Chapter Nine:
Shedding Past Notions of Marginalised Education: How Understanding Learning Styles Can Transform Perspectives on Learning

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Abstract

This chapter examines the role of a pre-undergraduate language course in encouraging and enabling adult learners to transform perspectives of themselves from marginalised learners to successful university students. One tool for encouraging this transformation is Soloman and Felder's *Index of Learning Styles* (ILS) (Felder & Brent, 2005). This inventory shows that students' learning preferences can be measured along a continuum in four different areas: active/reflective, sensing/intuitive, visual/verbal and sequential/global. As well as furnishing students with greater understanding of how they learn, this information has assisted lecturers in Central Queensland University's Skills for Tertiary Education Preparatory Studies (STEPS) program to plan an effective language course that gives students learning strategies from both inside and outside their preferred learning styles. Student voices testify to the fact that both understanding themselves and learning a wide variety of new skills have been beneficial in consciousness raising. This knowledge has given many STEPS participants the freedom to cast off perceptions of marginalisation, and has helped them to gain not only academic success in the STEPS program but also the confidence of future success in the worlds of university and lifelong learning.

Introduction

Mezirow (1991, cited in Taylor, 2000, p. 3 of 15) sees the goal of fostering transformative learning as helping learners move from a simple

awareness of their experiencing to an awareness of the conditions for their experiencing...and beyond this to an awareness of the reasons why they experience as they do and to action based upon these insights.

Challenging and changing existing perceptions of themselves as marginalised learners are for many adult students important parts of gaining the confidence to be successful in the higher education arena—particularly if previous educational experiences have not been kind. This chapter examines how a pre-university preparatory program at Central Queensland University (CQU)—Skills for Tertiary Education Preparatory Studies (STEPS)—whose philosophy reflects recent theories of transformative learning works as a vehicle for encouraging marginalised learners to unshackle negative perceptions of themselves as learners and begin their journey as lifelong learners. A tool that facilitates this process is Soloman and Felder's *Index of Learning Styles* (*ILS*) (Felder & Brent, 2005) used in the program's writing course. (The *Index of Learning Styles* is a self-scoring questionnaire for assessing preferences on four dimensions of the Felder-Silverman model and can be accessed at http://www.engr.ncsu.edu/learningstyles/ilsweb.html)

As lecturers in the STEPS language course, we believe that effective adult learning should be holistic and transformative and that teaching, to be effective, should acknowledge that different students learn in different ways. We also believe that if students are encouraged to be flexible in their approach to learning, and are given a wide variety of strategies, their adult learning experiences will prove to be more enjoyable and thus more successful than many of their past learning experiences have been. Consequently, the STEPS language course gives students learning strategies from both inside and outside their preferred learning styles. Both qualitative research and anecdotal evidence suggest that a better understanding of individual learning style preferences and a newly developed repertoire of learning strategies have indeed helped to transform many STEPS students' perspectives of themselves as learners. Every year many students tell their stories of how understanding learning styles has transformed their perspectives on learning and has allowed them to shed past notions of marginalised education.

What is STEPS?

A pre-university preparatory program for adult learners, such as STEPS, has been vital for Central Queensland. The region has a low percentage of adults with tertiary qualifications. Figures from the 2001 census show that the percentage of adults who had attained graduate status stood at 4.8 per cent for the Fitzroy Statistical Division, which covers much of Central Queensland. According to the Commonwealth Department of Education,

Science and Training in 2001, this was considerably lower than the national average of 8.2% (McConachie & Simpson, 2003). CQU as far back as 1986 realised the urgency of developing a preparatory program that delivers to marginalised members of the community not only academic skills that would prepare them for success in tertiary studies but also the understanding and attributes to deal with personal and social change. Consequently, STEPS came into being on the Rockhampton campus. Since then, this program has grown to assist yearly over 400 adult learners on the CQU regional campuses of Emerald, Mackay, Gladstone and Bundaberg as well as in Rockhampton. The aim of the program is to develop in second-chance learners, traditionally under-represented in higher education, the concepts, skills, strategies and attitudes that will enable them to become independent, lifelong learners with the ability to make successfully the transition to undergraduate study. STEPS targets people who are at least 18 years of age. Students are selected on the basis of results in entrance tests, an interview with STEPS staff and consideration of educational disadvantages. Since its inception, the program has undergone significant changes in its teaching and learning focus and now emphasises the development of attributes desirable in graduate students. Furthermore, the development of these attributes occurs within a student-centred approach to study through an integrated curriculum.

STEPS has many modes of delivery. Both the STEPS Accelerated program and the STEPS Extended program are delivered full-time, are AUSTUDY approved and are offered at no cost to students. STEPS Accelerated is delivered over 12 weeks of full-time study, and STEPS Extended is delivered over 24 weeks of full-time study. Alternatively, STEPS Flex is delivered over two terms at night as a part-time program of 24 weeks, and STEPS External is a 24 week part-time course available to students who will study in a distance, off-campus mode. Each mode has its own set curriculum, and the courses incorporated into each program are Language and Learning, Tertiary Preparation Skills, Computing for Academic Assignment Writing and Mathematics. These courses have played a significant role in STEPS students' subsequent academic success.

Fear of Learning

Many STEPS students have been forced into and thus fear adult learning. Their worlds are changing as divorce, job loss that often leads to long-term unemployment, physical and mental disabilities and poor health have led them to revisit learning institutions that they thought they had left forever. Academic failure, which in classrooms of the past has created a great sense of inadequacy, generates fear in many of these adult learners as they face the university environment. This belief in failure, a habit of mind, has tainted

their image of themselves. According to Mezirow (2000, p. 18), a habit of mind refers to "a set of assumptions—broad, generalised, orienting predispositions—that act as a filter for interpreting the meaning of experience". Some of these habits of mind include social norms and customs, conscience, learning styles, philosophy, personality traits, values and attitudes (Mezirow, 2000, p. 17). Often apathetic attitudes to learning have been the result of poor teaching in classrooms of the past.

On the other hand, a poor sense of self in many of the beginning STEPS learners has sometimes been fuelled by unmet learning styles in their youth; therefore changing their habits of mind is vital. Knowles and his colleagues remind us that adults learn best when the learning reflects their immediate life needs, and are most motivated when their inner needs are met (Knowles, Holton, & Swanson, 1998, p. 172). Thus helping these STEPS students to understand the ways that they perceive and process information is one way of helping them to gain a greater understanding of why they may have faced past learning failures, and how they can transform themselves into successful adult learners.

To be fully effective, adult learning must be transformative. The most recent definition of transformative learning that is being widely accepted shows transformative learning as "the experience of consciousness through the transformation of basic worldviews and specific capacities of the self" (Elias, 2005). Cranton (1994) sees the fostering of emancipatory learning, which frees learners from influences that bind and restrict them, as so important that it must be the central goal of adult education. She too agrees that consciousness raising, that "process of developing self-knowledge and self-awareness" (Chaplin, 1985; cited in Cranton 1994, p. 174), is a vital part of transformative learning.

One way that the Language and Learning course in the STEPS program aids consciousness raising is to identify the learning styles of each learner. Explicit clarification of how their learning styles may have contributed to past negative learning experiences is also addressed and, through the adoption of new strategies, a more positive attitude towards themselves as confident learners is promoted. Through these transformed habits of mind, many STEPS students come to appreciate why they have experienced marginalisation as learners in the past, and are thus empowered to change and transform old patterns of disengagement.

What are Learning Styles?

A greater understanding of learning style preferences can provide valuable insight into the ways that individuals can learn most effectively. Felder (n.d., p. 1 of 3) states that:

> Students preferentially take in and process information in different ways: by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analysing and visualizing, steadily and in fits and starts….When mismatches exist between learning styles of most students in a class and the teaching style of the professor, the students may become bored and inattentive in class, do poorly on tests, get discouraged about the courses, the curriculum, and themselves, and in some cases change to other curricula or drop out.

The notion of preferred learning styles is a contested term, say Gordon and Bull (2004), who believe that it is important to understand that learning styles are not static. Nevertheless, Keefe (n.d., cited in Felder & Brent, 2005, p. 58) claims that learning styles are "characteristic, cognitive, affective, and psychological behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment". He maintains that learning styles or preferences are shaped by many factors including gender, age, personality and temperament and can change over time, as the outside world influences not only how teachers teach but also how students think that they should learn. Such knowledge is important to learners as they come to realise that changes can be made.

This knowledge of learning styles in STEPS is achieved through the completion of the *ILS*. Developed in 1991 by Richard Felder and Barbara Soloman, the *ILS* is a multiple choice instrument with 44 items (Felder & Brent, 2005, p. 61). The designers of this model have been influenced by the 1984 work of Kolb and the Myers-Brigg Type Indicator, as well as the visual-auditory-kinaesthetic formulation of modality theory and neurolinguistic programming (Felder & Spurlin, 2005, p. 1). Despite the obvious influences of these models, the Soloman/Felder instrument is unique in the way that the dimensions are combined. Felder and Spurlin (2005, p. 1) state that it classifies students as having preferences for one category or the other in each of the following four areas:

- *active* (learn by trying things out) or *reflective* (learn by thinking things through);
- *sensing* (concrete thinker, practical, oriented towards facts and procedures) or *intuitive* (abstract thinker, conceptual, oriented towards theories);

- *visual* (prefer material presented visually) or *verbal* (prefer material presented using written or spoken explanations);
- *sequential* (linear thinking process) or *global* (holistic thinking process).

Upon responding to the items, students are then able to record their degree of preference by seeing where they fall on the continuum between the two extremes of the four categories, and come to understand the types of learners that they are.

Lecturers as well as learners are advantaged when learning styles are understood and acted upon. All teachers have favourite methods of instruction, and these will obviously disadvantage some learners. Research shows that students achieve better results when their styles match those of their lecturers (Pizzo, 1981). In addition, Sims and Sims (1995, p. 4) report that, when students are taught according to their individual learning styles, their academic achievement increases, as do their attitudes, self-esteem, discipline and outlook towards the future. However, Felder's research has also shown that, if lecturers teach exclusively in their students' preferred modes, the students may not develop the mental dexterity that they need to reach their learning potential (Felder, 1996, p. 1). All of this information can therefore assist lecturers in the design of learning programs that address the learning needs of all their students. It can also aid students to see the connection between specific strategies for learning and why these strategies are necessary for effective learning (Felder & Spurlin, 2005, p. 110). This knowledge has enabled STEPS language lecturers to provide opportunities for students to work well in all learning style modes. To make their journey into adult learning at university a more positive and potentially transforming one, STEPS students are thus exposed to, and encouraged to develop, a wide range of learning strategies and skills that complement all learning styles.

Effective Learning Strategies

Two strategies among many taught in the Language and Learning course that cater for all learning extremes are Mind Mapping and clustering. Mind Mapping (Buzan, 1999) allows students to work with the whole brain by thinking logically and creatively at the same time; clustering (Rico, 1983) encourages a broad, creative, intuitive response. For global learners, who need to understand the "big picture" before the "parts" make sense, Mind Mapping and clustering are self-organising, and assist the brain to see the whole picture because they focus on the relationships among things (Rico, 1983, p. 3). Mind Maps help learners organise their thinking, plan and remember more effectively (Buzan, 1999). Moreover, for sequential learners,

Mind Maps are logical in that they allow analysis, link ideas and have structure. Mind Maps and clusters work for visual learners by representing much of what they are learning in the form of symbols, colour and pictures. Verbal learners, who find it difficult not to use words, find Mind Maps helpful for paraphrasing because they must limit the words that they use and find images, symbols, pictures and metaphors to represent what they are trying to say. Both strategies give STEPS students concrete and creative frameworks for their thinking.

Other strategies that specifically cater for both global and sequential learners include graphic organisers and the free writing technique. Graphic organisers provide a structure that sequential learners appreciate, and that global learners need in order to make sense of what they are writing. Students are able to fill in the table in short form or dot points after they have identified their main point and its relationship to the context in which they are working. Once this has been achieved, the learner can return and fill in the details that will be developed into sentences and paragraphs. Free writing (Elbow, 2000) works well for global learners, and can assist sequential learners, who like lists, to broaden their ideas. It is a kind of verbal clustering. Quite the opposite of graphic organisers, free writing allows students freedom to transfer their ideas to paper intuitively, quickly and without having to worry about the conventions of writing. Once they have "talked to the paper", they can, at their leisure, go back to their work and structure it according to the conventions of the genre required. Again these strategies are successful as all learners, despite their preferences, are encouraged to practise skills where they may not be strong. Gaining control over these strategies can free students from negative beliefs in their writing and thinking abilities. Including strategies both within and outside their preferred styles can enhance students' ability to learn and also transform their understanding of themselves as marginalised learners.

Changed Perceptions

The identification of learning styles proves to be a liberating experience for most STEPS participants in that they come to a greater comprehension of themselves and their individual talents and intelligences. It is also significant in providing some understanding as to why previous learning experiences may not have been viewed as positive. Many STEPS students have come to realise that they are not "dumb" but simply learn in a different style from the ones previously imposed upon them. Past students' reflections speak to this revelation.

Let us introduce you to three typical STEPS students. Christopher, Michelle and Rebecca are not real people, but are composites of many of the clientele in the STEPS program. Although they vary in motivation, past experiences, values, temperament, self-belief, self-confidence and learning styles, these three students share negative memories of past schooling and consequent feelings of marginalisation. However, on entry to STEPS, they were all highly motivated in their desire to make changes to their lives through second-chance education. All three learners have found that discovering their learning styles has been empowering in the quest to break through the barrier of seeing themselves as marginalised learners.

Christopher

Christopher is 30 years old and lives in a *de facto* relationship with the mother of his five year old daughter. He struggled as far as Year 10 at high school, where he perceived himself as "dumb". Since leaving school, he has been unemployed, apart from brief stints of casual work picking and packing small crops. With more family responsibilities, he decided that it was time to seek more direction in his life. On entering STEPS, Christopher confided that he was "scared stiff" because he was "dumb" and he really didn't know why he even came as he "wouldn't be able to do it [university]". Two weeks into the program and on completion of the *ILS*, Christopher was excited at the prospect that perhaps his marginalisation as a learner at school was not because he was dumb but because the strategies used by his teachers had not catered for his learning needs. Christopher confided that he was bored by the uninspiring classroom structure of his childhood, where, in his experience, students sat and listened and teachers stood and talked. Not being able to see the point of some lessons meant that he was unable and unwilling to learn them.

The *ILS* allowed Christopher to discover that he was an active, verbal learner. He realised that he liked to experience topics that he was learning about for himself so that he could discover more information. Christopher also came to the conclusion that verbal learning helps him because he uses it while talking ideas over with other people to find out different points of view. He now knows that, if he can share his thoughts on the material being taught and then "do" something concrete with it, he can retain the concepts as they have meaning to him. Christopher concluded that had he in his school days understood that there were strategies that he could have applied to learn from those teachers who "talked all of the time", he may very well have had a much more positive view of his learning experiences.

Michelle

Michelle is a 42-year-old divorcee who has five dependent children aged 16, 14, 12, 7 and 5 years. For the last 10 years she had various positions, predominantly as a cleaner in private homes and was content with her lot as she believed that that was all that she was capable of achieving. Michelle is typical of a marginalised learner who exited Year 10 with very poor academic results. She felt that she was incapable of learning but, upon completing the *ILS* during her STEPS experience, she gained a greater understanding of how her past learning experiences had created her negative habit of mind about herself as a learner.

Upon reflection, Michelle discovered that at school she was a sequential learner who loved organisation but who lacked the skills to be organised. She said that she used to think about set study times, timetables and having a neat study area, but she never actually learnt strategies to put this into practice. She confided that, as an adult, her attention to detail allows her to run her home like clockwork, which gives her a great deal of satisfaction. She also believes that it is her attention to detail and natural ability to organise her cleaning jobs that enables her to be efficient in her job as a cleaner. She prides herself on being seen by her employer as good at what she does.

Completing the *ILS* helped Michelle to see that her ability to reflect as well as her organisational skills at home and in her job could be transferred to the student life that she wished to lead. Michelle also realised that she needs to learn things in a logical sequence and, as a reflective learner, needs time to think about what she is learning. She said that if, through too much reflection, she missed a step in a subject at school, she would panic, shut down and feel totally overwhelmed. At school she would spend weeks thinking about an assignment, then "knock it off" the night before it was due. Michelle admitted that she had no real understanding of what she had done; she was simply good at finding information and "pinching" it. Michelle confided that she had gone through school "being good at being good" and "being inconspicuous". She felt marginalised in a system that did not cater for strongly reflective learners. Michelle believes the work on learning styles that she completed in those first few weeks of STEPS has been like discovering a key not only to her character but also to her brain, and she senses that this knowledge will be invaluable in the next few years of study. Michelle has experienced a reassessment of self.

Rebecca

Rebecca is a 22-year-old single female who has no dependants and lives at home with her mother and father. Rebecca believes that she struggled to learn at school. She could only ever remember trivial information and, because of this, she was an average student. Upon completing the *ILS*,

Rebecca discovered that she was "not as dumb as she thought she was". She admitted that, as a school student, she sat quietly in the second back row and hoped that her teachers would not ask her any specific questions. Before Rebecca found this out, she was terrified that she would fail STEPS because she didn't think she had it in her to learn and succeed.

Rebecca is a visual, sensing learner. As a visual learner, she has come to understand that she learns best when she can picture something or imagine it. Rebecca did not realise that there were strategies that she could use as a visual learner to help her to learn in situations where teachers were mainly verbal learners. She is also a sensing learner who finds it easier to understand information if there is a context to place it in, or a real world application for it. Unfortunately for her as a school student, the subjects that she studied were not always presented to her in this way, and she believed that there was no point in listening and "tuned out". Now that Rebecca understands how she learns best, she is much more confident and actually looks forward to assignments and study as she is aware of strategies that suit her particular learning style. Rebecca confided that she feels that discovering her learning style has opened a whole new chapter in her life and her potential to learn.

Transformed Student Voices

Although these fictionalised portraits represent the type of STEPS students who present every year across all five campuses, the following students are real, and speak about their transformation from marginalised learners to learners who are ready to undertake the academic adventure. All names used in this chapter are pseudonyms.

Student voices that tell stories of transformation are a valued part of STEPS. At the end of each program, students are invited to take part in focus group interviews. Over the years, these discussions have provided the STEPS team with invaluable data about the degree of consciousness raising that takes place in many of these learners during the preparatory program. Thus focus group interviews were used as the primary data source for this chapter for, as Gillham (2000, p. 62) notes, "the overwhelming strength of the face-to-face interviews is the 'richness' of the communication that is possible". Furthermore, Kamberelis and Dimitriadis (2005, p. 903) show that, "because of their synergistic potentials, focus groups often produce data that are seldom produced through individual interviewing and observation and that result in especially powerful interpretive insights". The focus group interviews were taped and transcribed in order to provide a true representation of the participants' voices.

Sheree is already committed to lifelong learning:

> In a generation where one was seen and not heard, I was never
> brave enough to ask why or how. My school years were some
> of the toughest days of my life. On reflection and on
> knowledge I have gained [*ILS*—STEPS class handout].
> I believe I was a global learner…where I was made to feel
> stupid, discouraged and self-doubting….I now know there is
> an active side to my learning—the seeing, doing, reading, the
> love of constructing, being highly productive, meeting
> deadlines and putting new ideas into practice. This describes
> my learning now….I am being innovative in a quest to
> discover new and exciting ways to become the best at what I
> do for the rest of my life.

Barb challenges the notion of being a marginalised learner when she says:

> What I've learnt most so far is that I've learnt a lot about
> myself and how I learn best. They [her family] used to say I
> was stupid, but I'm not stupid and I have shocked myself how
> I'm taking in and achieving things. I'm not stupid. I now know
> how I learn and put things together and I'm doing it more
> quickly and effectively. I'm not running around and I'm
> getting things done.

Joan always thought that her learning was compromised by her perception of herself as a learner:

> I find some concepts quite confusing until something makes it
> click into place and I can suddenly understand. I always
> thought I was a bit thick but now I know that I am merely
> being a global learner.

Beth identified herself as a global learner on the *ILS* and has found that using Mind Mapping enables her to have lots of ideas at once as she can:

> …record the ideas quickly as they jump into my head and then
> I can go back and fill in the details. I used to panic and then
> forget some but now I know that there is a way to get them all
> out of my head before I forget them.

She indicates a growing confidence in herself as a learner when she says:

> I have learnt more about learning in the last three weeks than I
> learnt in 12 years of school. I wish I had known then that I was
> a global learner and not stupid. My teachers would get so
> stressed when I had to get my draft checked and I felt bad so I
> didn't ever hand them in and I just failed in English. I now

> know that its all right to have lots of ideas at once because I
> can mindmap them all and go back to fill in the details of the
> ones that I want to use and leave the others unfinished and
> that's ok. Great news for me.

Sharon identified as being an active, sequential, sensing, visual learner, and has shown her understanding of how this will optimise her future success at university:

> I will have to join a study group that will allow me to explain
> and discuss topics from class. Also brainstorming and Mind
> Mapping will help me to think of how these theories apply to
> real world situations.

Greater understanding of themselves as learners appears to have increased the confidence of many students in their ability to learn in situations that may not be compatible with their preferred learning styles.

According to Robert:

> With my knowledge of preferred learning styles and applying
> strategies to compensate for negative aspects of my traits, over
> time study will become like second nature. To cope with being
> a visual learner I will colour code and use mindmaps to show
> links. If I mind map, I find it easier to organise my information
> because I am a global learner.

Perspective Transformation

This research indicates that giving students the opportunity to understand their individual learning style preferences can act as a catalyst for perspective transformation. According to Cranton, perspective transformation is defined as "an individual's revision of a meaning perspective or a worldview as a result of critical self-reflection and discourse" (Patricia Cranton, personal communication via email, 5 November 2003). It is concerned with personal transformation that is experienced when individuals see the limitations or distortions of worldviews or perspectives that they hold and, through the process of critical reflection and dialogue, reflect on, revise and change those worldviews or perspectives. Thus, armed with a new awareness of their preferred learning styles, as well as a range of strategies that they can draw on in a variety of learning situations, many STEPS students come to transform perspectives that they previously held about themselves as learners. Consequently, they have a greater understanding of the implications that this will have for their future learning engagements. This understanding frees them to reflect on past negative learning experiences and to view them

in a different light. This can be a powerful catalyst for transformed perspectives as a learner.

Conclusion

When students are given the opportunity to discover their learning preferences, many are able to revise their existing perspectives about themselves as marginalised learners and to change them. Understanding their specific learning preferences gives them a framework for adopting learning strategies that they can call upon in various learning situations. Armed with this repertoire, they can challenge old beliefs about themselves and create new realities where they now position themselves as beginning university students, and not as failed or marginalised students incapable of university studies.

Of considerable significance to those of us who have developed the program is the implication that this research has for maintaining a relevant pre-university preparatory program that encourages not only the development of skills but also self-awareness. Consideration of learning styles has featured significantly in the creation of curriculum materials and in the delivery of the program to the adult learners who embark upon a journey of both consciousness raising and skill development. Transforming perspectives about themselves as learners and providing opportunities to build a repertoire of learning strategies for a variety of learning situations drive the development and delivery of the program. This is perhaps one of the main contributions that this research can provide to other universities endeavouring to present pre-university preparatory programs to adults wishing to return to study. It is more than a tool box of skills that adults require—it is a belief in themselves that they can achieve. It is through understanding how they "tick" and prefer to learn that potential students can find a common language to talk about their understandings of themselves as learners.

The students we have written about here are typical of many past STEPS students who have gone on to embrace lifelong learning with dedication and enthusiasm. The self-esteem and confidence that they have gained from the awareness of how they learn have led many past students to great success in their academic pursuits. Their families and communities have also gained. Pearson (1998) believes that, as individuals transform their perspectives, they transform every system of which they are a part. Today, in many areas of Australia, and even the globe, there are teachers, solicitors, psychologists, doctors and engineers, to name but a few, who had their dream of a second chance at education first fulfilled in the STEPS program. Whether or not the adult learners we have featured in this chapter continue their learning

journeys at tertiary institutions like CQU, many will become advocates of *doctrina perpetua*. They have left their old learning lives, hopefully forever, through gaining a greater awareness of themselves and their individual gifts. Sharon perhaps best encapsulates this when she says:

> I now know that you can achieve whatever you put your mind to. There are different levels of success. We all learn at different levels, achieve different marks, write different assignments and get excited by different learning skills. Where to from here? A step at a time.

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