes and emotions of individuals engaging in PDP learning processes might be connected. There appears to be a good correlation between the key actions and behaviours in the PDP model of learning and those of self-regulated learning. But the model of self-regulated learning provides much greater detail of the thinking processes, motivations, values and belief systems that underlie PDP practices. As such it provides a useful analytical tool with which to evaluate different types of PDP practices. The following observations can be made.

PDP processes tend to focus on the instrumental features of action planning, record keeping and reflection on action and performance. The other important features of self-regulated learning are often implicit.

There is often little consideration given to the richness of the forethought process and the underlying motivations, values and beliefs that underpin the sense of self-efficacy that drives the whole process. PDP offers a real opportunity to value the intrinsic motivations of learners yet we often see PDP being driven by the extrinsic motivation of teacher assessment which takes no account of the personal motivations that drive individuals. This runs counter to the ideal of preparing students for a world in which their personal motivations will be far more important in securing their own success in life than any external motivations.

Forethought is the home of imagination (idea generation) and creative thinking (how own or other people's ideas might be used). If we are to nurture imagination and creativity in students' learning this should be explicit in both PDP and self-regulation models of learning. Imagination is a source of personal energy that motivates us to do something in a particular way. The ability to imagine goals and impacts and then imagine interesting ways of achieving these things is important to sustaining the motivation to learn and do and fuels self-regulated behaviour.

The doing (performance) part of the self-regulation model identifies many sub-processes that are implicit in PDP practices - notions of self-instruction, help-seeking and using the environment to create resources for learning. These are all crucial in problem-working throughout life and they are rarely explicitly recognised in PDP models for learning. 'Doing' is the home of creativity in action (making use of own or other people's ideas). The process of engaging with emergent problems in real time, the structuring of the environment to create resources for learning, the adaptation and transfer of ideas to new contexts, the juggling of numerous tasks and the nurturing of relationships are all manifestations of creativity in action. These things all rely on self-efficacy and personal motivation to sustain them.

There is generally a strong emphasis on reflection in PDP practices but the quality of reflection can be quite variable and it requires considerable practice and coaching to develop the critical thinking aspects of reflection. Comparing own performance and attributing causal significance to results - requires evaluation against criteria, standards or previous performance - what is good/poor performance attributed to? The extent to which we provide students with the knowledge and skills to do this, and the opportunities for practising self-evaluation are quite variable in PDP processes.

Emotions like *anger* (resentment, annoyance, hostility and even outrage), *sadness* (dejection/ depression, flatness, energyless, loneliness), *fear* (anxiety, misgiving, apprehension) and *enjoyment* (contentment, satisfaction, pride and even pleasure) are all part and parcel of everyday learning. But higher education, with its focus on the development of a rational/analytical/critically detached perspective, tends to ignore the personal emotional dimensions of learning. PDP provides an opportunity to put emotions back into learning within contexts that are meaningful to the learner and to acknowledge that learning is an emotional business.

How we feel about something has a major effect on whether we want to pursue something or abandon it. The interplay of emotions, beliefs, actions and contexts are complex and unpredictable but we need to be conscious of them as they will impact on our decision making processes. The self-regulatory model acknowledges these things in a way that PDP models often do not. Goleman's (1996) book on emotional intelligence depicts a world in which the capacity to cope with life is strongly dependent on attitudes of mind that have little to do with the thinking rational part of the brain and more to do with the emotional, non-rational and intuitive brain. The roots of self-efficacy, our senses of personal and professional satisfaction with what we have done and our willingness to adapt in the future, lie in these attitudes of mind. If we are to improve our ability to promote personal knowledge of these things through the higher education experience then we need to develop PDP strategies and evaluation criteria that clearly address and work with emotional intelligence.

PDP & Learning Ecologies

There is an opportunity for PDP practices, that accommodate the model of self-directed, self-regulated learning to support an approach in higher education that embraces the idea of learning ecologies. Again, we might return to Naomi's narrative of the learning ecology she developed around her volunteering project. She undertook this while at the University of Surrey and while she was involved in it she participated in the university's Lifewide Learning Award which had within it a PDP process which invited her to record her thinking, activities and achievements. She used a diary and made film clips which were later assembled into a film. She produced a personal development plan which set out her goals and how she intended to achieve them and also provided a template for the reflective account she produced as she looked back on her experience. The framework and the award it supported, provided her with an incentive and a structure within which she could record her learning and achievements. In this way PDP could be a useful aid to the development of educational practices that encouraged and recognised learners' own ecologies for learning, development and achievement.

Concluding thoughts

Self-regulation is a powerful theory that explains the relationship between a learner's willingness and desire to learn, their ability to set themselves a goal(s), create and implement strategies and activities to achieve their goals, monitor and evaluate their progress towards what they want to achieve and adjust their strategies if necessary, capitalise on new opportunities as they emerge, make judgements about their own performance and draw deeper meaning / learning from their experience through reflective processes. All these dispositions, ways of thinking, capability and behaviour are involved in the creation and maintenance of a complex ecology for learning, developing and achieving.

The fundamental difference between learning in an informal learning context compared to a formal learning setting is the learner's perception of choice - the freedom to choose between possible goals, activities, participants, resources, tools and technologies, when to start, when to change tack and when to stop, and to keep on choosing throughout a learning project, until the decision is made to stop. The creation of a self-determined, self-directed process for learning - an ecology for learning, developing and achieving, in an informal setting, provides the affordances to make use of these choices, and experience the sense of learning spontaneously and without much conscious effort (Boekaerts and Minnaert 1999).

There are numerous ways of developing self-regulatory attitudes, skills and habits in formal educational settings. In the UK a policy has been developed to encourage Personal Development Planning (PDP) at all levels and in all higher education contexts. The framework of attitudes, values, skills and habits PDP promotes are those we associate with self-regulated learning. The policy emphasises that students' learning and development takes place in personal, educational and career (or work-related) contexts while they are studying at university and it encourages them to take responsibility for, plan and reflect on their own learning in these diverse learning contexts. PDP is ideally configured to support both the development of learners' self-regulatory skill and habits and their involvement in creating their own ecologies for learning, developing and achieving.