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Supporting student learning in the 21st century university: What's the job and whose job is it?

Alex Radloff
Central Queensland University
Australia

Abstract

If the purpose of universities in the 21st century is to produce learning rather than simply to provide instruction, what does that mean for students and staff and, in particular, for those staff whose current role is supporting student learning? What do they have to do to ensure that learning happens? In this presentation, I consider what student learning would look like in a university genuinely committed to the goal of learning, how students might be supported to be effective learners in such an environment, and the role that those working in academic development should and indeed must play in achieving that vision.

Introduction

In 1995, Robert Barr and John Tagg published the now seminal article, "From teaching to learning: A new paradigm for undergraduate education", in which they called for a shift in the focus of undergraduate education from instruction to learning. According to Barr and Tagg, universities focus on inputs such as courses, credit hours and physical resources rather than on outputs in the form of student learning. However, they argued, educational productivity should be expressed in terms of what students have actually learned and the quality of that learning rather than in terms of the number of hours taught or the number of courses taken. More recently, Tagg (2003, p. 31) has expanded on the idea that the new mission for universities is "to produce student learning", not simply to provide instruction. Tagg calls for a fundamental shift in the way we conceptualise university education, and a major change in how we go about achieving student learning. According to Tagg, universities should adopt a 'learning paradigm' that:

- promotes intrinsically rewarding goals;
- requires frequent, continual, connected, and authentic student performances;
- provides consistent, continual, interactive feedback to students;
- provides a long time horizon for learning;
- creates purposeful communities of practice; and
- aligns all institutional activities to producing student learning.

Barr and Tagg are not alone in suggesting that change is needed. Many other educators have called for a significant mind shift in how we think about the purposes of a university education and how we create environments that support effective student learning (Barnett & Coate, 2005; Chickering & Gamson, 1991; Fink, 2003; Gardner, 1994; Halpern & Hakel, 2003; Kuh, 1996; Strange & Banning, 2001; Weimer, 2002, 2003).

For example, Halpern and Hakel (2003) lament the fact that there is little evidence that we understand and apply research on learning when designing educational programmes and learning experiences, and that most academics teach the way they themselves were taught. While biology has become the scientific basis for medicine shaping its practice, cognitive psychology and learning research have not become the scientific basis for education. Indeed, Halpern and Hakel (p. 36) point out that "it would be difficult to design an educational model that is more at odds with the findings of current research about human cognition than the one being used today at most colleges and universities".

Kuh (1996) suggests that universities should build seamless learning environments to support student learning. Seamless environments, according to Kuh, establish learning conditions that encourage and motivate students to put their time and energy into educationally valid activities. Fink (2003) proposes the development of significant learning experiences through an integrated approach to designing courses. Significant learning experiences are characterised by students engaged in high energy learning activities that lead to significant and lasting changes in learners and are valuable for life and for work. According to Weimer (2002, 2003), academics should design learning environments that motivate students to take responsibility for their own learning. Further, they should focus on building their students' knowledge base and developing their learning skills and self-awareness.

Strange and Banning (2001) put the case for paying close attention to the human environment – the physical layout, the characteristics of the people, the organisational structures and the inhabitants' constructions of the context – that makes up a university campus, real or virtual, since it is this environment that shapes much of the educational experiences of students and staff. They argue for the development of environments that foster educational success by promoting safety and inclusion, encouraging participation and involvement, and building a community of learners.

Gardner (1994) argues that we now have enough research evidence available about student learning on which to build more effective educational experiences. He urges universities to be clear about their mission, to define their intended outcomes and to design learning experiences that "will involve students actively at every point, teach students how to learn, develop a campus climate that challenges and supports every person, and ensure that each student has high-quality developmental academic advising" (p. vii).

Chickering and Gamson (1991) propose seven research-based principles for good practice in undergraduate education. According to the principles, effective education:

1. encourages contact between students and staff;
2. develops reciprocity and cooperation among students;
3. encourages active learning;
4. gives prompt feedback;
5. emphasises time on task;
6. communicates high expectations; and
7. respects diverse talents and ways of learning.

The principles emphasise six important educational concepts, namely, interaction, co-operation, activity, responsibility, expectations and diversity that can be applied across all disciplines in any educational setting and with students from diverse backgrounds.

A constructivist approach to learning

The different proposals for change to our approach to university education outlined above advocate a shift away from a transmission approach to learning to a constructivist approach to learning. According to this view of learning, learners actively strive to make sense of their experiences and to

construct personal meaning out of them leading to understanding. Such learning is typically socially situated and involves learning with and from others.

A constructivist approach to learning assumes a curriculum that is designed around enquiry and problem solving, and emphasises the fundamental concepts of the discipline being studied. Assessment is designed to be authentic, that is, closely aligned to real world tasks and aimed at testing learners' ability to apply their learning. Assessment also includes opportunities for peer and self assessment. The learning environment is characterised by high challenge as well as high support, and instruction is learner-centred and makes use of collaborative learning.

Implied in this view of learning is the need for us to pay attention to *how* learners learn as much as to *what* they learn. Thus, as McKeachie, Pintrich, Lin, and Smith (1986, p. 1) argue,

> ...every course should help students become aware of strategies for learning and problem solving. An explicit goal of education throughout the curriculum should be to facilitate the development both of learning strategies and problem solving skills and of effective strategies for their use.

The 21st century university student

In considering the characteristics of the 21st century university whose mission is to produce learning, we should also take account of the characteristics of the students who are likely to be studying at such a university. There have been significant changes in the demographics of university students in both New Zealand and Australia. Thus, university students now, as compared to a decade ago, are more likely to come from a diverse range of cultural and language backgrounds. Indeed, probably the biggest change that has occurred in both countries has been in the growth of international students now studying at our tertiary institutions. Although growth in international student enrolments is now slowing, the proportion of international students studying onshore in Australia has now reached 25% and in some courses, it is closer to 50%.

Further, the number of mature age students as a proportion of total student enrolments is growing in both New Zealand and Australia. Students are also more likely to be enrolled part-time and to juggle study with work and family commitments. The proportion of full-time students in paid employment has risen as well with over half of first-year students in Australia reporting being engaged in some form of employment during the academic year (Krause, 2005).

As a result, both full-time and part-time students tend to spend less time on campus and are less likely to be involved in campus social activities (Jacoby, 2000). As McInnis, James and Hartley (2000, p. xii) point out, "it appears that university study occupies a smaller proportion of a growing number of students' lives". Moreover, students now actively seek and expect flexibility in their courses and to be able to use information and communication technologies to support their study including access to online course resources, email to contact staff and other students, and subject related software to support their learning.

Students – both school leavers and mature age – are now more vocationally focused (Krause, 2005) and "have an increased sense of purpose and greater clarity about occupational aspirations" (Krause, Hartley, James, & McInnis, 2005, p. iv). And, as the cost of attending university increases in the current 'user pays' climate, students are becoming more price and quality conscious and seeking value for money from their educational experience.

Finally, the total number of students undertaking tertiary study has increased in response to government policies encouraging more of the population to gain a tertiary qualification with the aim of

increasing economic productivity and the contribution of formal educational qualifications for employment opportunities and financial rewards.

Being an effective learner in the 21st century university

In order to be able to survive and thrive in a university focused on producing learning, all students need to be effective learners. Research conducted over the past thirty years has provided considerable insight into what characterises effective learners (Radloff, 1997; Zimmerman, 2002; Zimmerman & Schunk, 2001). Effective learners understand the learning process and themselves as learners, hold positive beliefs about the value of learning and of themselves as learners, and set realistic learning goals. They also have and use appropriately a wide repertoire of learning strategies, manage their learning using metacognitive strategies, persist in the face of obstacles and seek help when they need it.

Essentially, effective learners are self-regulated learners who direct their thoughts, feelings and behaviours towards achieving their learning goals. Self-regulated learners understand what they need to do to learn, have confidence in themselves as learners, are strategic, can manage themselves and their learning environment, and are able to reflect on and learn from their experiences (Ertmer & Newby, 1996). In short, they have both the will and the skill to be successful learners. Moreover, self-regulated learners are able to apply their knowledge and skills in different contexts, to adapt to complex environments and to deal with ill-defined problems, which require insight and reflection.

The following characteristics constitute what I call the seven pillars of self-regulated learning. Self-regulated learners:

1. *Understand* the process of learning and the self as learner;
2. *Believe* in the value of learning and in the self as learner;
3. *Set* realistic learning goals;
4. *Use* learning strategies appropriately;
5. *Manage* the learning process;
6. *Persist* in the face of obstacles; and
7. *Seek* help when needed.

A brief description of each of the characteristics or pillars is presented below.

Understanding the process of learning and the self as learner

Learning is an active process in which the learner is engaged in making sense of experiences by building on existing knowledge in collaboration with others. Learning may involve both cognitive (thinking) and physical (doing) activity using different modalities. Generally speaking, the more modalities (e.g. seeing, hearing, speaking, touching) involved in learning, the more effective the learning tends to be. Further, activity that involves a variety of experiences or tasks increases interest and enjoyment in the learning task.

Learning is not a spectator sport. Learners have to be active in order to learn effectively. As Shuell (1986, p. 429) points out, "it is helpful to remember that what the student does is actually more important in determining what is learned than what the teacher does".

Learners construct meaning for themselves based on past experiences and their understanding of the learning task. They also learn with and from others through collaboration, negotiation of meaning and validation of ideas. Thus, constructing knowledge is a socially mediated activity.
Ideally, the outcome of learning activities is deep learning or understanding, which learners describe in terms of feelings of satisfaction, a sense of coherence and connectedness among concepts or ideas, recognition that the learning is irreversible (you cannot forget something that you understand),

confidence in being able to explain the concept or idea to someone else, and ability to adapt and apply the concept or idea in different situations (Entwistle & Entwistle, 1997).

Self-regulated learners understand the process of learning and recognise that it requires them to be actively involved in making meaning of their experiences. They are aware that learning is the result of their personal efforts rather than something that happens as a result of teaching.

Further, self-regulated learners are aware of how they learn including their preferred ways of learning and their strengths and weaknesses as learners. Learners who are able to answer the following questions are demonstrating a good awareness of themselves as learners:

- What sort of learning do I like to do?
- What sort of learning do I avoid?
- What motivates me to learn?
- How do I learn best?
- What learning strategies do I know?
- Which learning strategies work best for me?
- What learning resources do I need to help me learn?
- What are my strengths as a learner?
- What are my weaknesses as a learner?

Believing in the value of learning and in the self as learner

Learners who believe in the value of learning in general and find learning tasks interesting will be motivated to learn. In other words, they have an intrinsic interest in learning, that is a belief that a task (e.g., learning something new) is inherently interesting and thus worth doing or that completing the task (e.g., mastering a new skill) will lead to feelings of satisfaction.

Learners who believe that they are capable of learning and of achieving their learning goals are more likely to engage in learning. They are exhibiting self-efficacy – a belief in personal capacity to undertake tasks and to achieve goals (Bandura, 1997). According to Bandura, how learners behave may be better predicted by their beliefs about what they are capable of doing than by what they are actually capable of doing. In other words, whether students believe they can or whether they believe, they can't, they are right.

Self-regulated learners with a strong sense of self efficacy take responsibility for their learning, see learning tasks as a challenge rather than as a threat, set personally challenging learning goals, pay attention to the demands of a learning task, put effort into completing it and are spurred to greater effort if confronted by obstacles, and recover from setbacks or failures quickly. Moreover, they are more likely to attribute learning success and failure to factors under their control such as personal effort, rather than to factors outside their control such as ability or luck.

Setting realistic learning goals

Goals are important for learning in that having clear, realistic, personally meaningful goals is related to persistence and to achievement (Locke & Latham, 1990; Schunk, 1990). Learning goals give direction and purpose to learning and provide a reference point from which to monitor progress and regulate effort (Volet & Lawrence, 1990). Goals also influence motivation to learn with moderately difficult goals being the most motivating. They also influence the approach to learning and the learning strategies that learners choose to use. For example, if the goal is simply to memorise, learners may adopt a surface approach to learning and use rote learning strategies. In contrast, if the goal is to

achieve understanding or mastery, learners may adopt a deep approach and use more sophisticated learning strategies such as elaboration or problem-solving (Biggs, 1987).

Self-regulated learners engage in effective goal setting including setting a long-term goal, and then breaking the long-term goal into a series of short-term goals that direct and guide learning. During learning, they monitor their progress against their goals, adjust goals as needed and move to the next goal as each goal is achieved (Schunk, 2001).

Using learning strategies appropriately

Learning strategies include a number of cognitive strategies such as rehearsal where learners repeat, copy, highlight, or underline text material; elaboration where learners create mental images, paraphrase or use analogies; and organisation where learners group ideas, create lists or use concept maps (Weinstein, 1982, 1987). Learners may also use more elaborate learning strategies such as critical thinking where they question ideas, consider alternative explanations and test solutions.

Learning strategies also include adaptive strategies such as managing time and organising the learning environment, as well as cue-seeking which involves actively seeking information about the learning task, including what the desired learning outcome should be, what criteria will be used to assess performance and the standard of performance expected.

Self-regulated learners typically possess a repertoire, or tool kit, of learning strategies which they know how to use effectively (Newman, 2002) and are motivated to use appropriately, that is, they know whether, when and how to use a particular learning strategy to achieve a particular learning goal.

Managing the learning process

Effective learning is dependent on careful management of the learning process. Knowing what has to be learned and setting learning goals is not enough. Learners need to plan, monitor, adapt and evaluate their learning. They also need to select, create or adapt physical and social environments that will support their learning. In other words, they need to exert metacognitive control of their learning.

Self-regulated learners use metacognitive strategies to manage their learning. Once they have determined the learning goal(s), learners plan their learning activities including which learning strategies they will use to achieve their goal(s), monitor their progress against their goal(s), adapt their strategies and goal(s) if needed, determine when they have achieved their goal(s), and evaluate their learning outcomes. They also take time to reflect on their performance and to consider how they might do things differently in the future based on their experiences of what worked and what did not.

Learners who are able to answer the following kinds of questions about their learning are being metacognitive about their learning:

- Do I have a regular study schedule?
- Have I got a place to work?
- Is my work area organised?
- Do I use available time productively?
- How do I know when I have learned something?
- How do I check on my progress?
- What do I do to keep to my learning schedule?
- What do I do if I get stuck?
- What do I do when I have completed a piece of work?

Persisting in the face of obstacles

Learners often encounter obstacles to their learning. Obstacles may be either internal – such as lack of background knowledge, difficulty getting started on a learning task or negative feelings associated with learning – or external – such as lack of access to appropriate learning resources, family and work demands interfering with learning (Radloff, 1997).

Self-regulated learners recognise that learning is challenging and that obstacles to achieving their learning goals are to be expected. They regard obstacles as natural, increase their efforts when they encounter obstacles and persist to overcome them. When confronted with an obstacle, they may try alternative solutions, review and adapt their learning goals, or seek help from others. They will deal with negative feelings by using different strategies such as discussing their feelings with family or friends, use positive self-talk and visualisation to manage feelings, or engage in physical exercise.

Seeking help when needed

Learning is often difficult and learners may find that they are stuck and cannot proceed without seeking help from someone else, usually a more knowledgeable person. Adaptive help-seeking involves getting help to support independent learning, not simply to get the correct answer to a problem or to get someone else to complete the learning task. Adaptive help-seeking can keep learners remain engaged in the learning activity, prevent failure, increase the chances of successful mastery of a learning task and lead to independent learning. Adaptive help-seeking is more likely when learners are involved in the learning activity, and are supported to feel autonomous and competent (Newman, 2002).

Self-regulated learners understand that they sometimes need help in order to learn effectively and recognise that asking for help is an acceptable strategy rather than a sign of lack of ability or failure. They monitor their progress and if they encounter problems, they seek help from peers or instructors.

Self-regulation of learning is not a fixed ability but a set of processes involving thoughts, feelings and behaviours that learners can develop over time with encouragement and explicit instruction. There are a growing number of examples of educational interventions that have resulted in the development of one or more characteristics of self-regulated learning (e.g., de la Harpe & Radloff, 1998; Hattie, Biggs, & Purdie, 1996; Schunk, 2001; Schunk & Zimmerman, 1998).

Supporting student learning – whose job is it?

The key tasks for universities committed to a learner-centred constructivist approach to education are to design learning environments that produce learning and to help students to be self-regulated learners. The responsibility for designing suitable learning environments and supporting students to be effective learners needs to be shared by all those who are part of the university community – academic staff, learning skills advisers, administrative staff and students. Each has a role to play as part of the whole educational enterprise. No one individual or group can or indeed should be expected to take sole responsibility for student learning.

However, there is little doubt that in many universities supporting student learning is seen to be primarily if not solely the responsibility of learning skills advisers. Further, the work of learning skills advisers is often poorly understood and thus often seen as remedial – 'fixing up' students who are underprepared for university study – rather than developmental – helping all students to be self-regulated learners. Moreover, the focus of the work is often helping students to manage within learning environments that may be less than ideal in terms of the design of the curriculum, the quality of instruction and the appropriateness of assessment tasks. Thus, learning skills advisers may find themselves in a situation where they are supporting students as best they can in learning environments that are not designed to encourage and support high quality learning. They usually have limited opportunities to intervene to address systemic problems or to influence the characteristics of the learning environment including the design of the curriculum, instruction and assessment. Thus they may become by default the "remediators" and "mediators" (Webb, 2002).

Typically, learning skills advisers carry out their work at the margins of the university (Chanock, East, & Maxwell, 2004). They are usually situated in centres that lack critical mass, have few senior positions and struggle to obtain sufficient funding to support their work. As Percy and Stirling (2004, p. 42) note, learning skills centres "are still largely viewed as ancillary, or an optional supplement, to the 'real' business of academia".

The majority of learning skills advisers are women who work on short-term contracts, with little job security and often limited career pathways (Lee, 1997; Webb, 2002). Further, in Australia, around a third of learning skills advisers are appointed as 'general' rather than academic staff (Chanock et al., 2004) making it difficult for them to engage in academic activities that confer status and credibility such as research, and limiting their access to professional development opportunities available to academic staff including sabbaticals and conference support.

Given the context in which they work and their position within the university, many learning skills advisers find themselves in the role of 'fixers', intervening on behalf of students, trouble-shooting and mending as best they can. And, sometimes, when they try to point out the problems with the system and ask what may be perceived as awkward questions about curriculum, teaching and assessment practices, they may also be seen to be trouble-makers.

However, if universities are to embrace the mission of producing learning and genuinely commit to designing learning environments that support students to be effective learners, then there needs to be a major shift in the role that learning skills advisers play.

What should the job be?

In order to be able to contribute fully to the mission of the university to produce learning, learning skills advisers need to become part of the university leadership team that is charged with the responsibility for ensuring that the whole institution is geared to encouraging and supporting learning. As part of such a team, learning skills advisers, given their background in student learning and their extensive practical knowledge of student needs, are able to play a key role in the design of the learning environment to ensure that curriculum, instruction and assessment are based on social constructivist principles. Moreover, they should have a strong voice in the design and implementation of policies and systems aimed at supporting learning since these need to be fully aligned and in line with the social constructivist approach.

In order to be able to support student learning as outlined above, the work of learning skills advisers will need to be embedded in the organisational structure. This means that learning skills advisers have to be full members of the academic community, and be recognised as such by the university, especially by academic staff situated in departments and engaged in more traditional academic work.

And as part of that community, learning skills advisers need to engage in the scholarship of teaching and learning, contributing to the research base of the profession and through that work gaining the respect of colleagues across the disciplines. As Chanock and Vardi (2005) argue, learning skills advisers should develop confidence in their ability to undertake high quality research whose value in contributing to theory and practice in student learning is recognised by universities. Moreover, they need to ensure that their work is disseminated beyond their peers to academics across the disciplines in order to influence teaching practice.

The role of learning skills advisers as outlined above allows them to become movers and shakers, wielding power and influence within their institutions. But how might they move from their current situation as bit players to this more influential position? Two approaches hold promise.

First, learning skills advisers can work more deliberately to position themselves and their work strategically within their institution. The work of learning skills advisers – its purposes, means and outcomes – must engage better with those who are its institutional stakeholders. As Chalmers and O'Brien (2005, p. 51) point out, "if EDUs [educational development units] are to be truly effective within the teaching and learning community, then they need to be positioned across the multiple layers of interactions within their own universities".

In order to be able to position themselves strategically within the university, learning skills advisers need actively to seek champions within the senior leadership of the university as well as among academic staff who have credibility as academic leaders within their own disciplines. Both these groups can help to validate the work of learning skills advisers and to ensure their participation in decision-making around teaching and learning. Another strategy is to publicise the work and achievements of learning skills advisers and in particular to highlight their contribution to meeting university priorities such as increasing student retention, improving student progress and enhancing student satisfaction with their learning experiences.

Second, learning skills advisers can seek more opportunities to engage with colleagues from the disciplines in collaborative initiatives to support student learning. In particular, learning skills advisers should seek to be part of institution-wide or, even better, national or international projects focused on teaching and learning. In this way, they can use their knowledge and expertise in student learning to influence and shape innovations in the design of learning environments that support quality learning. They can also participate in implementing innovations in their institutions using their change management skills.

Whether either of these approaches is the right one will depend on the particular context and on the mindset of learning skills advisers themselves. As Webb (2004, p. 174) cautions, "from the perspective of senior university managers, [academic development] is a tiny and non-critical part of the operation of the enterprise" and thus those in leadership positions may have little interest in supporting learning skills advisers and their work. Moreover, the nature of the work of learning skills advisers focusing as it does on nurturing and supporting learners, attracts individuals who may not be predisposed to see themselves as academic leaders and do not wish to become movers and shakers (Lee, 1996; Webb, 2002).

Further, it is wise to bear in mind that even the best designed initiatives aimed at improving teaching and learning and achieving excellent outcomes often remain local and are not widely taken up by institutions (Southwell, Gannaway, Orrell, Chalmers, & Abraham, 2005). As Tagg (2003, p. 11) remarks, "reform of higher education faces a problem of scale. Exciting experiments abound but have only slight impact on business as usual. Successful innovations seem to have no longer a shelf life than unsuccessful ones". Thus participation in innovative projects may not necessarily result in increased influence in shaping learning environments.

The dissemination and embedding of good practice in teaching and learning across the tertiary sector remains a significant challenge and one that requires strong leadership and change management skills (Scott, 2003). Even more challenging is getting a whole institution committed to designing learning environments that produce learning.

The 21st century university students are already here, enrolled in our tertiary institutions. They need and deserve the best possible education we can provide to set them up for work and for life. Learning skills advisers have a key role to play in ensuring that students get the support they need to be successful learners. They must have the confidence and courage to take on the job.

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