Identity and attribution as lenses to understand the relationship between transition to university and initial academic performance

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Background. Most students experience the transition from school to university as challenging. First-generation students are particularly vulnerable, as they receive little preparation for the expectations of university.
Objective. To understand the relationship between preparation for university, transition experiences, and academic performance in the first two years at university.
Methods. Sixteen second-year dentistry students were interviewed in this qualitative pilot study. Their marks for the first 18 months at university were accessed. Two theoretical frameworks were used to analyse the data – academic identity and attribution. Analysis resulted in four groupings: academically competent middle-class students, academically struggling middle-class students, academically struggling working-class students and academically competent working-class students.
Results. Findings suggest that students' academic performance is influenced by social class and assumptions of controllability and causality. Assumptions about control over their environment influenced how they engaged at university. These assumptions resulted in some students being better positioned for integration into the practices rewarded at university. Irrespective of social class, those who attributed academic performance to factors outside their control performed less well.
Conclusion. The study suggests that interventions are required that help all students to control their academic performance. Attributional retraining (AR) has the potential to assist students who attribute academic performance to causes beyond their control. The article concludes with suggestions for ways in which AR might be implemented to assist all students towards obtaining competent academic performance. Suggestions are also made for further large-scale studies.

Most students struggle with the transition from school to university[1] because the latter expects and rewards different academic practices from those valued at school.[2] Students who are the first in their families to attend university are the most vulnerable, as they have little opportunity to anticipate or prepare for the challenges of higher education.[3]

Objectives

The objective of this study was to understand the relationship between students' experiences of school-university transition and academic performance. This article offers insight into how transition is experienced by students who are first in their families to attend university and those who come from schools and families that prepared them for university. It explains the manner in which students engage with the university's academic environment by examining students' assumptions about their control over this environment. The article shows how these assumptions result in some students being better positioned for integration into the practices rewarded by university. The article then concludes by drawing on insights from the study to make recommendations for supporting all students in their transition from school to university.

Literature review

Two theoretical frameworks were used to understand students' engagement with the academic environment and their assumptions about academic success.

Identity

Wendt[4] defines identity as 'role-specific understandings and expectations about self', which are acquired 'by participating in … collective meanings'.

Identities are fastened, unfastened and refastened in cultural spaces[5] – in the case of this study, in schools and universities. Identity fastening occurs through the activities in which people engage to be recognised as insiders.[5] Students enter university with the fastened academic identity of 'school learner', which encompasses the practices expected and rewarded at school. Identity unfastening occurs when people are required to take on and demonstrate the practices of a different cultural context.[5] Achieving success at university requires competence in practices that are usually different from those engaged in at school. Identity refastening occurs when new practices are incorporated into current practices or when they replace existing practices.[5]

Attribution

Attributions are the causal explanations that people give of their experiences.[6] These explanations depend on people's beliefs with regard to their own capacity to predict and influence their environment.[6] Attribution theory is used to explain how individuals use the information they gather about their experiences to form causal judgements.[6] Attribution theory has been used to understand how university students draw on personal perceptions to explain academic performance.[7]

Two concepts from attribution theory which have been used to understand higher education are pertinent to the study – causality and controllability. Causality refers to the explanation that students give regarding the causes of their performance.[6] Students who assume an internal locus of causality explain performance with reference to internal factors, such as skills, ability and effort.[6] Those who assume external locus of causality attribute performance to external factors, such as task difficulty and luck.[5] Controllability refers to students' perceptions of whether the cause of their performance is within their control.[5] Students who perceive themselves as having control over their performance (i.e.

controllability within) attribute success or failure to effort.[5] Students who perceive performance to be beyond their control (i.e. controllability without) attribute success or failure to luck or the actions of others. Students who believe that they are in control perform better academically than those who do not have this belief.[7]

Methods

This qualitative pilot study examined the relationship between academic identity, perceptions of causality and control, and academic performance for a group of students at a South African university. Qualitative research allows for complex descriptions of people's experiences.[8] The qualitative approach allowed insight into students' transition experiences and their explanations of their performance.[8] A pilot study design was selected as this was an exploratory study. Findings from exploratory studies have the potential to highlight salient issues for large-scale confirmatory studies.[9]

The study elicited students' retrospective perceptions of the school-university transition and examined their explanations of academic performance. The pilot cohort consisted of 16 dentistry students in their second academic year. The cohort comprised eight of a group of 11 students who had participated in transition-experience focus-group interviews the previous year, and a further eight who joined the cohort in their second academic year. All 16 came from a single class of 23 first-year dentistry students. In their first year, all 94 dentistry students were randomly allocated to one of four smaller classes for a core module. One of these classes, comprising 23 students, was selected for the pilot study. The cohort encapsulates a relevant range in relation to the wider population of first-year dentistry students at the study site because of the random allocation of students to smaller classes.[10]

Table 1 indicates academic performance, social class and race of cohort members. The final percentages for first-year modules and modules completed in the first semester of the second year were elicited to understand students' academic performance during their transition period and at the time of the interviews. The terms African, Indian, coloured (mixed race), and white are racist nomenclature of apartheid. The legacy of apartheid, and its disparate distribution of resources along race lines, has resulted in a classed post-apartheid society based predominantly on previously racialised divides.[11] The use of race terms in this study highlights that legacy. For the study, 'working class' was used to signal students whose home and school were located in working-class areas, who were first in their family to attend university, and who were funded by the National Student Financial Aid Scheme available to students from low-income families. 'Middle class' was used to signal students whose home and school were located in middle-class suburbs, who had family experience of university, and who were funded by their families.

Semi-structured one-on-one interviews were conducted with the 16 students in the first semester of their second year. Interviews allow for a deeper understanding of the social phenomenon being studied than that available through closed-ended questionnaires.[12] Semi-structured interviews consist of a series of questions exploring key areas of a study.[12] The interview for this study probed academic identity and experiences of school-university transition, including academic performance. Eliciting insights from second-year students allowed for their reflection regarding the transition. Their experiences were no longer immediate; yet, the academic performance consequence of these experiences was apparent to them. The interviews were transcribed.

Using the theoretical framework for analysis

The literature[2,3,13-17] suggests that race and social class are major signifiers in school-university transition and university academic performance. It also highlights that middle-class schools and families prepare young people for university by making overt the practices that are rewarded there.[2] Middle-

class schools incorporate activities and develop learning strategies that prepare learners for university.[2] Working-class students, who are first in their families to attend university, receive little of this type of preparation.[2] Without having experienced university, their families cannot anticipate the challenges of higher education.[3] Schools with large populations of working-class children seldom provide these learners with information about university, and most rely on teaching strategies that require learner compliance – strategies ill-matched with the requirements for an autonomous university learner.[2] In South Africa, the situation for working-class students is exacerbated by the legacy of apartheid, where schools for such learners continue to be under-resourced, over-crowded, and frequently staffed with under-qualified teachers.[2]

Reed's[5] framework of identity as 'fastened', 'unfastened' and 'refastened' in cultural spaces such as universities was considered appropriate for understanding how students engaged with the expectations of university. The core concepts for analysis were fastened identity (evidence of students' assumptions about what is required for academic success), unfastened identity (evidence that students recognised the practices required for university success) and refastened identity (evidence that students realised that they had to adopt or incorporate and use new practices so as to be successful).

Initial analysis suggested that identity played a significant role in how students engaged with university expectations – with consequences for academic performance. Generally, middle-class students performed well (Table 1). They evinced an identity that recognised the practices required for university success – '[It] wasn't too bad, I could cope – you have to concentrate on work' [Ghalid]; 'I have always managed and this is the next step' [Yasmine]; and 'That was the only thing – you have to study continuously' [Antjie]. In contrast, most working-class students struggled academically. Struggling was defined as failing any module or participating in a supplementary or special examination. These students' university academic identities were less well established. They appeared unaware or unsure of what they needed to do to be successful – 'I thought I was handling it. But when I got to the exam I wasn't. It was so easy at school and I thought it would be the same at varsity but it was totally different. It is very upsetting when you work so hard and you see nothing' [Ronel].

However, identity did not explain the performance of all students. There were middle-class students who struggled academically (Table 1, Group B) and working-class students who performed well (Table 1, Group D).

Social class and race – and their associated access to educational resources – fell short of providing a full explanation of academic performance in the transition to university. A further theoretical framework was required to understand the anomalies. Closer scrutiny of the interview transcripts suggested that a theoretical framework which could explain students' perceptions of their own power over their academic performance had the potential to explain the anomalies. Four concepts of attribution theory were used to analyse the data – internal locus of causality (performance attributed to internal factors such as skills, abilities, efforts), external locus of causality (performance attributed to external factors such as difficult tasks, luck), controllability within (performance perceived to be within an individual's control, e.g. through personal effort), and controllability without (performance perceived to be outside an individual's control and attributed to actions of others).

Results

Analysis using both frameworks resulted in four groupings within the pilot cohort – academically competent middle-class students, academically struggling middle-class students, academically struggling working-class students, and academically competent working-class students.

Table 1. Student demographics and academic performance

Pseudonym	Social class location	Race location	First-year academic performance	Second-year (first semester) academic performance
Group A (middle-class students who performed well)				
Ghalid*	Middle class	Indian	Marks between 64% and 90%	Marks between 64% and 77%
Yasmine*	Middle class	Mixed race	Marks between 55% and 74%	Marks between 55% and 83%
Antjie*	Middle class	White	Marks between 50% and 73%	Marks between 55% and 71%
Nadia	Middle class	White	Marks between 64% and 79%	Marks between 66% and 89%
Sandra*	Middle class	White	Marks between 58% and 74%	Marks between 52% and 77%
Sanette*	Middle class	White	Marks between 57% and 82%	Marks between 55% and 75%
Group B (middle-class students who struggled academically)				
Ibrahim	Middle class	Indian	Marks between 55% and 75%	Marks between 47% and 73% One supplementary examination
Valencia	Middle class	Indian	Failed one module in first semester – transferred to 'intervention provision' Passed all intervention modules at end of year	Failed two modules in first semester of second year of registration (i.e. second semester of 'intervention provision') – required to leave the programme
Kerusha	Middle class	Indian	Failed one module at the end of first semester – transferred to 'intervention provision'	Failed two modules in 'intervention provision' – required to leave the programme
Group C (working-class students who struggled academically)				
Ronel	Working class	Mixed race	Marks between 47% and 75% One supplementary examination	Marks between 61% and 75%
Christel	Working class	Mixed race	Marks between 45% and 72% One supplementary examination	Marks between 40% and 62% One supplementary examination
Nelson*	Working class	African	Failed one module in first semester – transferred to 'intervention provision' Failed two 'intervention provision' modules at year end – required to leave the programme	Registered for oral hygiene – one supplementary examination at end of first semester
Craig*	Working class	Mixed race	Failed one module in first semester – transferred to 'intervention provision' Passed all intervention modules at end of year	Passed all modules in 'intervention provision' – transferred back to mainstream at end of first semester
Nadia*	Working class	Mixed race	Marks between 48% and 76% One supplementary examination	Marks between 63% and 67%
Group D (working-class students who performed well)				
Fathima	Working class	Mixed race	Marks between 62% and 77%	Marks between 64% and 85%
Minette	Working class	Mixed race	Marks between 53% and 71%	Marks between 51% and 71%

*Students who participated in the first-year focus-group interviews.

Being middle class and feeling in control

Middle-class students who performed well (Group A: Ghalid, Yasmine, Antjie, Nadia, Sandra, Sanette) came from homes where there was a familiarity with university. They had aspects of university identity embedded in their school identity. At school they had learnt the foundational practices that are valued at university. They thus incorporated new practices into their existing fastened academic identities, rather than unfastening their school academic identities. They attributed success to their own efforts, and argued

Table 2. Group A: Middle-class students who feel in control

Student	Identity	Attribution
Ghalid	'At the school that I went to, they drilled it into you that you are going to have a lot of problems and you have to learn how to deal with it. When Human Biology started, that was a shock. We had a high volume of work and you had to learn to cope and plan your day and to study for the tests. But the first year wasn't too bad. I could cope.'	'I have the ability. You keep yourself motivated and positive, and then you can cope. It comes down to you as a person. You have got to be strong willed. It is what you make of it.'
Yasmine	'Some students psyche themselves up, "Oh my word, we have so much work to do." I just went with it because I knew university was going to be a change. I think the school I went to prepared us for that change. I don't find it challenging.'	'It was because of something that was in place, who I am in general. I came with the mindset that I would manage. I have always managed. This is the next step.'
Antjie	'Maybe it is just what we studied at school or maybe I paid more attention in class. You have to study continuously. The workload over the period of time is just a lot more, not too much, but it is a lot.'	'I don't do really well, but I am not going to fail. I have never had that fear of failing. It is not an easy course, but I do have the intelligence to do it.'
Nadia	'Everyone used to tell me that when you go to university, it's not like school, no-one will guide you. It wasn't like that. I managed.'	'You had to deal with it. I can never leave it and say I am happy if I just make it.'
Sandra	'It is since I was little I learnt that I had to study hard. The workload was much more than I was used to at school. But the work wasn't that bad.'	'My time management is good. I never write tests without studying everything. So I feel good about myself.'
Sanette	'I learnt at school that if you don't learn, you won't get the marks. I managed fine.'	'I am not worried about it. I am quite good with organising my time. I know that I passed all my subjects.'

Table 3. Group B: Middle-class students who do not feel in control

Student	Identity	Attribution
Ibrahim	'First-year at university is overwhelming. You don't know where to go for support. You don't know what to do. Things come from your personal life and pressure. It was a bad luck car. I wasn't worried about the academics, but I was worried about the car. And then I failed.'	'I failed the two tests and the exam. The first one everyone failed. I think it is the way they set the papers. They ask you a question and if the answer is not the way they want it, you are not going to get the marks. Sometimes it is out of your control. It makes you feel useless.'
Valencia	'I think the main issue was leaving home and the fact that my grandmother passed away when I wasn't there. Everything went downhill from there. It was more emotional and personal.'	'The teaching methods – it was up to us rather than the lecturer to teach us. I get completely lost and then I don't feel like doing it. You are just completely put off and demotivated.'
Kerusha	'I don't know why I failed. I didn't have a problem with the work. I didn't feel that I lacked working last year because I did put in and it was disappointing that I failed because I don't go out much. I do my work. So I don't honestly know why I didn't make it.'	'You get into it with one lecturer because they lecture for about a two-week period and then all of a sudden there is a change, and you need to change because they have different teaching styles. The chances of you struggling are quite big. And the lecturer was scary. We were hesitant to go up to him. We weren't allowed to re-write despite the amount of failures.'

that as they had the prerequisite skills for academic competence, all they had to do was apply effort and use their skills and abilities.

Table 2 shows these students' understandings. The 'identity' column indicates identities as fastened, but incorporating practices expected at university. Students' perceptions of the match between the expectations of university and their own taken-for-granted assumptions about what was required for success at university are shown. The 'attribution' column illustrates these students' sense of inner control and causality.

Being middle class and feeling that things are beyond your control

Group B (Ibrahim, Valencia, Kerusha) comprised middle-class students who came from schools and homes that prepared them for university. They should, therefore, have had aspects of university identity embedded in their school identities. There should have been no need for them to unfasten their school academic identities. In order to ensure academic success they only had to incorporate new practices into their existing identities. However, their testimonies indicated that they were unaware of the prerequisite practices at university, and as they did not recognise them, they did not incorporate them. Instead, their testimony was focused on non-academic challenges. They experienced varying degrees of academic failure.

The difference between their accounts and those of Group A students related to attribution. Group B students felt that they lacked control over their academic performance. They assumed an external locus of causality, attributing performance to external factors such as task difficulty or luck. Controllability, for them, was 'without'. They perceived their performance to be outside their control. They attributed their academic performance to the actions of others.

Table 3 shows these students' understandings. The 'identity' column shows their failure to recognise that alternative practices were required

for competence at university. The 'attribution' column shows how, as a result of their lack of awareness and consequent discouraging university performance, these students assumed that they lacked control over their performance.

Being working class and feelings that things are beyond your control

Without preparation for university,[2] it was unsurprising that the Group C working-class students (Ronel, Christel, Nelson, Craig, Nadia) evinced difficulty making the transition and consequently struggled academically. There was disjuncture between their school academic identities and the expectations at university. There was therefore no possibility for these students to incorporate new practices into their existing academic identities. They were required to unfasten their school identities to build new academic identities. However, in order to do so, they had to recognise the inadequacy of their existing practices and identify suitable practices. There was no evidence that these students did so. Indeed, many of them – despite writing supplementary or special examinations, or even failing modules – argued that they were coping at university. Those who acknowledged that

they were struggling appeared disorientated. This evidence is presented in the 'identity' column in Table 4. Unable to explain or understand their academic performance, these students attributed their poor performance to factors beyond their control. These perceptions are indicated in the 'attribution' column.

Being working class and feeling in control

The working-class students in Group D (Fathima, Minette) performed well. While it may be argued that they too were not prepared for university,[2] there was evidence that they recognised that different practices were required and what these practices were. They therefore unfastened their school identities and refastened them with ways endorsed at university. This evidence is presented in the 'identity' column of Table 5. The refastening of these students' identities was influenced by the way in which they understood causality and controllability. Both students were clear that success was dependent on personally taking responsibility for practising what they had learnt, thus emphasising their perception of internal locus of control over academic success. These perceptions are presented in the 'attribution' column.

Table 4. Working-class students who do not feel in control

Student	Identity	Attribution
Ronel	'I did fail a subject. It was a shock. I thought I was handling it. At school I could study parrot fashion and I thought it would be the same at varsity. When the test comes, it is all those things I didn't go over.'	'I could handle the workload but I am not good with calculations and I have a problem with theory. The lecturers should say, "Come and see me about your paper." That is what they did in high school.'
Christel	'The course it rather easy. For Clinical Dentistry I actually had a sup for the exam – I think I was studying wrong for that. But I felt okay – nothing was difficult.'	'This year I had a problem. The class lecturers aren't nice – strict. I can't approach them to ask a question.'
Nelson	'For me, it was just that I am struggling with time management. I know that I am smart. I am doing fine.'	'Life in residence was not good. Because BA students are making a noise all the time, I wasn't able to study. I started to fail. Also, Life Sciences – we were about 400. There is a noise with people talking and you can't hear the important stuff. And, there is this problem with lecturers. They tell you, "No, I can't do this for you".'
Craig	'Last year, it wasn't as easy as I thought it would be or as fabulous as people make out that university would be. I didn't really know what is going on and what is important and what I had to concentrate on.'	'There are certain people like myself who passed the whole year through, but just failed in the exams by 3 or 4%. And then I found out that some people, who didn't make it, still passed. This girl told me that this guy got a certain percent and he still managed to get a supplementary and to go through to second year.'
Nadia	'I had quite a few re-writes throughout last year but in the end, actually I got good results, so I was happy with that. I think I am okay.'	'A lot of us, we have re-writes. I did everything that I thought he wanted and he just gave me zero. I know of someone who got zero and all his information in his answer was right but it just wasn't in the format that the lecturer wanted. I think it is very unfair. It breaks you.'

Table 5. Working-class students who feel in control

Student	Identity	Attribution
Fathima	'My first year was a big jump. I only got in the 50s in first year. Then I realised I wanted to achieve more and I had to work hard and get better results.'	'I think that I am a very hard working person and I will go the extra mile and strive to do it. But there were mentors who helped us. I basically learnt how to balance everything.'
Minette	'The workload was a shock. Everything was different. It was a different way of studying. We had to use logic and understanding.'	'I definitely know what to do better because Academic Literacy helped me a lot with everything. Now I can't go out as much as I want to and I always have to say I can't go out because I have to study now.'

Discussion

This study suggests that students' academic performance is shaped by social class and race and assumptions of controllability and causality. Social class and race played a significant role in the extent to which students were prepared for higher education. However, social class and race do not provide a comprehensive explanation of academic performance for a significant minority of university students. Irrespective of race or social class, the students who attributed performance to internal factors and perceived the cause of their performance to be within their control were academically more successful. This finding is in keeping with a growing call to investigate the role that human agency plays in social phenomena, such as academic success.[18]

It may therefore be argued that decisions regarding student support cannot be based only on assumptions about social class, race, and academic preparation. These factors alone do not explain academic performance. However, race and social class should be taken into account when planning student development.[19] Such interventions may nevertheless fail to assist *all* students entering university. The study suggests that additional support may be required to help students take personal control over their performance. The need for this support appears to transcend the extent to which a student has been prepared for university. Some students who came from university-orientated backgrounds indicated feelings of powerlessness when discussing their academic competence.

Empirical studies argue that attributional retraining (AR) has the potential to change the perceptions of students who attribute performance to causes beyond their control.[7,20] These studies suggest that helping students to change their causal beliefs about factors that affect their academic performance leads to improved performance.[21] Students are assisted to develop a sense of personal control over academic activities and to believe that success is achievable.[22] AR encourages students to attribute poor performance to explanations that imply that failure can be reduced or success can be repeated.[22] Findings from these studies indicate that students who relocate control as internal, perceive effort as a salient explanation for performance and, consequently, experience increased confidence and motivation, and strive for achievement.[7]

The AR intervention involves teacher-mediated viewing of a motivational video, talk, interview or drama. These motivations encourage students to adopt controllable explanations of failure, such as insufficient attention or inappropriate study techniques. Motivational input is followed by individual activities intended to consolidate learning from the motivation. Effective follow-up activities include providing students with key point summaries, opportunities to put learning from the motivation into practice, requiring students to practise thinking from an internal causality perspective (such as recording as many reasons as possible for why their grades should improve), and reflective activities (such as writing and discussing what they perceive to be important aspects of the AR session).[7,21,22] To be effective, AR interventions require a consolidation activity in which students apply or reflect on what they have learnt.[7]

The provision of support in the form of AR is not unproblematic, especially in an SA context, where the barriers to learning in higher education are overwhelming.[23] AR alone should not be expected to engender the belief that success is achievable, as students from backgrounds not able to prepare them for university might fail, and blame 'lack of effort' for that failure. However, integrating AR into academic support programmes offers a mechanism for helping students to reflect on their learning and the strategies they adopt when learning. Motivational input would allow them to recognise their enormous potential – how, even in the face of adverse academic preparation, they have been selected for university because they have already demonstrated their potential to succeed. Framing academic support activities as providing the tools to turn potential into academic competence provides further motivation. Such an approach acknowledges both students' real disadvantages and their potential to develop competence in areas of initial limitation. Combining academic support activities with AR goes some way to providing first-generation university students with the kind of insider information that middle-class students bring to university. Such AR would make explicit what competencies (such as time management, independent note-taking, reading and writing extended text) are required in order to be successful at university, would support students in the development of these competencies, and would provide students with opportunities to reflect on and critically evaluate their use of these competencies.

For middle-class students, AR may have benefits when introduced as suggested in the literature – as a mechanism that encourages students to attribute poor performance to explanations that imply that failure can be reduced or success repeated.[22] Through reflection on academic performance and associated academic practices, these students might be taught to recognise the contributory factors (e.g. time management or concept mastery) to academic performance. Successful strategies can then be repeated and appropriate ones for addressing shortcomings taught, practised and evaluated – thus facilitating the development of an explanation of academic performance within the control of the student.

Conclusion

This study drew on the voices of second-year dentistry students and the theoretical tools of academic identity and attribution theory to understand the relationship between transition to university and initial academic performance. Race and social class and perceptions of control were found to play a role in students' academic performance. Suggestions from the literature regarding AR were adapted to propose ways to assist students towards competent academic performance.

The limitations of this study should, however, be taken into account when considering the wider applicability of the findings. This was a small-scale pilot study. However, the rich data that are accumulated from such studies allow for the highlighting of salient issues for further investigation.[9] Larger-scale qualitative studies are required to confirm the validity of the findings from this pilot study. Quantitative questionnaire-based studies, designed from the findings of larger qualitative studies, would allow for the survey of substantial numbers of students and further validation of the findings. Ultimately, a diagnostic tool might be developed to allow academically struggling students to identify how their academic practices contribute to their academic performance. Academic support activities could then be developed to assist students to become more academically competent. By using the diagnostic tool and participating in support activities students will have opportunities to perceive their academic development and their academic performance as within their control.

Research

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