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Writing, identity and ways of knowing in science

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Abstract

In the tertiary environment, the ability to write is crucial to success. The acquisition of academic discourse is often a difficult task for many students, particularly those from non-English speaking backgrounds. This paper looks at the problems students can face with writing at university and also explores the role that identity and self-belief play in academic writing. It focuses on the experiences of two science students from non-English speaking background families and their adjustment to writing in the tertiary environment. A qualitative analysis of these two students was conducted, using semi-structured interviews and samples of students' writing. Ivanič's (1998) four writer identities were used as a framework for exploring the students' perceptions of themselves as writers. Their initial struggle with aspects of academic writing, their negotiation of new identities for themselves as writers and the close link between writing and a sense of self were examined.

Introduction

Writing is important because it is a valuable tool for learning and the writing process helps learners organise and clarify their thoughts (de la Harpe & Radloff, 2000; Prosser & Trigwell, 1999). In the tertiary environment, the ability to write is crucial to success. In most cases, writing is used as the sole means of assessing both the merit of students and their understanding of their subject. Students therefore need to know how to present an argument and how to frame their thoughts coherently within the conventions of their discipline in order to do well. Understanding how to use the written genres of the discipline is as essential to successful membership of a disciplinary community as understanding the subject knowledge (Candlin, Gollin, Plum, Spinks, & Stuart-Smith, 1998; Hyland, 2000; Taylor et al., 1988).

Achieving academic literacy is more than a question of developing reading, writing, and communication skills and applying them appropriately; it also "demands the creation of meaning and the expression of understanding" (Taylor et al., 1988, p. 2). Mastering this literacy is a complex task which requires an advanced vocabulary and logic as well as specialised knowledge (Geisler, 1994). There is nothing neutral about this practice as it tends to privilege ESB (English Speaking Background) middle class students as their family background and schooling may prepare them better for the types of learning and literacy that happen at university. It is often more difficult for students from other socio-economic and language backgrounds, who may be the first generation in their families to attend university, to make an easy transition to the tertiary environment (Benesch, 2001; Gee, 1998; Rubin, 1995).

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The way students acquire academic literacy can perhaps be compared to the way learners acquire a second language (Kramsch, 1993); as Kutz (1998) points out: “For our students...the standard forms of academic discourse are a new style, a new dialect, in a sense a new language” (p. 41). In both cases, meaningful acquisition of the new language takes place when the language is viewed not as an end in itself but rather as a means of constructing knowledge. Similarly, as in the case of second language learners, learning the language of the university involves more than just mastery of vocabulary and grammar but also involves learning a new culture and way of understanding (Kramsch, 1993). Students need to find their own site of meaning where they negotiate a “third place” between their own voice and the new voice of the university, articulating “their new experience within their old one, making it relevant to their own lives” (Kramsch, 1993, p. 238).

Students bring a range of identities to university, depending on their individual backgrounds. Melucci (1996) defines identity as “a process involving constant negotiation among different parts of the self and among the different settings or systems to which each one of us belongs” (p. 49). The way this is negotiated has implications for the way students perceive themselves as writers. A sense of personal identity, of who one is and where one fits in the scheme of things is important for the act of writing (Ivanic, 1998; Rubin, 1995), as the way we use language is linked closely to how we perceive ourselves (Norton, 2000; Norton & Toohey, 2004). Rubin, in particular, has found that writing and identity are closely linked and that writing is an individual cognitive act that also expresses both a personal and a social identity: “Written language both reflects the writer’s identity, and at the same time creates that identity” (Rubin, 1995, p. 3).

I work in the Language and Academic Skills (LAS) Unit in the Faculty of Science, Technology and Engineering at La Trobe University in Melbourne. At many universities, Learning Skills Units are centralised but at La Trobe there are five LAS Units, four of which are specific to each faculty and one which caters for international students throughout the university. At our LAS Unit, our work focuses on helping science students with their writing and communication skills. This ranges from assistance with first-year laboratory reports to thesis preparation. La Trobe University is in the north western area of Melbourne, which is one of the most culturally diverse areas of Australia. Just under 20% of our students speak a language other than English at home and a significant number are the first people in their families to go on to tertiary learning. Some of our students struggle with the demands of academic writing, some with the culture of the university and its requirements and others are able students who wish to improve their marks to be accepted into postgraduate study. We are also required by the faculty to administer an English Language Proficiency (ELP) test, which science students are required to pass before their degree can be awarded. The purpose of the test was to identify students who were having difficulties with writing and was set up due to concerns the faculty had as a result of negative feedback from employers about the writing ability of some graduates. The test consists of an essay question related to broad areas of science, such as biology, genetics, agriculture and mathematics. The students who fail receive individual assistance until their written English has reached an acceptable standard.

This paper focuses on the experiences of two students, Rosa and Nina (pseudonyms have been used to preserve confidentiality) who came into contact with me as a result of failing the ELP test and explores how they adjusted to academic writing and the challenges they faced. Both are from working class non English speaking migrant backgrounds and are the first members of their families to attend university. Both students were studying science and, despite their success at school, both were having difficulties with essay writing in their course. The writing up of lab reports where students report on a particular experiment posed no problems for them.

Case studies

Rosa

Rosa was born in Macedonia and came to Melbourne when she was five years old, with no understanding of English. She is now fully bilingual and uses both Macedonian and English at home. Rosa's first experience of English was when she started school:

When I first came here, I had no knowledge of the English language. I lived with my cousin who was exactly the same age as me who went to my primary school so the teachers tried to make it easier for me by having my cousin come into the class so that's how I picked it up a little bit quicker but it was still very, very hard.

Because her parents could not speak English well, she had no one to ask for help with homework and consequently became very self-reliant ("I learnt to use the dictionary"). Her transition to primary school in Australia was made more difficult by the fact that she went to four different primary schools. Her first school was close to her cousin's house; her second school was in the next suburb as her family had moved into their own house; then the family moved back to Macedonia for 13 months when Rosa was in the third grade and then returned to Melbourne for the last years of her primary education. This kind of upheaval would be hard but it was compounded for Rosa by second language difficulties:

...emotionally that affected me because I was constantly a bit shy and I found it hard to fit in so I did focus on my studies but English was never strong. I think up to about Grade 6 I had problems reading and writing ... I was afraid to ask for help so when you don't ask for help and when you're new, and you're shy, especially in a new school in a new country, it's really hard to improve.

Her secondary education was much more stable. She attended a school where 35% of students were from Macedonian backgrounds and particularly enjoyed English (having supportive and inspiring teachers throughout her schooling), maths and science. She did well at school in her final year and enrolled in a Bachelor of Science degree majoring in biotechnology but found the transition to university difficult, failing two subjects in her first year. The most difficult thing for her at university was adjusting to the writing style required by the discipline of science. She found that the writing style which she had developed at school was not regarded favourably and this, combined with not doing as well as at school, was clearly a very negative experience. She perceived the style her lecturers expected her to write in as boring and she wanted to retain her own style. To her, writing an essay should be more personal, more of an art form through which the writer could express her own personality while the writing style should be interesting, engrossing, entertaining and above all unique:

You know of all people the trouble I've had. The style that they require... The university is just ridiculous. You can tell me all the criteria that they want but if you've written something and even if it's in correct English, then they don't want it. You start using words that are, for instance, longer than five letters long and it's not like a compound in Biology, then they don't want to see it. You have to make everything really clear, very factual and you can't take twists and turns, it has to be very straightforward.

One of the requirements of an academic essay is that it should not be like a mystery story; that is, the reader should have some evidence of where the essay is heading in the introduction and the conclusion should not be a surprise. Rosa disagreed strongly with this approach. An introduction should "grab" the reader and she thought that the requirement that the writer has to clearly state her thesis and structure in the introduction made writing an essay dull and predictable with no flair. She saw no point in making the argument of the essay explicit. It was more important to her to keep the reader interested. Her approach meant that in her first and second year she received much negative feedback from her lecturers:

It's not even clearly defined how they would want it. They give you an essay and say 'here write it' and then you come back and they're like 'Well, it was all right. Your introduction didn't state this, this and this' and I go "yes, it did". "You should have actually said it" but it's very plain to just write it like that. Why should I have to write it just very plainly? Can't I be a bit more creative? "They make it hard for the reader to understand it" and I go "Well everyone here is at university so I'm sure they should be able to understand this" but the thing is they assume that what I've written is difficult because I've written it creatively.

When I saw her, Rosa had lost a lot of confidence in her writing ability. The fact that she had failed the ELP test was a further confirmation for her:

Maybe I have had troubles because of my home language... I've never really developed the level that most other people have got. I don't think I'll ever reach it... And that makes you feel inadequate. You know how discouraging it is, for instance, to work really hard and get a D for it.

She had strongly considered leaving university at the end of her first year but, because her goal was to be a secondary school teacher, she was determined to finish her degree. It soon became apparent to me that for Rosa, her identity was her defining characteristic. It had made her who she is. Through her experiences of migration, she had developed a strong and coherent sense of herself as a survivor:

It's been really difficult for me moving schools and then going back to Macedonia and then coming back here, you know, but the thing is, I think it all builds character. I mean it makes you appreciate things, it makes you become strong, it puts you into a good sort of rhythm as to how to survive in life. If you've been going to the same primary school all this time and you have everything easy, unless you struggle with something like English, then you don't learn.

Her life experiences have made her feel a stronger person and given her a desire to learn. They have also made her aware of how she differs from others and contributed to her own sense of a unique identity, one that she wants to retain at any cost. Her identity is a complex interweaving of her Macedonian culture, which she is both proud of and critical of, and her sense of being an Australian and her experiences of migration ("you have that sort of massive time when you are trying really hard to fit in and then you have that thing when you are trying to really stand out"), including encounters with racism.

It also became very obvious that there was a deep connection between her writing and her identity ("Look at my life. What do you expect? If you think about it, everyone's life is so unique right? Mine's so unique and my writing style is directly related to it obviously"). She saw her writing style as very close to her sense of her self and clearly felt her lecturers' criticisms were personal. She also had a strong sense of independence forged from her migration experiences, which meant she had some ambivalence to representations of authority in her life (her parents, Macedonian culture, religion and the university):

I think a lot of the people who are here feel constricted. They feel constricted by their families, they feel constricted by the language...look I don't. I just do what I want. I don't have to live by what other people say. It's very difficult you see because I'm the sort of person who wants to go to church, I believe in God yet I don't like to be told that I should...I believe in what I believe. I make the decisions that I want.

The sort of person who does not want to be told to believe in God is not going to accept a writing style that she feels is dictated to her from outside. This was understandably related to her attachment to her identity and her migrant experience of trying to "fit in" and "stand out". She was prepared to fit in, in terms of speaking and writing English fluently and conforming to her parents' career aspirations for her as these were what she wanted but she also wanted to stand out as her own person in opposition to

her parents on such issues as prospective marriage partners and living independently. In particular, she wanted to stand out in opposition to the writing style of scientific discourse.

When Rosa and I worked on her writing, her strengths soon became very apparent to me. Her vocabulary was rich and more developed than that of some native speakers, her sentence structures were varied and complex and her syntax and grammar were free from error. Her writing did not conform to the expectations of her lecturers in that her style tended to be discursive, her vocabulary richer and more flowery than is usually seen in standard scientific writing, and she would never clearly signal her argument in her introduction. Here is the opening to a Microbiology essay:

Modern society exists on many levels.

It would seem on the face of things that the world is forging ahead on a never ending road to technological and scientific enlightenment.

We live in times where advances in Biotechnology, Information Technology, Medicine and Space Science dominate.

However, a glimpse below the surface reveals that the technological fire is fuelled not entirely by society's quest for knowledge.

Her natural preference was to see her essay as a story (with "twists and turns"), and I attributed this to the fact that she had always been a keen reader and had in fact developed her fluency and love of English through story. However, although her approach to her topic was non linear and she would often stray from the main points, she would always answer the question and tie it up in her conclusion. Her essays always had a beginning, middle and end, even if these were sometimes not clearly defined. There were minor issues with Rosa's writing, for example, while she used paragraphs and signalled the main idea in the first sentence, she started every new sentence in the paragraph on a new line. There were also some issues with coherence but these were very easily overcome.

Because I realised how important Rosa's identity was to her, my first step in working with her was to build on the writing abilities she already had and rebuild her confidence. I praised the strengths in her writing and encouraged her to retain her writing voice but to work on integrating a stronger structural framework into her writing and to stick to the topic. I also encouraged her to see that learning a new style of writing did not result in invalidating her old one by using the metaphor of clothing, for example wearing different clothes to a funeral compared to a party. Clothing, no matter how formal or outrageous, does not negate the true identity of the person wearing it. The academic writing style favoured by science was alien to her and had never been fully explained so we also spent some time reviewing the structure and purpose of a scientific essay. In many ways Rosa's style of writing would have been more accepted in humanities subjects but her direction was towards science. She loved chemistry and wanted to be a science teacher so it was important for her to succeed in order to achieve her goals. Last year when she completed her degree, she applied for teaching and was accepted but instead chose to defer that option and enrolled in an Honours degree in chemistry.

Nina

Nina was born in Melbourne but both her parents are from a Maltese background. She grew up speaking Maltese and English and describes herself as bilingual. She has always spoken English at home with her mother and sister and speaks Maltese with her father and her extended family. She had a much smoother transition to her schooling than Rosa because she could speak English by the time she started school (and thus did not experience the same dislocation) and she also only attended one primary school and one secondary school. Nina became aware from an early age that she was interested in science. Some of the early childhood memories she recounted to me were of playing with the microscope set her parents had given her when she was six. She enjoyed science and maths all the way through primary and secondary school. In contrast, she "never enjoyed English that much". At primary school the only kind of writing she liked was doing projects. What appealed to her was the focus on presentation ("I loved doing the fancy headings, borders, a front cover and stuff like that; you got extra marks") and the factual nature of the content. She told me she hated any

creative or personal writing and she would never read a book for pleasure: “I only read them for school, we had to”.

At secondary school, she realised she wanted to specialise in science and she was encouraged in this by her teachers who clearly recognised her interest and ability in this area. Nina performed well in the VCE², receiving Bs in her science subjects. Interestingly, the subject she got A in was English, the least favourite of all her subjects. Her English teacher was very keen for her to study English at university but Nina was not interested at all in this option.

Nina enrolled in a degree in animal science at La Trobe University. She did not find the transition to tertiary study too difficult, although she found learning at university to be a very different experience from secondary school both in terms of the subject matter and the expectations on students. She enjoyed the laboratory work in her degree much more than writing: “the writing part is not like my favourite thing. I enjoy more doing the practical side, doing the experiments”. She had a number of lab reports to write up each semester but she did not mind this type of writing as it was closely related to what she was doing, consistent with her preference in her primary school days of doing factual projects.

The writing task she had difficulty with was essay writing (“I’ve always hated writing essays”) and this was what brought her in her second year of study into contact with me at the LAS unit. She failed the ELP test and her paper demonstrates the extent of her problems at this time with her writing. Her answer was very short, her paragraphing was non-existent and what there was consisted of fragmentary sentences that lacked any sense of a coherent idea. We started a series of individual sessions to work on her writing skills. What struck me at the time was her lack of self-confidence. As with Rosa, sitting and failing the test was both intimidating and demoralising for her. My memory of her at this time was of someone dressed all in brown, who spoke so softly that I had to lean forward sometimes to hear her.

In our individual sessions, I soon saw that there was little point in teaching generic essay writing skills and that the teaching of writing had to take place within the context of her course work. Her main problems were with coherence: she tended to present lots of information and the main point of a paragraph was often buried in an avalanche of examples. She would often fail to clearly signal an argument, at times her expression seemed stilted and her sentences could be short so that the information in the paragraphs lacked flow:

Species A consists of a single gut compared to species B and C (Richardson & Woller, 1986; Gartrell, 2001). Species B and species C consist of hard items in their diet such as insects and seeds, which may require them to consist of a more complex gut.

Sometimes her writing gave the impression that she had not understood the topic. Our discussions in our sessions together always found that the opposite was in fact the case and that she had an extraordinary depth of knowledge and the challenge was to get her writing to express it. To achieve this, we worked on confidence building and overall coherence, both in paragraphs and between paragraphs, so her writing developed logically and no longer jumped around. I noticed her writing improved on any topic of science that interested her. Nina was aware of this herself. For her, interest and understanding in her subject was the key to writing about it.

I think it’s because if I write something that I enjoy, it comes out a lot better than for something that I don’t. It helps if you enjoy the area. I like learning about it so that helps when you’re writing. If you told me to write an essay on war or history, that wouldn’t be a good topic. – I wouldn’t find that interesting.

² The VCE (Victorian Certificate of Education) is the equivalent of NCEA Level 3. Unlike NCEA, the VCE follows the traditional system of marking (A, B, C, D, E etc) where A+ is the highest mark awarded.

Halfway through her third year of study, Nina had a key experience that triggered off both an awareness of her future direction and a developing self-confidence in herself as a writer. Part of her third year in her animal science degree involved a series of lectures on birds from a lecturer in the zoology department. Inspired by this, she became very interested in birds herself. On a purely voluntary basis, she assisted with PhD projects on two different native bird species and helped with bird banding in different areas of country Victoria. Her work experience project in her third year involved a study of another native bird, which further fuelled her passion. When I read her report on this project, I remember observing the improvement in her writing and the development of a greater coherence. Previously in her studies, she had “just been doing enough to pass” and it was her involvement with this project in particular that further inspired her to do well enough to apply for Honours.

Nina underwent a remarkable transformation in her Honours year. She had been chosen for her desired project, which was analysing the diet of a native bird (species M) to assess its protein requirements, and she had a positive and supportive relationship with her supervisor (“We share our interest – it’s something she is very interested in too so it’s not like it’s just me”). As an Honours student, she was now definitely a full participant in the academic world of science and her identification and pride in this was palpable. In her second year, it seemed as if she were trying to blend into the surrounding environment. In her Honours year, she dressed in bright colours, wore a nose ring, dyed her hair various shades (purple and bleach blonde) and her overall demeanour was more confident.

This confidence translated into her writing. She continued to make regular appointments throughout the year and I was able to observe the improvement in her writing. In the final draft of her thesis her writing is assured, confident and flows well. It shows her conceptual control of her material and does justice to her understanding:

Species M has a similar alimentary canal compared to other nectivores such as hummingbirds and honeyeaters (Brice et al. 1989). In comparison to similar insectivorous and granivorous birds, nectarivorous birds tend to have a less muscular gizzard and shorter intestine (Richardson & Woller 1989). This anatomical structure may have developed in nectarivores since they consume an easily digestible liquid diet. The less muscular gizzard in species M suggests that these birds rarely break down hard shells of insects or the coats of seeds (Guntert 1981).

Not only is Nina’s approach to her writing confident, her planning and writing strategies are also sound:

First, like I brainstorm the topic and then I do some research, do some reading and that helps you like sort out what you’re actually going to talk about and then like I actually summarise each article – once you’ve got about 60 articles, it’s too difficult to remember what was in the first one that you read and then I sort all of that into sections and stuff like that and plan it out what I’m going to write about... while I’m out doing other stuff, I’ll have a think about it, having it at the back of my mind, just thinking about it before I sit down and start writing.

Her planning approach is suited to her individual style, as she has always found it difficult to sit down and just start writing. For this reason the ELP test would have been the worst way for her of assessing her writing. Instead she prefers to spend time thinking about the material and making sense of it in her mind.

Nina, above all, is a scientist. Her clear preference from her primary school days for doing factual projects is on the same continuum as the Honours student who loves her experimental work and participating fully in the world of science. She developed a sense of herself as a writer through her passion for her project and through her identification with science. This year she has enrolled in her PhD and is working on a project to increase the survival rate of a rare native bird.

Discussion and conclusions

I found Ivanic's (1998) research on writer identities helpful in interpreting the experiences of these two students. Ivanic proposes four interrelated factors that contribute to the notion of writer identity: the autobiographical self (the writer's life history); the discursal self (the self the writer constructs in the act of writing); the self as author (the writer's voice in terms of their opinions) and the institutional context for writer identity (Ivanic, 1998, p. 24-27). Ivanic stresses that writing is not a neutral activity that we come to in a vacuum and that when we write, our life histories – who we are, where we come from, our gender, ethnicity, social class, abilities and disabilities and the way these are “constructed in the socio-cultural context in which we live” (p. 182) – all form a major influence on the way we write. Rosa's triple migration experience meant she would have needed to evaluate her identity (where she belonged, how much of her original culture to retain etc.). This type of negotiation means that one's identity becomes a salient factor. Rosa had a coherent and well developed narrative of her life experiences; she saw her life as unique and her writing as part of her sense of self (“my writing style is directly related to it obviously”). This would explain why in the process of writing, the autobiographical self and the discursal self were so closely linked and why they played a vital role in her writing, and also why she was reluctant to change her writing style as she perceived this to be an attack on herself.

For Nina, her ethnicity was not as important to her as she had spent all her life in Australia and did not question her place here. Nina draws her sense of self not from her individual identity but from the discipline of science. Her passion for her subject and her positive relationship with her lecturers have all contributed to this (see Candlin et al., 1998; Hyland, 2000). Nina has had her sense of her identity and her self-esteem confirmed through her involvement in science. She developed from a student who by her own admission was “only doing enough to pass” and who was struggling with her writing into a successful postgraduate student. This gave her a strong sense of an institutional identity in that she had been “accord[ed]... status” (Ivanic, 1998, p. 27). Ivanic (1998) speaks of the possibilities for writer identity that exist within an institution: “In any institutional context, there will be several socially available possibilities for selfhood... some will be privileged over others, in the sense that the institution accords them more status” (p. 27). The institution of the university gave her success, status, a direction in life and a voice and from this she draws both her personal identity and her writer identity. Her attitude to writing changed as her self-confidence grew. From initially considering herself to be no good at writing, she became a competent writer, who employed sound writing strategies. This transformation was a direct result of her involvement and passion for science that stemmed from her childhood.

In contrast, Rosa's experience of studying science at university was less positive. She was not as successful as Nina and so did not have her self-esteem confirmed in the same affirming way. Unlike Nina, she did not feel herself a member of the discipline and the university's lack of acceptance of her writing (which was very closely linked to her sense of herself and her life experiences) was at times so discouraging for her that she considered dropping out of her course. What sustained her in the end, I think, was her own inner strength forged by her life experiences and her knowledge of her goals of becoming a secondary teacher and living independently.

It is interesting to observe how these two students positioned themselves in the discourse of science and how this affected their writing identity and their institutional identity. Wenger makes this process explicit: “We not only produce our identities through the practices we engage in but we also define ourselves through practices we do not engage in. Our identities are constituted not only by what we are but also by what we are not” (Wenger, 1998, p. 164). Nina saw herself as a member while Rosa felt an outsider and constructed her identity in opposition to the expectations of the university. Engagement as both “a mode of belonging and a source of identity” (Wenger, 1998, p. 174) plays a vital role in this process. Nina's passion for her subject and her identification with science meant that she felt a full participant which gave her “the legitimacy to make a contribution” (Wenger, 1998, p.

184). Rosa felt cut off from the empowering nature of this process and in her first year experienced the individual “powerlessness [that] results in being cut off from one’s self and one’s own ideas” (Blanton, 1998, p. 231).

It is also worth considering the role of self-belief and how this unlocked the writing process for both these students. Nina’s passion and Rosa’s sense of herself as a survivor gave each student the confidence to develop their writing. Once Rosa was able to see that her identity was not threatened by putting a little more structure into her writing, she could adapt her writing style so that it conformed more closely to the discourse of science and thus improved her marks. When Nina felt she could not write, she had no voice; she could not express what she wanted to say. For her, discovery of her voice was critical in her development as a writer. Once she had an interest in what she was writing about and had that interest further confirmed by academic success, she was able to transform herself from a novice writer with problems to a writer at home in the discourse of science. In short, she could now write authoritatively, literally as an author in control of her own writing. When I first saw her, she had lost all confidence in herself. My belief now is that she could write all along but she did not believe she had this ability. Self-belief in her case played a crucial role in her development as a writer and in her growing overall confidence.

These case studies raise implications for universities. Many students have difficulty in adjusting to university and in learning the ways knowledge is constructed in their discipline. This task is hard for all students but can sometimes be compounded for students from NES (Non English Speaking) backgrounds and those who are the first in their families to attend university. The challenge for universities is not to see these students in a deficit mode but to acknowledge and build on the strengths that students already have. Both students in the case studies scored As in VCE English but both were demoralised in different ways with their writing when I first came into contact with them in their second year. Nina felt she was “no good at writing” (which was surprising, given her school results) and Rosa was convinced that she would never reach the same standard as native speakers. This could have been due to the negative experience of failing the ELP test, but could also be linked to an overall experience of university at the time that was less than positive for them both. Nina had not yet discovered her passion and direction and Rosa was discouraged by criticism and lack of success. My role as a learning advisor was crucial here in providing the supportive learning environment that can exist within the context of a meaningful relationship (Clarke, 2000).

It was important for both these students that writing was not seen as a set of skills to be mastered but instead as a vital component of their learning. Both lacked clearly defined contextualised assistance with essay writing in their subjects. Essay topics were set out in the subject handbook and students signed up for their first preference, wrote the essay and submitted it. The teaching of writing in science cannot be seen as non-essential and additional but needs to be embedded within the curriculum (Chanock, 1994, 2000; de la Harpe & Radloff, 2000; Green, Hammer & Stephens, 2005). In our faculty, the ELP test was disbanded this year (2005) and we are working with lecturers to develop students’ writing skills within the context of the various disciplines.

It is also important to have a pedagogy of writing that engages with learners’ identities, rather than expecting students to abandon their identity when they start to write in academic discourse (Kutz, 1998; Zamel, 1998). Students entering the new discourse community of the university must take on its ways of knowing and writing to succeed but not at the expense of their identity, of who they are; what is needed is a “plurality” (Geisler, 1994) that reflects and recognises the many backgrounds of students and how they enrich tertiary culture. As Rosa herself says:

Students should be able to show their own individual writing style as long as they meet the requirements needed to demonstrate their knowledge. Why not? Only by delaying it, people will just lose their hope and just want to leave so you know I think there just needs to be more flexibility, more acceptance of different individuals ‘cause everyone is different and we aren’t all going to write in the same way or even want to, you know.

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