Managing the expectations–reality mismatch through aspirations, access and achievement: Engineering a first year undergraduate student's habitus

Barnard Janse van Rensburg, Faculty of Engineering and Surveying, University of Southern Queensland, Australia

P. A. Danaher, Faculty of Education, University of Southern Queensland, Australia

Henriette van Rensburg, Faculty of Education, University of Southern Queensland, Australia

Abstract

Despite some criticisms, Bourdieu's (1977) notion of the habitus remains a powerful conceptual tool for analysing how individuals perceive and engage with different worlds. It certainly constitutes a generative explanatory framework for examining how first year undergraduate students navigate their ways through the often competing pressures of university study, paid work and home life. In particular, the habitus is helpful to students and university personnel alike in managing the common mismatch between the expectations and reality of the first year experience. This paper explores selected aspects of the first named author's habitus as a first year mechanical engineering student in an Australian regional university. An audiotaped semi-structured interview clustered around the themes of aspirations, access and achievement is used to identify how the student engineers his habitus and also to posit implications for future practice by the student, his family, his friends and the relevant university personnel.

Introduction

A crucial theme in the burgeoning literature about the first year experiences of university undergraduates is the student's central place in managing those experiences. Among other roles, students are involved in interacting with social learning spaces established to maximise student engagement (Matthews, Adams, & Gannaway, 2009), responding to assessment feedback opportunities (Potter & Lynch, 2008) and placing university study within the wider gamut of their lifeworlds and cultural practices (Mattarozzi Laming, 2007). Students are thereby required to take the lead in synthesising and integrating the competing demands on their time and attention, and to display from the outset the capabilities and dispositions of independent learning – or at least dependent and interdependent learning leading to independent learning.

Yet the capacity to take this lead varies strikingly from individual student to student. Some achieve excellent results, some pass their courses unspectacularly and others become attrition statistics (Rienks & Taylor, 2009). One among several possibly fruitful ways of explaining this diversity lies with Bourdieu's (1977) still very useful concept of the habitus, which he defined as "the durably installed generative principles of regulated improvisation … [which produces] practices" (p. 78), and which Webb, Schirato and Danaher (2002) elaborated thus:

> A concept that expresses, on the one hand, the way in which individuals 'become themselves'–develop attitudes and dispositions–and, on the other hand, the ways in which those individuals engage in practices. An artistic habitus, for example, disposes the individual artist to certain

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activities and perspectives that express the culturally and historically constituted values of the artistic field. (pp. xii-xiii)

The habitus therefore provides a reasonably stable framework for guiding the individual's interactions with the world and is also changed in turn through these engagements; it is a simultaneously durable and dynamic phenomenon. For first year undergraduate students, a habitus attuned to the world of university is particularly important in helping them to make the transition through their programs (Fisher & McConachie, 2009) as well as in resolving any mismatches between expectations and perceived reality that might arise during those programs.

This paper explores selected ways in which the first named author, a mechanical engineering student in an Australian regional university, currently moving from first to second years in his program, goes about engineering his habitus. We analyse extracts from a semi-structured interview between the student and the other authors in relation to three key themes: aspirations, access and achievement. What emerges is the student's generally clear articulation of his developing habitus as a prospective engineer, informed and in some ways contradicted by his constructions of his program and other aspects of his life. It is by means of that habitus, we argue, that he attains a tentative and necessarily temporary resolution of the perceived mismatch between expectations and reality.

The paper is divided into the following four sections: a selective literature review, conceptual framework and research design; a reporting of the three themes from the interview; an analysis of those themes in terms of the habitus; and suggested implications for practice for students and university personnel.

Literature review, conceptual framework and research design

The ongoing significance of students' expectations of their first year experience *vis-à-vis* how they perceive the reality of that experience is widely recognised in the literature (Andrews, 2006; Jansen & van der Meer, 2007; McPhail, Fisher, & McConachie, 2009). This significance centres on the degree of alignment between a student's anticipation and fulfilment related to the respective university program, and is clearly influenced by a myriad of factors, some pertaining to the university and others outside its knowledge and control. Initiatives designed to maximise this alignment have included strategies using current social networking technologies to enhance student engagement (Howard, 2009), developing specialist support programs (Noble & Henderson, 2008), involving students in summative assessment design and decision-making (Cuffe & Jackson, 2006) and drawing on the work of face-to-face and online student mentors (Dawson, 2007). While these have inevitably met with varied success, all of them have been underpinned by a determination to fulfil first year students' expectations before commencing university study within the constraints of available resources and what is perceived to be reasonable and sustainable.

This same determination and potential tension are evident in the specialist engineering education literature. Steer (2008) cited a student's comment about an Engineering Learning Centre set up specifically for first year students: "You have a sense of identity by going in there[;] you feel like an engineer" (p. 9), highlighting the non-academic and emotional dimensions of the first year engineering experience. Other issues impacting on whether and how students' expectations are fulfilled range from effective laboratory use (Feisel & Rosa, 2005) and online provision (Bourne, Harris, & Mayadas, 2005) to honing analytical and group skills (Strauss & Terenzini, 2007) as well as assessment practices (Olds, Moskal, & Miller,

2005). As with the broader strategies outlined above, these engineering-specific initiatives vary in their degrees of effectiveness.

As we also noted above, the paper's conceptual framework is centred on Bourdieu's (1977) notion of the habitus, whereby individuals "'become themselves' … and … engage in practices" (Webb, Schirato, & Danaher, 2002, pp. xii-xiii). Or as these authors elaborated:

> The habitus constitutes Bourdieu's most ambitious attempt to ground and explain practices in terms of both specific and general sociocultural contexts …. Habitus can be understood as, on the one hand, the historical and cultural production of individual practices–since contexts, laws, rules and ideologies all speak through individuals, who are never entirely aware that this is happening–and, on the other hand, the individual production of practices–since the individual always acts from self-interest. (Webb, Schirato, & Danaher, 2002, p. 15)

Given the preceding discussion, these dual aspects of the habitus are equally important: identity re/formation and material action go hand in hand in terms of aligning students' expectations and perceptions of reality as far as possible. This point also alerts us to the larger backdrop against which individual strategies of support and teaching, and student responses to these strategies, need to be understood; indeed, as Thomas (2002) has demonstrated, the influence of institutional habitus is equally significant. While we acknowledge criticisms of the concept of the habitus (Elliott, 2009, pp. 148-150), the first named author's engineering of his own habitus constitutes the analytical framework for interpreting the data presented below.

The paper is part of a wider study investigating engineering students' professional and personal experiences, with potential extension to South Africa and Venezuela. The study's research design draws together principles of autoethnography (Buzard, 2003; Holt, 2003) and case study (Stake, 2005; Yin, 2009), and is qualitative and interpretivist in orientation (Somekh & Lewin, 2005). A single, extended, semi-structured, audiotaped interview yielded a lengthy transcript that was analysed in terms of emergent themes, framed by selected elements of the concept of the habitus (Bourdieu, 1977). We now turn to present these themes, followed by a restricted analysis of the data.

The three themes in the interview

As explained earlier, the interview entailed the first named author's engaging with a series of questions related to his expectations, followed by his experiences, of the first year of his current mechanical engineering undergraduate program. His responses were clustered around the three themes of aspirations, access and achievement.

Aspirations

There were four distinct elements of the first named author's aspirations with regard to engineering specifically and contemporary life in general. The first was an intrinsic sense of motivation and curiosity: "I think engineering has always been a field that I found very interesting …. There are so many … [aspects of engineering], and I find it very interesting".

The second element was a determination to do the best that he could academically:

> In life, in general, I like to do the best I can in everything I do and I like to achieve well. I'm not necessarily always satisfied with getting a C [passing grade] – that doesn't really appeal.

The third element was related to job security and financial independence: " … the prospect of having a professional career where there are so many opportunities and things that you can do … ".

The fourth element was a clear-sighted view of engineering's practical applicability and its capacity to effect positive change in the world, to which the student also saw himself contributing directly and substantially. For example, he contended that "you can solve bigger problems culturally and within countries" and that "the main reason" for his choice of profession "is what you can do with engineering". This point was directly connected with his strong sense of personal and professional identity:

> In the end I guess my biggest ambition in life, and it's a saying I picked up, is, "Be the change you want to see in the world", so figure out what it is that you want to change, figure out what it is that you want the world to be, and be that. I guess that's my biggest ambition in life, to make a difference of some description.

Many of these elements were combined and encapsulated in a specific dilemma faced by the student throughout his first year experience: the realisation that the major or specialisation that he had chosen (civil engineering) was the incorrect choice for him, and the need to find a replacement (mechanical engineering):

> I think the first reason I was in civil was probably for the wrong reasons, being that I was constantly told by many, many professional engineers, amongst a lot of other people, that there's a lot better job prospects for civil engineers in Australia. They do seem to do better financially in terms of the hierarchy in companies and so forth and so on. That was the initial reason for choosing civil. However, when we were doing principles of engineering, we were doing a lot of case studies, and the ones we were doing about civil engineering just did not appeal and brought on as much excitement as the ones that involved mechanical field[s] or mechanisms and bits and pieces that turn, and that really appealed to me and that made me decide that yes, I would much rather do [the] mechanical field and enjoy what I do rather than look at what the financial and other benefits are for doing civil.

Here aspirations related to extrinsic and intrinsic motivation competed for priority and were found to be in such disjuncture that the intrinsic motivation prevailed and a change of specialisation occurred. This disjuncture was also reflected in a striking contrast articulated between the student's pre-program expectations and the reality of his first year experience. On the one hand, he had expected "that you'd be building little bridges and testing a lot of things and doing exciting stuff and learning about how to build machines or anything like that", based on "what you see on television or what you get led to believe engineers do all day, which is design and build and break stuff". On the other hand, this applied dimension of acquiring an engineer's habitus was quickly found to be only "a very small portion" of the first year program; "the first thing that was a bit of a let down" was that there was "a lot of general, basic knowledge that we had to study that seemed very basic and very across the field", as well as "a lot of group work" and "a lot of essays".

These various elements of the first named author's aspirations and examples of the mismatch between expectations and reality in his first year experience were powerfully synthesised in the following statement of the perceived links between his chosen profession and his identity:

> Being somebody who I would think is mechanically inclined and having the drive and the urgency to do good for other people or to try and help people develop in whatever way is probably a very strong bond I would say between the job and the discipline I've chosen and me as a person.

Access

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As someone who had clearly defined understandings of how and why he learns, the first named author expressed distinct preferences and perceptions related to accessing different types of learning support in his first year program. For example, he had achieved considerable success through memorisation:

> I definitely [am the] sort of learner that likes a bit of repetition. I enjoy parrot learning. If there's something I can learn and I can read it once, photographic memory helps to just be able to recall that straight again.

By contrast, he realised that this was not always possible or desirable; at those times, it was crucial for him to be able to: " … understand the topic or the underlying principle of what it's about, and therefore you can figure out your own way from there". For this understanding to occur it was crucial for him to have direct and easy access to his lecturers and tutors. He commented that they generally made themselves available to students and provided additional support for student learning: "I like face to face study with teachers or lecturers if I have any problems". For this reason he ensured that he had a very high attendance at lectures and tutorials.

The student expressed mixed emotions about accessing learning via the group work that had been such a prominent feature of his first year experience. On the one hand:

> Even studying in a group, I do enjoy studying in a group of people of my own choice, mind you, people that I believe are just as ambitious or would like to get ahead that are actually serious about studying.

On the other hand, being a member of a randomly assigned group was "when access [to learning] does become hard". He described the experience of being in such a group of eight or nine students and asking the other members "what we want to achieve this semester", and being concerned when most of them stated that "they just want to pass" because they were sponsored by a company or needed only a passing grade to fulfil the requirements of their visas if they were international students. He confided that "access in that … [sense] does hinder you a bit" – for example, having to learn "how to get couch potatoes to work".

The student also indicated that he disliked online provision as a means of accessing learning, finding it "very impersonal and very … out of it". He elaborated "out of it" as conveying a sense of feeling:

> … very detached, as in you're sitting here, the other people are in a [different] room – they could be in a different country; you wouldn't know – and it's very impersonal, and I enjoy … social interaction. Therefore the computer is very impersonal, and I don't really particularly enjoy using the computer [for accessing learning].

As with his aspirations, then, the first named author articulated a strong awareness of the factors that facilitated his access to learning and those that did not, which in turn influenced his sense of achievement during his first year experience.

Achievement

The student had achieved excellent results (four high distinction grades) in the first semester of the program, which testified to his conscientious dedication to study and his effective time management across all the areas of competing demands in his life. In the second semester he still achieved very well, attaining one high distinction, two distinctions and one passing grade. Although he was "not entirely happy with that" outcome, he explained that a major

contributor to the situation was the end of his relationship with his girlfriend of three years, an event that he found:

> … drags you down, and you can't help but think of it, and it definitely hinders your own ability to learn and to stay focused and to keep doing what you're doing.

In reflecting on what he had achieved and how he had been able to achieve it during his first year experience, the first named author identified initially "my own personal drive – I don't think anybody can have as strong [an] influence on yourself as getting yourself ready". "After that" various other groups were crucial to enabling achievement, including family members and university personnel. He referred specifically to the value of "a few close university friends that are studying and helping each other", whereby someone who has a particular understanding of "things like mathematics or statics" is able to share that knowledge, "and then obviously it works *vice versa* when you're talking about other things where people might be stronger".

More broadly, the student articulated a sense of developing and ongoing achievement that reflected a growing awareness of himself as person, learner and prospective engineer, among other roles:

> I think one of the biggest sense[s] of achievements I have in life at the moment is finding out where I am at now and where I want to be at, and finding out how engineering, for example, is a significant part of getting to that …. In my life I'm figuring out what I really want to do with myself …. Although I haven't got an answer yet, I'm achieving something by … recognising that there is this issue that I need to sort out.

As a specific illustration of that sense and awareness, the student concluded by identifying some particular areas of interest that he was keen to explore:

> … I'm a very hands on person …. I'm really keen to get back into second year … and I've read some of the subjects that we're doing, and it's really starting to be the engineering stuff I'd expected – for example, stress analysis and dynamics and more nitty gritty engineering things that I'm really getting excited about. So first year … started off a bit odd and lethargic, definitely got better and definitely excited from first year to get to second year and hopefully later on.

The three themes and the habitus

So what do the preceding extracts from the semi-structured interview with the first named author demonstrate about his engineering of his habitus and his negotiations of the mismatch between his pre-program expectations and the reality of his first year experience? Firstly, there is the vital connection between "habitus and bodily helix" (Webb, Schirato, & Danaher, 2002, p. 36) that provides a timely reminder that it is through the repetitive routines of individual bodily actions that the habitus is formed and reformed. In this case, the first named author's initial aspiration to "design and build and break stuff" highlighted a set of bodily practices that he associated with the engineering profession, aspects of which might well become more apparent as the program proceeds. Such an outcome would also provide a physical dimension of his more sociocultural vision of "what you can do with engineering".

Secondly, the individual's habitus must be understood against the backdrop of Bourdieu's (1977) notion of field, which refers to clusters of contemporary social life such as business, economics, politics, religion, sport and work. From this perspective, "As agents move through and across different fields, they tend to incorporate into their habitus the values and imperatives of those fields" (Webb, Schirato, & Danaher, 2002, p. 37). This was evident in

the student's early dislike of writing essays, studying ethics and working in groups, and his subsequent acknowledgment that engineers need to be able to deploy these skills when they are 'in the field'. It was also reflected in his awareness of the ways in which hard work and professionalism operate in the engineering field – an example of his own prior disposition according with, and being reinforced by, the work ethic of the university personnel, some of his fellow students and the working engineers with whom he had contact before and during his first year experience.

Thirdly, a variation on this notion of field is the recognition of the interplay of multiple and not necessarily complementary influences on the habitus. This was manifested in the student's references to the respective places of paid work, family and friends in sustaining and sometimes distracting his capacity to complete his first year study and engineer his intended professional habitus. So, for example, his family encouraged and acknowledged his very high work ethic and his excellent academic results, and he sought out friends with similar aspirations and values, while the break-up of a long-term relationship for a time " … [dragged him] down" and temporarily diluted his focus on his learning.

Fourthly, " … the habitus is always constituted in moments of practice" (Webb, Schirato, & Danaher, 2002, p. 38). Thus the first named author's experiences of attending lectures and tutorials as well as online delivery, for example, provided opportunities for him to test his habitus against each new experience and to reinforce and/or refine his existing, dispositions in favour of certain kinds of learning practices and against certain others. At the same time, and as noted above, those dispositions are dynamic as well as durable, and each new experience created an occasion for adapting his attitudes and behaviour towards what he identified as different aspects of the engineering profession to which he wished to feel committed. This adaptation was a significant part of the ongoing process of navigating his way between idealistic expectations and realistic assessments of his program.

Implications for practice

What might the first named author's engineering of his habitus, and the associated negotiations between expectations and reality, mean for different kinds of stakeholders in the first year experience? In posing and addressing this question, we acknowledge the limitation of basing our response on the reflections of a single student; nevertheless we assert that those reflections are useful in indicating the degree of fit between student expectations and institutional provision. Firstly, the notion of habitus is a timely reminder of the first year student's agency – not as some type of celebrationist analysis of individual action, but rather as recognising the student's capability and responsibility in terms of constructing meaning and validating purpose from this experience. This is not to deny the necessity for different forms of support for different students, and that students vary widely with regard to their levels of capital (Bourdieu, 1977; see also Thomas, 2001), but it is to agree with the first named author about the centrality of "my own personal drive – I don't think anybody can have as strong [an] influence on yourself as getting yourself ready". This suggests that first year students need to be fully committed to pursuing their study in the midst of other and often competing priorities, and that sometimes they will require assistance in relation to understanding as comprehensively as possible what their study will entail, how much time it will take, what it will cost and so on. Without high level aspirations, they are, for example, unlikely to experience high level achievement.

Secondly, it is clear that the first named author appreciated his lecturers' and tutors' efforts to maximise learning access and support for his fellow students and himself. At the same time,

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he responded more fully to some of those efforts (such as lectures, tutorials and self-selected study groups) than he did to others (such as online delivery, downloading podcasts of materials and participating in randomly assigned, compulsory student teams for completing group assessment items). He found some topics of study (such as mathematics and statics) more challenging; he was also able to tutor his fellow students in some other topics that they in turn found difficult. This is an inevitable corollary of the diversity of the student body. It suggests that, while lecturers and tutors need to continue to provide as much access and support as they can, it is neither possible nor desirable for them to seek to insist that each individual student experiences all aspects of the first year program in equal proportion.

Thirdly, university administrators and policy-makers, faced with this increased diversity of first year students, should find more ways to engage with those students – for example, in relation to the sense of individual agency and responsibility implied by the proposition of students engineering their habitus. That is, instead of creating an ever widening array of opportunities and services that are likely to be ineffective as well as financially non-sustainable, university personnel would be better placed developing forms of dialogue with students at different times in the first year and subsequently about their aspirations, access and achievement during their learning experiences. This would provide students with enhanced information about the parameters and possibilities of decision-making, while also informing the decision-makers about how particular initiatives are likely to be perceived and received by the students. This would be helpful in maximising the degree of alignment between students' expectations of specific programs and their beliefs about the reality of these programs.

Fourthly, students' families, friends and paid employers clearly play a significant part in helping to sustain students in their first year experiences and beyond. Reciprocal support is vital in facilitating students' engagements with their study and also in keeping them grounded as well as retaining a sense of perspective about where and how that study fits into the broader outline of their lives. That support is likewise important for ensuring that students' expectations of their study are not unrealistic and thereby likely to lead to disappointment and disenchantment. Students' significant others can therefore assist powerfully in their engineering of their respective habitus.

Conclusion

This paper has explored the first named author's engineering of his habitus, as gleaned from his reflections on his first year experience as an undergraduate engineering student in an Australian regional university. The semi-structured interview in which he participated generated the three themes of aspirations, access and achievement, which were analysed through the lens of Bourdieu's (1977) fruitful concept of the habitus. That analysis in turn provided the basis for some suggested implications of the notion for different stakeholders in managing the potential mismatch between expectations and reality of the first year program.

While noting the restrictions on applying the concept, and in particular acknowledging that students vary widely in their capacity to acquire a university habitus, we contend that the account presented here provides one among several possible readings of the student's reflections, and a reading that suggests a number of prospective elaborations. Just as the student's ongoing learning journey excites him about the next stages of his engineering of his habitus, it will be informative to see where those elaborations take us.

Acknowledgments

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