

FROM 'MATIE' TO CITIZEN – GRADUATE ATTRIBUTES AS SIGNATURE LEARNING AT STELLENBOSCH UNIVERSITY

Cecilia Jacobs - University of Stellenbosch, South Africa

Sonja Strydom - University of Stellenbosch, South Africa

Abstract

Graduateness is generally understood to mean the generic qualities that might be expected of any graduate. The issue of graduateness is explored in this article through an initiative at Stellenbosch University which took the form of a Signature Learning Experience (SLE) entitled: 'Being a Matie, being a citizen'. This initiative was designed as a common learning experience for first-year students through which the graduate attributes could be embedded. The article draws on Barrie's research into graduate attributes, to analyse the development and implementation of the initiative. The article maps the SLE initiative against Barrie's conceptualisations of how graduate attributes are understood by academics, as well as understandings of how students acquire generic graduate attributes. Multi-method approaches were used to gather data about the initiative, which was piloted as a semester-long programme in the co-curriculum, with a group of first-year students. The themes emerging from the findings relate to the competing demands of the formal and co-curriculum and the challenges of embedding graduate attributes in the curriculum. The conclusions point to the need for a broader conversation around approaches towards embedding graduate attributes.

Introduction

The notion of 'graduateness', and its expression as graduate attributes embedded in higher education curricula, is currently being debated across a number of universities, both nationally and internationally. This debate has been fuelled by initiatives in Australia, such as the national Graduate Attributes Project (GAP), which focused on the implementation of graduate attributes through a broader process of curriculum renewal. Australia has been leading the field for just over a decade, with regard to researching graduate attributes (Oliver, 2013). In her seminal paper, Jones (2012) outlines some of the considerable research that has been undertaken into the area of graduate attributes, and argues that while 'much of this research has been based on the assumption that graduate attributes are generic and transcend the disciplinary context', this notion is also contested in studies which have 'examined the relationship between graduate attributes and disciplinary culture' (2012: 592). She concludes that there is still much uncertainty about the integration of graduate attributes into the curriculum and the ways this can best be achieved. This is the case in South Africa as well, where there is a paucity of research into the implementation of graduate attributes, creating a lacuna that this paper hopes to start addressing. In an earlier paper, Jones (2009) outlines two strands in the literature which has shaped the nature of the debates around graduate attributes; those studies with an interest in generic skills/attributes and those studies with an interest in the disciplinary forms of graduate attributes. These two schools of thought are reflected in the data presented in this paper, and as authors we argue against the assumption that graduate attributes are generic and call for a reconceptualisation of graduate attributes a context-specific engagement with knowledge.

In South Africa the forms of implementing graduate attributes vary across institutions, from the reading and discussion of a book prescribed for reading and discussion across a university, to the development of a core module which is taught as a pre-requisite to all first-year students. None of these forms of implementation come without particular challenges. Given the history of apartheid and its continued effects on South African society today, we argue that the issue of graduateness has become linked to issues of social justice and critical citizenship. This has resulted in a number of initiatives at South African universities, such as the Grounding Programme at Fort Hare University and the new core curriculum module at the University of the Free State which claims to be 'creating the next generation of citizens and young academics to stand out amongst other graduates in South Africa' (UFS101 prepares new students for life, 2012). At Stellenbosch University, such an initiative took the form of a signature learning experience, and this article reports on the research emanating from this initiative.

Context

Recent debates around the notion of a signature learning experience programme at Stellenbosch University arose from a 2010 university research project, focusing on the graduate attributes important to Stellenbosch University. This research project (Van Schalkwyk, Muller & Herman, 2011), which was part of a broader institutional initiative to revisit the profile of the Stellenbosch University graduate, considered Stellenbosch University policy statements in relation to graduate attributes. The research also investigated how these graduate attributes were perceived by students in the undergraduate curriculum. One of the findings from this research was that academic departments had a limited engagement with and understanding of what it meant to address aspects of citizenship in the curriculum.

In March 2011 the topic of graduate attributes was also the focus of a presentation to the Cape Higher Education Consortium (of which Stellenbosch University is a part) by Simon Barrie (2011), a scholar currently leading debates in the area of graduate attributes internationally. This encounter with Barrie's work (2004, 2006, 2009) stimulated discussions on the topic of graduate attributes at the university, which resulted in the revision of the university Teaching and Learning Policy in order to incorporate a new set of graduate attributes. This document lists the attributes of a

Stellenbosch University graduate as a person with the following capabilities:

an enquiring mind

an engaged citizen

a dynamic professional

a well-rounded individual.

One of the responses to suggestions to embed these attributes was the planning and implementation of a Signature Learning Experience (SLE) programme in 2012. A report on this topic was commissioned by the university, in which signature learning was described as ‘an integration of particular pedagogies with broad learning goals and a combination of in-class and co-curricular activities over a longer period’, and defined as ‘a unique learning environment that integrates a broad base of disciplines to enhance creative teaching and comprehension’(Smith, 2011: 6).

After a range of broad consultative meetings the planned SLE was placed in the co-curriculum² since it was thought to be too complex to integrate into the formal curriculum in such a short time. However, this decision was influenced by more than just pragmatic reasons, it also reflected a particular understanding of graduate attributes, as illustrated in the Theoretical framing section.

As a result of collaboration among various key role players, the following SLE outcome was deemed important: ‘To create learning opportunities for students to engage critically with the diversity of realities of their personal and immediate context (Stellenbosch) but also their broader context (South Africa and beyond) in order to develop the attributes Stellenbosch University would like to see in graduates’ (Strydom, Jacobs & Kirsten, 2012: 4).

The project documentation conceptualised the SLE as a strategy that sought to ‘support graduate attributes’, by encouraging students to think widely about their role

in society and their roles as students. The SLE was conceptualised as an experience stressing two important aspects of students' roles, namely, 'their engagement with their studies and their engagement and responsiveness within a diverse environment'. The project was thus summarised in the slogan: 'Being a Matie,³ being a citizen', and aimed to provide students with a 'common set of messages and a common learning platform', with the intention of encouraging students to talk and interact across disciplinary, residence and other social boundaries such as 'race' and language. In addition to this, the project was conceptualised as a catalyst for:

collaboration between academics and support services personnel

embedding graduate attributes in undergraduate programmes

staff development with regard to teaching for citizenship.

It was hoped that the project would achieve the above by drawing in staff from across the various divisions of the university. The design and implementation of this SLE initiative was the object of research and this article reports on the findings of this research.

Theoretical framing

As outlined in the introduction, the SLE initiative arose from an engagement with the work of Simon Barrie. He offers a conceptual framework for the teaching and learning of generic graduate attributes (Barrie, 2007). Barrie's research is based on a phenomenographic investigation into academics' conceptions of graduate attributes. What he found was that academics held 'disparate understandings of the nature of generic attributes and their place amongst the outcomes of a university education' (Barrie, 2007: 439). He described this disparity as four increasingly complex categories of how graduate attributes are understood by academics: Precursor Conception; Complement Conception; Translation Conception; and Enabling Conception.

Precursor Conception: This conception sees graduate attributes as necessary basic precursor skills, but considers them to be irrelevant to higher education, as they are a

regarded as a prerequisite for entry into the university.

Complement Conception: This conception sees graduate attributes as general functional abilities and personal skills that complement the discipline-specific learning outcomes of a university education.

The co-curriculum refers to the continuous process of student development which happens through informal out-of-class learning experiences.

The term 'Matie' refers to students who are registered at Stellenbosch University.

Translation Conception: This conception sees graduate attributes as the abilities that enable students to translate and make use of or apply disciplinary knowledge in the world.

Enabling Conception: This conception sees graduate attributes as enabling abilities that infuse university learning and knowledge.

The first two conceptions (precursor and complement) were viewed as 'additive', while the other two conceptions (translation and enabling) were viewed as 'transformative'. Barrie describes the additive approach as one which sees graduate attributes as providing a generic foundation to which the disciplinary knowledge of a university education can be added. He further describes the transformative approach as one, which sees graduate attributes as having the potential to transform university learning and knowledge and 'support the creation of new knowledge and transform the individual' (Barrie, 2007: 440).

Drawing on Barrie's research, if one maps the Stellenbosch University SLE against these conceptualisations, it becomes clear that this initiative was underpinned by an understanding of graduate attributes as general functional abilities and personal skills that complement the discipline-specific learning outcomes of a university education, i.e., the 'Complement Conception'. The SLE initiative could thus be viewed as an additive approach, in which the graduate attributes were seen as providing a generic foundation to which the disciplinary knowledge of the university education could be added.

Arising from the categories of how graduate attributes were understood by academics, Barrie also developed a set of categories representing academics' increasingly complex understandings of how students acquire generic graduate attributes: Remedial; Associated; Teaching Content; Teaching Process; Engagement; and Participatory.

Remedial: This view sees the development of generic attributes as the responsibility of educational experiences prior to higher education studies. The teaching of these generic attributes is considered remedial and necessary for those students who have not yet developed these skills.

Associated: This view sees the development of generic attributes as part of the university's teaching role. However this teaching is done through the provision of an additional separate curriculum in association with the formal university curriculum. The difference between this view and the remedial view is that the additional separate curriculum is not seen as remedial but as a curriculum for all students.

Teaching Content: This view regards the development of generic attributes as part of the taught content of formal university courses, rather than an additional curriculum. Generic attributes are included as an integral part of the teaching content of the discipline.

Teaching Process: This view sees the development of generic attributes as something to be achieved through the teaching process of formal university courses.

Engagement: This view sees the development of generic attributes not as a part of the content (what is taught) or the process (the way it is taught) of teaching, but rather as the way the student engages with learning in formal university courses.

Participatory: This view sees the development of generic attributes as the way the student participates in the broader learning experiences of university life.

These six categories are further divided into two types: Supplementary and Integrated. The first two categories, Remedial and Associated, fall into the 'Supplementary' type. This means that the process of developing graduate attributes is supplementary to mainstream university teaching and learning. The other four categories fall into the 'Integrated' type because they are considered to be an integral part of the formal curriculum, rather than being supplementary to it.

In mapping the SLE against these six categories, it becomes clear that this initiative falls into the second category, Associated, as it was underpinned by understandings that saw the development of graduate attributes as part of the university's teaching role. In this way it was quite distinct from the Remedial category. It also differed from the Remedial category in that it was not offered to those students who had not yet developed these skills. Instead, it was offered to a group of students, as a pilot programme, with the intention of offering it to all first-year students the following year. However, because the SLE initiative was conceptualised as the provision of an additional separate curriculum in association with the formal university curriculum, it falls into the 'Supplementary' type rather than the 'Integrated' type.

Methodology

This study drew on multi-method approaches and participatory methodologies, such as interviews, questionnaires/surveys, focus groups, document scans, and analyses of project tasks, activities and content, as well as the online activities of participants. The primary participants in the study were the trainers, facilitators and students in the SLE initiative. We attempted to gather data from as wide a range of stakeholders and role players, both inside and outside of the SLE initiative, as possible. The sources of information for the data collection process were:

the group of 646 participating first-year students (mentees)

the 91 participating senior students (mentors/facilitators)

the implementation group, consisting of non-academic staff who volunteered to be trainers in the initiative

the team of staff members who developed the initiative

selected Stellenbosch University academics who expressed an interest in the initiative
SLE project documentation

the learning management system (Blackboard) which hosted the online resources correspondence with international students who were partners in the initiative.

Data was obtained through online questionnaires, focus group interviews, feedback sessions, as well as document analysis. Two online questionnaires were distributed using the university survey tool (SUNSurveys). One questionnaire was distributed to the 646 participating first-year students, and the other was distributed to the 91 participating mentors. The questionnaire, consisting of 18 Likert-scale questions and five open-ended questions, was completed by 33% of the mentors and 57% of the mentees. Data analysis consisted of the determination of the mean score for each of the Likert-scale questions and open coding of the open-ended questions.

As a follow-up to the questionnaires, and drawing on the themes emerging from the coding and analysis of the questionnaires, a series of seven focus group sessions were conducted with those trainers, mentors and mentees who responded to the invitation. Documentation related to the SLE initiative (e.g. reports, presentations, participant e-mail correspondence, online materials and activity, written feedback on the SLE) as well as the themes emerging from the questionnaire, informed the focus group sessions. Focus group data was analysed by means of open coding which formed part of the qualitative thematic analysis. Strategies to ensure reliability of the data included inter-coder agreements and cross-checking of the identified codes in the transcripts (Creswell, 2009). A process of informed consent ensured ethical considerations and all participants were aware of their right to withdraw and of their anonymity. Interviews were conducted with selected individuals who were unable to participate in the focus group sessions, and feedback sessions were also conducted with groups of participants and stakeholders while the SLE initiative was in progress. Finally, all SLE project documentation, such as reports, presentations, materials, participant e-mail correspondence, written feedback on the SLE, online materials and activity, interim evaluation documents, were analysed.

Findings

A range of findings emerged from this study. The themes that related most directly to the issue of graduate attributes were: the competing demands of formal academic work and co-curricular activities; the synergy between formal and co-curriculum; and the challenges of embedding graduate attributes in the curriculum.

Competing demands of mainstream academic work and co-curricular activities

This theme spoke to the pressure of mainstream academic work. Since the SLE initiative was conceptualised as a complementary to the formal curriculum, and placed in the co-curriculum, it was perceived as an additional burden by many students:

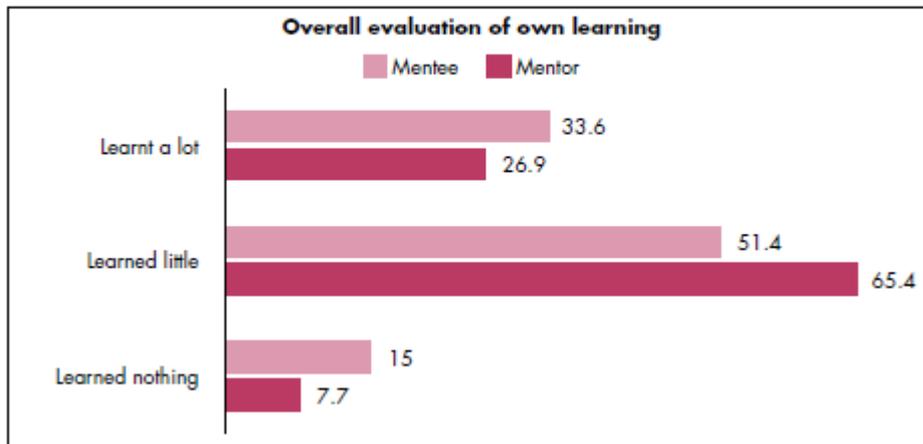
...doing this programme on top of studies is difficult...the sessions require time that is difficult to find in the week, and then the sessions are usually rushed to fit everyone's schedule...

...I think it (SLE) is taking up too much time...I'm writing three tests this week, one of which is tomorrow... this exercise doesn't have anything to do with academics and therefore we cannot be obliged to do this as I am focused now on studies...

...some things I didn't feel were necessarily beneficial at this stage in our studies...

Faced with the competing demands of their mainstream academic work and the co-curricular SLE initiative, the students invariably privileged their academic work and neglected the SLE programme. When asked to evaluate their own learning in relation to the SLE initiative, 33.6% of the mentees (first-year students) indicated that they learnt a lot, in comparison to 26.9% of the mentors (senior students who facilitated the programme). However, the majority of both mentors and mentees suggested that they had learnt little in the programme.

Figure 1:
Overall evaluation of own learning



The survey and focus group interviews revealed that students had not valued the SLE programme in which the graduate attributes were embedded, as it was seen to be unrelated to their mainstream academic work. Their attendance was poor on the whole and dwindled as the programme proceeded. All of these factors contributed to this overall evaluation of their learning.

Synergy between formal and co-curriculum

Generally the participants in the SLE initiative felt that there was little synergy between the formal curriculum (which housed their academic work) and the co-curriculum (which housed the SLE initiative) in which the graduate attributes were embedded. This relates to the previous finding, where students experienced a tension between the competing demands of the formal and co-curriculum. In the data emerging from the focus group interviews, participants expressed the view that these two curricula needed to be better integrated. There were differing opinions though, on how this integration should happen. Some participants felt that aspects of the graduate attributes, such as the more personal attributes, were better suited to the co-curriculum, and that others, such as the more academic attributes, were better suited to the formal curriculum:

I always thought, if you look at some of the themes and what we wanted to achieve, that the university could have some of this in the curriculum ... some of this can

definitely stay in the co-curriculum but I think the more formal parts should be part of the curriculum.

Another view of the synergy between the formal and co-curriculum related to the voluntary nature of the co-curriculum. This participant also felt that many of the graduate attributes were more suited to the formal curriculum. However, he also felt that by embedding these attributes in the voluntary co-curriculum, which was primarily set up to serve the needs of students staying in residence, it was denying an opportunity to those students who commuted on a daily basis.

Everybody needs to attend class, but not everybody needs to participate in the co-curriculum...many of the graduate attributes are more closely linked with the curriculum than the co-curriculum, or perhaps just as much...so, you develop in all these experiences you have, as much as what you choose to learn from it...and you make sense of it in terms of your life, and not everybody is in a residence, not everybody is in PSO, some students drive in daily...they are never going to be part of the co- curriculum, some people leave class and just study the whole time...

Participants also had different views about whether the formal and the co-curriculum should be integrated and how this might happen. One participant felt that both types of curricula had a place in the university, but that they needed to be better connected:

We can have a co-curriculum but it must be connected to the formal curriculum. If it isn't fully integrated it must be connected. That is imperative. I cannot follow themes in the co-curriculum if the themes are not understood and connected to what happens in the degree programmes. I think the attributes then become extremely important and all of us can focus.

Another participant felt that these two curricula could not be separated and needed to be much more closely integrated:

But you cannot separate the curriculum and the co-curriculum, it is precisely the integration we are looking for, the integration of the social and academic to see the total picture making up an individual. The more you learn in the curriculum the more

you are geared to contribute in the co-curriculum...

Another viewpoint was that there was no middle ground regarding the integration of the co-curriculum and the formal curriculum, and this participant argued for either total separation or full integration of the two:

My big problem is this disintegration – this is not a problem between the curriculum and the co- curriculum, it is total disintegration. There are many other programmes, for example co-curricular, that are running but you do not make sense of them because they are not well integrated ... it is a detachment of many realities ... if we make a conscious decision to separate it, then we need to keep it separate, I don't think there is middle ground here. There are fundamental differences, learning differences, different experiences...

Challenges of embedding graduate attributes in the curriculum

On the issue of embedding graduate attributes in the curriculum, there were also a range of viewpoints. An academic staff member expressed the view that not all graduate attributes (such as 'dynamic professional') were suited to the attributes of first-year students, implying that graduate attributes needed to be dealt with beyond the first year. Most academics indicated that they would only be involved in the teaching of graduate attributes if these attributes were connected to their own disciplinary research, teaching and students. A non-academic staff member, involved in the co-curriculum, supported the view that graduate attributes needed to be embedded across all years of study and not just be a first-year initiative:

The graduate attributes are great but I think it should be, it should definitely happen at the beginning, it could be the first thing that you get told when you come here. You are going to do a B.Com but you should also have these four things by the time you leave. And it should be the whole time, through development, the first year, then the second year get reminded, and you get questioned, and there should be a tick box there at some point somewhere, maybe in your fifth year, when you say well finally I am a citizen, you know ... there shouldn't be an immediate tick box, but we should find ways at the university to keep addressing the attributes, not just a first-year programme, or

questioning them at their graduation.

This view was endorsed by the student participants. One postgraduate student held the view that graduate attributes needed to be developed across the students' studies. As a postgraduate student, she pointed to her own experience of developing graduate attributes:

It isn't something you can tick off, you've done it. You grow in it, you only start the growing experience in your first year. I would say, when I read and really thought about what the graduate attributes are, maybe in my fourth or my fifth year, and a lot of them I still don't ... I need to in a sense get there. These are not things that you tick off in a little programme in your first year. It is everything that you experience at a university.

One of the senior students who facilitated the SLE programme with the first-year students expressed the view that first-year students struggled with the notion of gradueness because they were too new to the university and the university experience was still too unfamiliar to them:

The first-year students weren't able to benefit that much from it (the SLE programme) because they didn't have experience in well, thinking 'like that' ... it challenged the students to think in a way that I only learnt over the course of my three years at university. Expecting first years to do it in the very beginning of the year resulted in much frustration and disappointment because they didn't 'get' what the programme was trying to do.

In a focus group session, these senior students commented on how they struggled to articulate notions of citizenship and gradueness to the first-year students and how they were unable to express these notions in ways that were accessible to first-year students. An academic development staff member, who provided training for these senior students who facilitated the SLE programme, questioned whether graduate attributes could be taught and learned explicitly. He felt that it was something students acquired in the process and experience of learning:

For it to be meaningful you actually need to acquire it rather than learn what the

attribute is. I would never have said that at the end of your programme you need to be 'an enquiring person' but I think it is part of the process and experience of learning. Students need to have questions, they need to investigate those ideas or questions. So, I think the whole notion of experience, especially in the first year, is central to how I develop as 'an enquiring person' so that when I begin to show that I do have questions, that I do have a way of beginning to investigate those questions and trying to find evidence, and beginning to draw conclusions about those and developing new propositions, then I'm beginning to grapple with the experience of enquiry, rather than knowing that this is the attribute and that I need to be enquiring.

The SLE programme was conceptualised as a space for embedding the SU graduate attributes. Although the graduate attributes were made explicit to the students and they had 'learned the language' of the graduate attributes, for it to be meaningful they actually needed to acquire the attributes. So, rather than having students reciting an attribute such as 'be an enquiring person', they needed to grapple with the process of enquiry and develop as an enquiring person. There was thus a strong argument for the embedding of the graduate attributes in the formal curriculum, since participation in the co-curriculum was voluntary and many students chose not to participate.

Conclusions

The notion of a Signature Learning Experience (SLE) as a vehicle for embedding graduate attributes at universities has gained traction across a number of universities. Although the forms of implementation vary, the common messaging across the range of forms in the literature is that such an initiative requires widespread engagement across an institution. The findings from this study suggest that this process of developing common understandings, did not take its course at SU. The result was therefore a stand-alone, add-on initiative underpinned by 'Complement Conceptions' (Barrie, 2007) that did not take root in the culture and fundamental ethos of the institution. This led to additive approaches rather than more transformative approaches.

The SLE initiative was planned for the co-curriculum, since it was thought to be too complex a process to integrate into the formal curriculum in a short space of time, with future prospects of integrating it into the formal curriculum. The findings from this study

point to the need to invest the necessary time to create the kinds of spaces required for in-depth dialogue and widespread engagement across the institution about the notion of embedding graduate attributes. This process should not be rushed, as it takes time to develop common understandings and plan implementation strategies that carry the support of a university community. Such time is well invested, as models at other universities (such as the Grounding Programme at Fort Hare University) have shown.

The findings also point to understandings that saw the development of graduate attributes through the provision of an additional separate curriculum, the SLE programme, in association with the formal university curriculum (Barrie, 2007). Although the SLE programme was conceptualised as a curriculum for all students, its reach was seriously hampered by its supplementary nature. A shift to what Barrie refers to as a more integrated approach, would require an exploration of the synergies between the formal and the co-curriculum at SU.

First-year students often find it challenging to link the formal curriculum with the co-curricular activities at the university. Students often experience learning opportunities as separate and fragmented, with little emphasis placed on the importance of learning outside the formal curriculum. The findings from this study point to the inability of first-year students to appreciate fully the learning opportunities provided by the SLE initiative. Some first-year students questioned the necessity and applicability of such an experience to their academic student life. This calls for better integration of the formal and co-curriculum. The SLE initiative attempted to shift students from 'Matie' to citizen. This theme of 'citizenship' is one that has already been taken up in certain courses in the formal curriculum, and there is a Critical Citizenship research group at the university which is currently assessing perceptions and attitudes held by academic staff regarding the notion of Critical Citizenship pedagogy and its implications for Stellenbosch University. Similarly there are areas within the co-curriculum, such as the SLE initiative and the 'Global Citizenship' course run by the International Office, where this theme is also being explored. These are all potential sites within which to locate initial discussions about creating better synergies between the formal and the co-curriculum.

Approaches towards the embedding of SU graduate attributes and the implications for teaching also need to be discussed by all stakeholders at the university. This debate has already been introduced by the Rector of SU. In his opening address at the annual SoTL (Scholarship of Teaching and Learning) conference at the university, he had the following to say in relation to the graduate attributes:

But we cannot only look at attributes of students without looking at the attributes of lecturers. If we want a student with an inquiring mind, we need lecturers with a critical pedagogy. If we want an engaged citizen, we need lecturers with a progressive pedagogy. If we want students who become dynamic professions, we need lecturers with an innovative pedagogy. And if we want students who are well- rounded individuals, we need lecturers with a self-renewing pedagogy (Botman, 2012).

This conversation is one that clearly needs widespread dialogue across the university community. Such engagement should be an open process, which draws in students, academics and administrators across the formal and co-curriculum. The entire university community should be invited to participate in these conversations which need to form part of a broader engagement at the university on the subject of curriculum renewal.

Finally, much of the literature on the topic of graduate attributes, despite often transformative agendas, is premised on an assumption that graduate attributes are 'generic'. In moving the graduate attributes debates to more transformative and integrated approaches, this assumption needs to be interrogated. Millar (2012) argues that it is not possible to compile a list of generic attributes that can be associated with every graduate. She claims that 'graduate attributes are not neutral, asocial, acultural, ahistorical or apolitical concepts' and that they need to be regarded as 'non-generic, context-specific and ideological'. This has implications for teaching and learning, as well as curriculum renewal. Millar argues that these attributes, or 'attitudes,' as she prefers to call them, need to be developed in a non-linear way, over time, through a process of being and with lots of space for reflexivity. This conceptualisation of graduate attributes is at odds with an assumption that graduate attributes are generic. The shift towards generic competencies and attributes links to autonomous views of teaching and learning (Boughey, 2012). Such approaches have been critiqued (Beck

& Young, 2005; Maton & Moore, 2010; Wheelan, 2007) for undermining the very intentions they purport to have. This calls for a rethinking of the notion that graduate attributes are generic. If graduate attributes require a specific context for them to be meaningful, then surely it is not sensible to codify this context-specific type of knowledge in the form of generic attributes? Attempts to find a fit between generic attributes and the knowledge areas in which students are studying are often so imprecise that these generic attributes are rendered meaningless. It seems clear then, that graduate attributes must be an engagement with knowledge.

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