

Academic staff perceptions of students' motivation and participation in architectural education

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ABSTRACT: This paper describes and classifies key themes in the way in which architecture students' motivations are perceived by academics. Results from the first comprehensive study of architectural education in Australia, New Zealand and Papua New Guinea are used to indicate that academics believe that one of the biggest issues facing architectural education today is a lack of student motivation and participation. A clear trend in staff responses to the study was that academics view students engagement in education in a negative light; students apparently give greater priority to paid work than to their education and, as a result of this, are regularly absent from classes and are contributors to a diminished studio culture. Staff believe that students are motivated not by learning but by consumer culture which relates not only to keeping up with the latest technological fads but also to their education; where students expect a certain level of customer satisfaction but without an associated level of commitment. While staff portray students as technologically savvy and financially independent, they are also perceived as confused by the course requirements and unable to think critically. The research relates these themes to a broader social and cultural context. Academic staff perceptions not only shed light on architecture students but on wider social trends including youth culture, consumerism and individualisation.

Keywords: Architectural education; academic perceptions; participation; youth culture

INTRODUCTION

In Australia alone, the national rate of participation in higher education has doubled since 1975 (Marginson 2004:3). Every year in the Oceania region, almost 8000 students are enrolled in architecture programs. The statistics show that participation in architecture programs has increased, with students now more likely to complete their studies than ever before; the ratio of commencing students to completing students has improved over time from 3:1 to 2:1. This is in line with DEST statistics that show there has been an 11.6% increase in domestic student completions from 2004-2005 (DEST 2005). The architecture student is therefore an important stakeholder in shaping architectural education but little is known about their views and even less about academic perceptions of them. One current view, that is held by many academics is that the "contemporary student is motivated by the acquisition of a qualification and not necessarily an education" (Ostwald and Williams 2008). In their US study of 242 architecture students Bachman and Bachman (2006) found that student motivation to study and perform was driven by a fear of failure rather than for the reward of learning. In 2008 the architecture student has a different set of priorities to those of past students. For the contemporary student, family, friends and employment are as important, if not more so, than their education. The present paper will begin to address this gap in the literature and make academics more aware of their own perceptions (regardless of whether they are true or false) so that in future an Oceania wide perspective may be developed to understand one of the key challenges facing architectural education today; student motivation.

1.0 METHODOLOGY

The impetus for the first comprehensive scoping study on architectural education in the region, including Australia, New Zealand and Papua New Guinea came from a competitive national grant for discipline-based initiatives awarded by the Australian Carrick Institute to support teaching and learning. This benchmarking study involved a two-stage process undertaken in 2007; an extensive online survey as well as qualitative interviews and focus groups at each of the 20 architecture schools in Oceania (sixteen schools in Australia, three schools in New Zealand and one school in Papua New Guinea). The study did not include Oceania Polytechnic or the school of architecture at Monash University that had not commenced operation at the time of the project.

The first stage of the project involved an online survey covering questions on a range of topics found to be relevant in the literature. The online survey was sent to over 300 full-time academics involved in architectural education. At the end of the survey period 181 valid responses had been received, representing an overall response rate of 56.7%. Categories of questions covered teaching and learning issues, the studio, research, administration and the profession. The independent administrators of the survey removed any identifiable data and the survey responses were analysed using a statistical data analysis software package. One part of the survey related to staff perceptions of students' attitudes towards their education. Staff were given six statements relating to student attitudes and were asked to indicate their level of agreement on a Likert scale; where 1 = strongly disagree and 5 = strongly agree. The

results indicated that staff were neutral (3.3) on students' active participation and motivation to seek out their own learning experiences. However, staff strongly agreed that student absenteeism does affect student learning and when asked in an open-ended question to identify the three most significant issues facing the studio both now and in the future, student motivation and participation and the amount of time students devote to part-time (paid) work were ranked highly.

The second stage of the project involved in-depth (Jones 2004), semi-structured interviews with senior academics and focus groups with staff and students from schools of architecture. The research team spoke in person to 58 students and over one hundred full-time academics involved in architectural education; 72 in staff focus groups and 38 interviews with Heads of Schools and Program Coordinators/Discipline Convenors. Each interview lasted for one hour and each focus group approximately two hours. The in-depth, semi-structured and open-ended questions asked in the interviews and focus groups were developed from an analysis of the results of the online survey and provided important contextual information and offered a more detailed response to the issues. A purposive sampling (Patton 1990) took place as staff participants were required to be full-time, long-term or contract academics responsible for teaching undergraduate or pre-professional programs in schools of architecture in Oceania. All participation was based entirely on the principle of active informed consent and staff were assured confidentiality and their anonymity. A consensus approach was taken in the focus groups and each interview and focus group was recorded and transcribed. After the transcription process a series of themes and categories were identified from which a codebook was developed for analysis of the text. Analysis of the data from the interviews and focus group followed an iterative, qualitative approach (Miles & Huberman 1994). Primary and secondary categories of codes were used with all textual data tabulated for thematic analysis. All transcripts were coded by hand and common and contrasting themes were analysed and related to the online survey results and the wider literature.

Academic staff in focus groups were asked, "what issues are affecting student learning and participation?", and although many of the responses below come from this question, comments on student motivation and participation also occurred throughout the interviews and focus groups in responses to questions about:

1. issues affecting the role of the studio both now and in the future,
2. the biggest challenges facing architectural education today,
3. issues surrounding feedback and assessment and
4. issues affecting the future of Architectural education in Australia, New Zealand and Papua New Guinea.

This paper reports the results of the responses given by academics to questions concerning students' motivation and participation in architectural education.

2.0 FINDINGS

Academics maintain that one of the biggest issues facing architectural education today is the lack of student motivation and students' associated lack of participation in educational opportunities. In the online survey and in the focus groups staff were asked about the issues that are affecting student learning and participation. The greatest single issue perceived as affecting student learning and participation was today's youth culture. Academics frequently made comments about student culture or youth culture and lifestyle when discussing the issues that are affecting student learning and participation. Contemporary youth culture is identified in these responses as being associated with part-time work, a consumer mentality and a lack of engagement.

The authors have endeavoured to use a wide range of source material from multiple countries and states to construct this analysis. To ensure anonymity, while still providing some level of acknowledgement of the type of person the answer was coming from, quotations are referenced in the following ways. If there is more than one school of architecture in a given state in Australia, then the state is used as a notation to describe the source of the quote (i.e., Qld, NSW, Vic, SA, WA). Where there is only one school in a state (NT, Tas and ACT) it might be possible to determine the source of the quote and so it is identified as "Aus". For New Zealand responses the coding "NZ" is used.

2.1 Part-time work

Academics believe that part-time work is the largest single contributor to poor student participation in architectural education. Some academics describe their universities as a "commuter campus" (NSW); their students drop in briefly for a class and then leave to work from home or go to their places of employment. Academic staff also argue that it is not just a small number of students who are working, but the vast majority. One senior staff member states, "70% of our students are working more than 30 hours a week" (Qld). The perceived "conflicting demands" (WA) of work and study mean that students see their university work as less relevant, or of less immediate importance, than the employment they currently have. One academic states that the "students' external workload dictates what they can contribute to their learning" and, as a result, "they commit very little" (WA). Thus, the main concern for staff is that education plays a secondary role to students' part-time work, especially when that work is occurring in architectural practice. Staff believe that a "booming" commercial environment has increased industry demand for students to such an extent that, as one academic observes, "their workload parallels our own" (NSW). As a result of this external workload, staff suggest that students are no longer focussed on education in the way that they once were.

External work is the major factor influencing student participation in learning activities and attending classes. Thirty per cent of students here work more than thirty hours a week outside. The external work commitment is affecting the attitudes and expectations of students. There is a high demand for students to work in architectural practices. (WA)

The lack of government funding, "driven partly by the economics of students having to earn" (Qld) is given as one possible explanation for the reason why students are working so much; for one academic it is all linked "back to funding" (NSW) and to the fee-paying nature of universities. Students "need to work to survive" (NSW) and in some

cases this involves a full-time job of 38-40 hours a week. For academics, student participation in architectural education is undoubtedly suffering because of the distraction of paid work however, some staff question why, with the pressure to work and pay such high fees, student motivation to learn is not much higher?

While some staff believe that students are working to survive, others are quick to counter this and claim that much of the work is simply being undertaken to support students "iGen" (SA) lifestyles because the "whole world is turning to materialistic things" (NSW). Today's students are viewed as both voracious and dilettante consumers who have little "brand loyalty". One academic from South Australia believes that this lifestyle is contributing to the need for students to undertake part-time work.

Well, it is [now] the norm for the student to run a car, have a mobile phone [and] go out on Friday nights. Now I'm not saying that [there] is anything wrong [with this] and it reflects society as a whole. But it all costs money and there's the peer pressure issue [as well]. Unless they have the mobile phone and the car and all of this, they can't be part of the student culture. [...] When I was a student we just had videos [and] we spent a lot of time in the union and the bar. We had a great time but [...] very few students ran cars in those days. So the social networks were different and [the] social networks which were probably cheaper to operate in the time. (SA)

2.2 Fee-Paying Consumers

Not only might contemporary students work part-time to support their consumer lifestyles, but they may have similar part-time attitudes to their studies. Student attitudes to education are said to have changed in the aftermath of the introduction of fee-paying places at universities; in this system, students expect a certain level of client satisfaction and view their education as a service for which they pay a fee. A corollary to this situation is that education is seen as a means to an end, not an end in itself. Thus, education is viewed as a

stepping stone to a real job, whereas previously it was seen as a necessary process. "As long as I can get a job I don't need you". There is an added pressure here with two-thirds of students commuting. Students are now buying education and education is a commodity. They are buying a pass, a result. The notion that it's about individual development has disappeared. Students say, "You're wasting my money." (Vic)

Again, staff question why student motivation is not higher with the introduction of fee paying, however, they conclude, "surfing and employment take over" as the most important things in life (NZ). "They only seem to want to do what they want to do. They don't understand that you have to do things you don't want to do just like in practice. This is true of young people in general" (NZ). Some academics propose that students might be motivated by learning from a practicing architect, and it is during these times that they can see the "value" (Vic) of their education. Another academic echoes this view stating that "I believe that most students do aspire to become architects one day and perhaps because of this a word from a registered architect carries more weight with them. Bring in a practicing architect to support what I said and it is better received" (Aus). As fee-paying consumers, students also demand individual attention which impacts on their motivation and participation in group work. Some academics feel that students "hate" group work because they understand design as an "individual production" (NSW) process and because they see themselves as having paid a fee for an individual service. As a result, group work is "the most problematic" activity from the point of view of the student consumer and it "brings with it the most vexed discussions" (NSW).

Staff believe that students, as consumers of education, also have a heightened expectation of "having the latest technology" (NZ) and better facilities and resources. Because these expectations are rarely met, students may be less likely to spend time in the studio; which in turn adversely affects the local culture of a school. One academic argues that

[w]e regard design teaching as the core and we regard the studio as the location where design teaching principally takes place. [Now] the average university students are now doing 15 hours a week full-time work because of the building boom in south-east Queensland; most of our students aren't working as waitresses or car park attendants any more. They're working in offices in town for one or two days a week and they try to lobby us to organise the timetable to even more compressed bundles. [Thus] I think [that for] part of the week they're [in] an architectural office that's clean and well set out and well serviced and all the rest of it, and we're insisting on a studio system and if you walk down the corridor and have a look at the first year studio, it could be a CWA hall in Charleville in the 1950s, that's how it's furnished. It has no resources of any particular sort apart from some desks and screens. (Qld)

Academic staff describe architecture students as the "iGen" on more than one occasion (Aus; SA); instantly pairing Generation Y and innovations in new technology. The "iGen" are defined by consumerism; having a "fixation with iPods and mobile phones" (Tas). Academics observe that students of this generation are typically much better "set up at home" (Vic) and that this has one major consequence; it leads to a diminished studio culture, as students would rather work from home. Staff believe that students expect better technological facilities within the studio and the laboratory if they are expected to work there. An academic from New South Wales observes that

[w]e've managed to keep the labs alive but I believe they are increasingly irrelevant to the modern student and their needs. I think the computer problem has gone through it's evolution cycle; you know the need to provide the labs has passed [and] the cost of the technology has dropped to the point that it's so accessible and, in fact, it's become counter productive because [...] students would prefer to perhaps work at home [which has] started to kill off the studio culture and [in response to this] we know across Europe and America they've addressed it by going [to] lap top and wireless [computers]; they've got rid of the labs [...] but no university in Australia is willing to take that on yet. (NSW)

2.3 Lack of Engagement

Several groups of academics expressed frustration over their student's lack of engagement with education. One states that, "if you don't feel you're getting a reaction, if there's nothing happening behind the eyes [...], then you might resort to" a much simpler education approach and they're often "more comfortable with that as well" (SA). The frustration can also be seen in academic perceptions about the way students' value feedback; "[w]e offer it [...]" but

they don't always come and get it. To teach is not to learn. I can't make them do anything. If you give them feedback any other way, they will not come and get it" (SA).

Staff also believe that the lack of engagement is partially due to the focus on design; observing that students emphasise design and spend more time on it at the expense of other subjects. One states that "students will fill up the amount of time in design no matter what they have to do. More time is spent on design than any other subject" (NSW). Staff also highlight the fact that students are motivated to do design and consequently view the design assessments as more important. "Students are totally conscious of this breakdown [of marks and] they focus on the design assignment, which is worth more and miss classes because they have a design due. There is an attitude that design is more important." (NZ). Only two staff groups expressed the view that a heavy academic workload is affecting students learning and participation. One proposed that the "stress is cumulative over five years", the stress of part-time work, debt and the environment impacts on student attendance (SA). The other group felt that staff set assignments that required too much time to be spent on them, particularly if the students were good and wanted to complete them well.

A small number of academics argue that the lack of engagement of Gen Y students is the result of a failure of academics to operate on their level. These academics argue that to remain relevant, they must engage with Gen Y's colloquialisms, mannerisms and technology.

There is a generational shift: get on board or you are going to get upset. Motivation and engagement for that generation is the key. Most of them are not working for essentials; it's for inessentials. Very few of them are working for food and rent. As long as we stay in our (baby) boomer heads and them in their Y's the more miserable we will be. I would rather have engagement with no equipment. For example, social networking sites such as facebook. We are excluded from the actual engagement that is going on. What we are really talking about is them doing exactly what we want exactly when we want them to do it. Here there is continuous assessment which requires attendance. It imposes on how Generation Y want to live their lives. The Generation Y teacher here is loved by all the students; he swears all the time. (SA)

Academics perceive a difference in the engagement, motivation and participation of mature-age and international students. While some staff believe mature-age students do not participate because they prefer to work from home, the majority maintain that mature-aged students are better organised and "better performers" (SA) and therefore more motivated and able to offer greater participation. Mature-aged students are seen to be able to cope with their workload and the pressures of daily life. A Western Australian academic notes that "mature age students have a more traditional attitude toward participation. There are about 10-15% of students who are mature aged and they have a significant effect on the class in a positive way" (WA). There is a divided view on the participation and motivation of international students; generally meaning students from Asia. Some felt that the problem was to do with language and comprehension; international students do not contribute in class because they have no "comprehension of what is being said to them" (NZ). While others felt that they "outperform" domestic students (SA) because, "they are more outspoken and challenge more" (NZ).

It is notable that the issue of gender was rarely raised in the entire discussion about students' participation and motivation in architectural education. One exception came from a South Australian academic who felt that female students "outperform the men with design skills, maturity, rigor, time management [and] addressing assessment criteria. I'm struck by the underperformance of males who are lazy, disorganised, and wanting hand delivery" (SA).

2.4 Criticality and Student Quality

The belief that today's students lack the ability to think critically or are not as astute or insightful as previous generations, was raised in many responses. Some academics even talk about changing institutions "for the smart students to work with" (NSW). Academics believe that part-time work, consumer culture and digital technology, the lack of government funding and the introduction of fee-paying places—where "students are more passive due to being the paying client" (SA)—are all factors that produce poor quality students. Thus the suggestion is not strictly that students are less intelligent today, but rather that, as a result of not having to regularly exercise their mental acuity, they are less capable of applying their cognitive skills or consider higher-order problems. Thus, a commonly held view is that students are coming to university with a lack of preparation; "students are not prepared [they are] non-reading [...] reading is not deemed important" to them (NSW). They believe that the expectations, preparedness and quality of student differs from previous generations because students straight from high school "don't have independent and critical learning" (Qld) which is affecting their participation; "they come to us not knowing how to learn and think. Not knowing how but not wanting to" (SA). There is also a strong belief that the low level student cognitive skills are a direct result of their consumer attitudes to education. Because students now pay such high fees, says one Victorian academic, there is a view that

we can't expect a lot from the students; we can't expect [them] to learn independently. [There is the expectation] that we teach them and it's less about their own effort. Secondary students aren't as good as what they [once] were but you still find that there are enough good students and if they are motivated it still works, but the percentage of students who don't take up an [educational] opportunity [is growing] and they are the critical mass and they know it. Teaching is a commodity and students are customers. (Vic)

Academics believe that a lack of critical thinking skills and "appalling" (Aus) literacy standards in secondary schooling contribute to the lack of engagement.

One common argument about the lack of cognitive skills maintains that digital technology decreases a student's ability to think critically. In almost every school a romanticised notion of times past was raised; an era when there was

“a relationship between the thinking and the making” (NZ), compared to “the current climate where theorising is kind of shooed out the back door in an embarrassed sort of way to privilege the natural and the digital” (NZ).

Students are reluctant to engage with the research process, they are content to “google” and then present [...] there does not seem to be much critical thinking [going on] it seems to be just a “find it” and “present it” sort of attitude. The image is seen as the research not the thinking and the detail which goes with the image. Critical thinking skills are desperately needed in the students (WA).

“Googling” and plagiarism were seen to be an issue when students who don’t understand what is required of them resort to using material from the Internet to complete work. Staff from one New South Wales school stated that “there is so much thievery on the computer where they downloaded research [...] and replicated it. They didn’t understand the specification or the learning; the significant thing” (NSW).

One academic expressed a long-term view that the lack of student motivation is likely to worsen as time passes. The next generation of students “are less willing to take ‘risks’ because of the pressures on them to pass” (WA). This will ultimately change the student experience of architectural education; it will create a “diminished [...] sense of engagement in the learning experience” (Qld). “The lack of government funding in tertiary education and the idea of an impoverished student environment means that they are not valuing the time spent thinking. There’s no time to protest, not time to think. Who is going to lead us in twenty years time?” (SA).

2.5 Student Numbers

A final reason given for the lack of student motivation and engagement was associated with the increase in student numbers across the region at a rate that was described as “ridiculous” (Aus). Some academics believe that increased student numbers is one reason students are staying away.

We were put on a central booking system... It now means we cannot offer every student a place in the studio. Two points need to be made about that. One is that we never had 100% participation in the studio [in the past] but we did have very high occupancy rates. [...] Now that we’ve had to say to students there’s not enough room for everybody, the occupancy rate has fallen dramatically. Now that we can’t keep saying “we expect you to be in the studio”, the occupancy rate has fallen away dramatically. So we have no trouble accommodating those half [of them] who have a [...] desire to be in the studio. That’s not how we want it. We would like to be able to say “no, the studio there is for you to be there all the time” and a lot of learning goes on between the lines so to speak. We’re not able to do that at this point in time and we would [...] like to be able to do that. But, to do that we’d need to dramatically increase the size of the studios. (NSW)

The impact of increased student numbers was also seen in the workshop areas with OH&S limitations compounding the issue. In particular, participation in the model making workshop area is seen as a “huge problem” (Vic) as “the students don’t tend to use it” (SA) because they “do most of that work at home” (SA). The relationship between increased student numbers and economic rationalism was noted with students’ overall lack of participation and motivation being attributed to a society where “education is being sidelined...[and] architectural education is becoming diluted” (NSW).

3.0 DISCUSSION AND CONCLUSION

The aim of this paper is not to determine whether academic perceptions of students’ motivation and participation are accurate or not. However, in the context of wider social patterns, academics’ perceptions do strongly mirror themes and practices identified in the literature on youth culture, consumerism and individualisation; this conclusion identifies and discusses several common trends.

The concept of “youth” is a social and cultural construct that goes beyond physiological and psychological definitions (Nilan *et al.* 2007). It can be related to many social processes including modernisation, urbanisation and the growth of mass education (Nilan *et al.* 2007). In Australia, young people must stay in education for longer periods of time, in order to secure employment in an increasingly competitive labour market (Nilan *et al.* 2007). The current generation of “youth”, Generation Y, is most commonly defined as the generation born after 1978 and before 1994; it is better educated and more affluent than any generation before it (Nilan *et al.* 2007:11). Unlike previous generations, Generation Y are also the generation that lives with a much greater sense of the “certainty of uncertainty” (Nilan *et al.* 2007:12). Ulrich Beck (1992) offers an explanation for this sense of uncertainty with his notion of a “risk society”. Beck proposes that risk is a state of mind rather than an actual physical threat. Risks should be seen as both personal and structural where young individuals become responsible for managing these perceived risks. Contemporary youth understand the world through this notion of risk and attempt to insulate themselves from it (Nilan *et al.* 2007). Rebecca Huntley argues that “the cost of being different, of not belonging or keeping up with the consumer habits of your peers is high. You risk social...alienation and personal unhappiness” (2006:155).

In Australia two-thirds of all full-time university students now undertake some form of paid employment (Nilan *et al.* 2007). This has been attributed to the impact of the increasing cost of university education which has, in turn, lead to an increase in student debt and a decline in student satisfaction (Nilan *et al.* 2007; Metcalf 2005). In a survey of students at the University of Canberra, Applegate and Daly (2006) found that while some paid employment improves grades marginally, working more than twenty-two hours per week has a negative effect which is exacerbated by missing classes. Similarly, Bachman and Bachman (2006) found that the hours students spent at a job were strongly related to time constraints, which were then associated with anxiety, depression, lack of motivation and poor grades. So why do young people work? Nilan, Julian and Germov (2007) maintain that young people desire work so that they may have “buying power” (125).

In an age of ontological insecurity traditions are breaking down and young people are valuing freedom (Giddens 1991:53). Youth culture is largely shaped by individualisation (Giddens 1991; Beck & Beck-Gernsheim 2002) where "each young person is under pressure to consciously tailor his or her own life trajectory towards successful adult citizenship" (Nilan *et al.* 2007:27). Through individualisation and de-traditionalisation (Giddens 1994) young people are now defining themselves through "individual choices in lifestyle" (Nilan *et al.* 2007:33). Socialising and consuming are now seen as the most common forms of leisure for young people (Nilan *et al.* 2007). In contemporary society consumption is also very important for the identity formation and 'lifestyle' of adults and the fact that young people rely on consumption for their sense of self should be seen in this light (Nilan *et al.* 2007). Young people's consumption practices should also be seen as fuelled by "collective friendships...[and] individual competitiveness with each other" (Nilan *et al.* 2007:229). Rebecca Huntley (2006:144) claims that Generation Y in Australia, "is the first genuine consumer generation". To achieve legitimate youth culture identity in contemporary Australia means being consumers of the "newest" music, ideas, fashion, drugs, technology and so on (Nilan *et al.* 2007:230). Rapid advances in technology that have come with globalisation also play a part in shaping young people's leisure (Nilan *et al.* 2007). Youth are part of the "network society" (Castells 1996), where global information and communication technologies are used for communication, entertainment and gaining and sharing knowledge (Nilan *et al.* 2007, 234).

From these accounts of youth culture, paid work, consumerism and individualisation, it appears that academic perception of students in architectural education correspond to the trends occurring in Australian society. However, there are also some marked differences in previous studies. In their 2006 study, Bachman and Bachman found that rather than socialising, architecture students experience excessive loss of sleep, poor diet, lack of even minimal exercise and marginal family and social activity as a consequence of workload compromises. Academics also had strong, negative opinions about the quality of students' critical thinking. Horkheimer (1972), Ritzer (1993) and Muggleton (2002) support the negative evaluations that youth cultures are more interested in consuming standardized products and are therefore less able to think critically. The rise of plagiarism can be seen as an example of the impact of computer technology on social practice and on a young person's ability to construct a stable identity (Nilan *et al.* 2007). However, others claim that mass popular culture "provides resources which people ...use in implicitly critical and sometimes creative ways to make reasonable sense of their lives" (Nilan *et al.* 2007 232). Young people are not always passive consumers (Gillespie 1995) but are engaging in the "creative construction of new meaning" (Nilan *et al.* 2007, 233). Young people are not being isolated but are now more connected and more engaged as there is a scale and intensity of social interaction unlike at any time in the past (Nilan *et al.* 2007).

Although academic perceptions are of decreased student quality the entrance rank for architecture in the top institutions remains high (Dave 2004:90). The perception that international students "outperform" domestic students is contradicted in other research. Tucker and Ang (2006) found that students of the built environment do experience acclimatisation difficulties due to different learning styles and cultural origins that result in lower performance scores, lower student satisfaction and lower group working ability and student participation. Similarly, while academic staff were adamant that student motivation and participation was one of the biggest issues facing architectural education, others believe that it is not student motivation and participation which is to blame, but the learning climate in schools of architecture and, in particular, the "primacy of the individual" they promote (Cuff 1991:45; Nicol and Pilling 2000). Segal believes that the individualistic practitioner is often promoted in the culture of schools of architecture as the "true way" (2006:13) however, he argues that in order to convey information and create solutions architects need to have skills that include complementary, respectful, and coordinated team work. Segal suggests that professional education needs to move away from the Howard Roark (individualistic) model towards a more socially useful one.

Ultimately, the present research has uncovered clear national trends in academics' perceptions of student motivation and participation in architectural education. Importantly, most, but not all of the dominant themes in these perceptions can be closely related to past research about "youth" or "Gen Y" culture and student behavioural patterns.

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