

## ALMOST FINAL VERSION

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### **Who teaches academic integrity and how do they teach it?**

#### **Abstract**

Whose role is it to teach academic integrity to university students? We explored academics' conceptions about their role in promoting academic integrity in two countries, namely New Zealand and Finland. We used Q methodology to find common configurations of perspectives that can help us understand the premises based on which academics approach the tasks and roles associated with teaching academic integrity. The 56 academics in our sample were asked to sort 42 statements highlighting a broad spectrum of perspectives on academic integrity and the teaching of it, and answer some related interview questions. A centroid factor analysis using PQMethod software resulted in five configurations of views with distinctive characteristics. We used three frameworks to interrogate these differences: (1) possible narrative from a students' perspective, (2) Biggs's levels of thinking about teaching, and (3) an ethical interpretation. Academics at our institutions appear united in respecting the importance of academic integrity, but not of one mind about what it is, how it should be taught, whether or not it can be taught, whose responsibility it is to teach it, and how to handle cases of misconduct. The results suggest that teachers are confused about integrity policies extant in higher education and about their roles within these.

#### **Introduction**

Academic integrity has been defined as involving "understanding what it means to be honest in the particular culture of the academic world, and being able to apply the scholarly conventions of acknowledgment" (East and Donnelly 2012). Turner and Beemsterboer (2003) include the notions of teaching, learning and the wider academic environment, and define academic integrity as "honesty in all matters relating to endeavours of the academic environment", which includes "the teaching and learning of knowledge, skills, and values and the discovery and dissemination of new knowledge." Within the past decade, there has been a change in focus on academic integrity from detection and punishment of undesired behaviours to promotion of desired behaviours (Ferguson et al. 2007). However, academic institutions around the world struggle to address integrity issues in the student body (e.g. Lin and Wen 2007; Mirshekary and Lawrence 2009; Ison 2012). An increased focus on combating plagiarism (e.g. McKillup & McKillup 2007; Gilmore et al. 2010; Löfström & Kupila 2013) appears symptomatic of this struggle.

Class discussions, and syllabi and course outlines that acknowledge academic integrity are effective means of facilitating student learning about academic integrity (e.g. Gynnild and Gotschalk 2008; Zuccherro 2008; Burr and King 2012), but the explicit teaching is not all there is to it. Prior research suggests that integration into the academic community serves to prevent research misconduct (True, Alexander and Richman 2011). Students learn ethical guidelines and codes of conduct through relationships and interactions with faculty (McCabe 1993; Anderson and Louis 1994; Aluede et al

2006). Supervisors hold a key role in terms of influencing students' awareness and acceptance of academic integrity standards (Alfredo and Hart 2011; Gray and Jordan 2012).

The current proactive ethos to academic integrity places great expectations on academic staff and raises questions about how academics themselves view their roles and responsibilities. What do supervisors themselves think about their role in teaching academic integrity: Is it their task or not? Through what roles do the academics (not) enact upon their notions of the teaching task?

Surely, higher education has always taken academic integrity seriously and has made efforts to make sure that its members act in accord with what is considered to be ethical, both in research as well as in teaching, but we suspected individual academics' views on academic integrity and their role in promoting it can vary and be highly subjective (e.g. Escámez, López and Jover 2008; East 2010). Thus, to capture qualitative variation, we embarked on a Q methodological study (Stenner, Watts and Worrell 2008) on academics' conceptions of academic integrity and their role in it.

Q methodology can be used to make sense of complex phenomena, e.g. academic integrity, about which different points of view can be expressed (Brown 1996). We did not explore the university teachers' beliefs about academic integrity, per se. Instead we sought to find common configurations of perspectives or views that can help us understand the premises based on which academics approach the tasks and roles associated with teaching academic integrity. We focussed especially on conceptions of supervisors of undergraduate work. Supervisors play a vital role, as students often gain their first, hands-on experiences of the research process through this partnership.

We conducted the study at two research-intensive universities, one in New Zealand and one in Finland. The New Zealand university is reviewing its integrity policy, while the Finnish university revised its protocol for student deceit and plagiarism in 2011 and adopted the revised national guidelines for the responsible conduct of research in 2012.

## Method

This study followed a conventional Q methodological approach described in Watts and Stenner (2005). It followed the ethics approval of the New Zealand based institution. The Finnish university did not require ethical review for this type of study<sup>1</sup>. Voluntary participation, informed consent, anonymity and confidentiality were respected at both institutions.

Once the initial task of developing a research question broad enough to encompass the objectives of the project was completed, an inductive phase followed to develop a set of statements (Q set) that represented the broadest sample of reasonable responses to the research question, "*How do university teachers understand the processes whereby undergraduate, masters and honours students learn academic integrity as they experience research supervision?*"

A Q set of more than one hundred statements was developed from the data gathered, which included themes identified in the literature and interviews with academic staff and students. The number of statements was reduced to 42 by combining some statements and eliminating similar themes in an attempt to bring the total down to a reasonable number. In Q methodology, items are viewed as cases and participants as variables. Thus, the notion of representative sampling applies to the sampling of items in the Q set rather than participants (Stenner et al. 2008). The statements were piloted twice to

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<sup>1</sup> The research did not involve intervention in the physical integrity of research participants; deviate from the principle of informed consent, involve participants under the age of 15 being studied without parental consent; expose participants to exceptionally strong stimuli; cause long-term mental harm beyond the risks encountered in normal life; or signify a security risk to subjects (Finnish Advisory Board on Research Integrity 2009, 3).

address the clarity and validity of the Q set. The process of instrument design has been described in Trotman et al. (2013).

The data consist of the Q sorts and interviews with 56 faculty members (NZ: 39 and FI: 17). Relatively small P-sets can yield meaningful results in Q methodology, in which participants are “not regarded as subjects from subpopulations whose responses can be extrapolated to estimate population statistics” (Stenner et al. 2008, 221, emphasis original). Our intention was to involve faculty members with a variety of viewpoints, disciplines and experience. The faculty members included teaching and research awardees, members of a new teachers’ support group, participants in academic development workshops as well as faculty members in leadership positions. They represented natural sciences, medicine, social sciences, and arts and humanities. Participants were recruited by email requests and on-site in workshops.

The Q sort process was conducted in face-to-face sessions. Participants were asked to sort the Q set (42 statements printed on cards) based on the extent to which they agreed or disagreed with the statement by placing them in a predetermined grid with an 11-point scale from -5 to +5. Participants were also told that the statements should be judged relative to one another rather than a categorical agree or disagree. In keeping with other Q research, the grid was limited to two statements at -5 and +5, increasing to 5 statements at -1 and +1 and six statements at zero. The pseudo-normal distribution facilitates analysis, but has little effect on the final outcome of the study (Watts and Stenner 2005). Post-sort interviews were conducted in order to provide insight into how participants interpreted the statements and provide additional qualitative data on their personal views relative to the topic.

The quantitative data in this study was analysed using PQMethod (version 2.33), a software programme specifically designed for Q methodology (Schmolck 2013). Applying centroid factor analysis, Q sorts were allocated to factors on the basis of loadings greater than 0.4 ( $p < .01$ , based on the number of statements  $N=42$ ). Factors were retained in the analysis if at least two sorts significantly loaded onto them without also significantly loading onto another factor. The factors that emerged were rotated using a varimax approach, to maximise the variation explained by the retained factors. To interpret the data, an estimate or best description of each factor was produced (by PQ Method) by merging all the Q sorts that loaded significantly (at  $p < .01$ ) onto each factor and that exemplified that factor or point of view (i.e. defining sorts, Watts and Stenner 2005). This process results in a factor score for each statement. Combining these factor scores into a single complete best-fit Q sort for each factor results in a factor array used for the interpretive analysis. We identified five significant factors accounting for 60% of the variance.

Factors were interpreted by developing accounts of the factors based on the distribution of Q set items within their respective ‘factor arrays’, as described by Watts and Stenner (2005). We started by analysing consensus statements and statements that differentiated between factors. Subsequently we analysed the distinguishing statements for each factor and the statements that most differentiated each factor from the other factors. The distribution included 30 defining sorts for Factor 1, 15 for Factor 2, 23 for Factor 3, 4 for Factor 4 and 8 for Factor 5. Factors are referred to as Groups 1 to 5.

Overall interpretation, however, was not based only on particular ranking positions of the statements. A holistic interpretation was achieved by considering the interview responses (indicated by (p#) referring to the participant number). Essentially the “task is to reconstruct the subjective point of view expressed in the factor array and hence ‘breath subjective life’ back into the purely numerical representation” (Stenner et al. 2008, 227). We then brought our analyses together and agreed on the factor interpretations.

## Results

The results show that all groups agree (albeit to varying degrees) with many statements, indicative of some general consensus around some aspects of academic integrity, but there were also some

statements that groups had different levels of agreement over. In some respects, the statements that most readily distinguish between groups were those that addressed the detail of teaching academic integrity, rather than the generality of doing so. We refer readers to the full statements as written in Table 1 when reviewing the group descriptions as these may have required an inversion of the statement for facility of expression.

All groups agreed that: in research, process is important, not just getting the right results (statement 20); academic staff do have the knowledge and competence to teach academic integrity (24); academic integrity is an integral part of the research process (27); academic staff should not be making up their own minds about academic integrity (33); academics do find time to address academic integrity (36); academic integrity is more than following rules (37); ignoring minor incidences is not the best way to protect the institutions reputation (38); attending to academic integrity is appreciated within departments (39) and it is the job of academic staff to address the academic integrity of their students (40).

The results provide clear distinctions between the groups based on their disagreement on a range of concerns relating to the nature of academic integrity, how to teach it, how learners address it, and what institutional processes should be involved. Most particularly, groups did not agree on the extent to which it is their role to teach academic integrity (1) or if students either have academic integrity or don't have it (and therefore on the extent to which it is teachable) (2). Groups had different perspectives on whether they explicitly teach academic integrity or model it (6), what researching with integrity involves (14), the importance of moral codes to research (17), on the extent to which students need to make up their own minds on what integrity is (21), on the origins of a personal 'moral compass' (22) and on whether underlying values can be taught or not (23). Furthermore, groups had different perspectives on institutional matters such as the role of academic administration (31), the extent to which students should take responsibility for academic integrity (35) and the extent of institutional culpability if students do cheat (42). The closer to practice we get (i.e. questions regarding how to teach, how students learn, how institutions should address academic integrity etc.), the more disagreements emerge.

Table 1: 42-item Q set with factor scores for each group

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In an attempt to 'give voice' to the groups, the descriptors below are written to articulate the particular view of the group, based on statistically distinguishing statements and on related quotations from interviews with each group's defining sorts. It is important to note that some of the identifying statements are held in common by two or more groups. For the sake of clarity, we have identified each group with individual, discrete descriptors. The commonalities of some groups receive further attention in the Discussion section that follows.

### **Group 1: Teachers of rules and values**

We teach the rules and the values of academic integrity. We certainly teach the rules of academic integrity to our students (34). But although rules are important, we also address the values and morality of academic integrity in our research supervision. *'Values are important because they are the reasons behind the rules'* (p12). *'Institutions have a responsibility to make their values and expectations explicit, and academic staff should clarify their values with respect to institutional policies'* (p19). *'The whole institution has to model the ethical aspirations and deal with it similarly'* (p06). We, personally, play important parts in this process. We don't trust wider society to distinguish right from wrong (22). In the context of our research supervision teaching academic integrity is our role as academics. We also tend to take an explicit approach to teaching values so, for example, we are unlikely to simply structure the learning environment to make it easy for students to do the right thing (8). Once the institution's academic integrity guidelines are discussed with our students, we may *'build it into assessment criteria'* (p30).

The academic integrity of our students is substantially our responsibility and we must teach both the rules and the values of academic integrity to our students. We make sure our students learn these important things.

### **Group 2: Gatekeepers of the academy**

We uphold professional and academic standards of integrity through role modelling. Academic integrity is an integral part of our routine research supervision so we are more likely to model integrity than to teach it explicitly (6). We are less likely than some of our colleagues to engage in critical conversations about ethical principles (7) and more likely to simply make it easy for students to 'do the right thing' (8). *'The way we structure an assessment and allocate marks reinforces good practice. We try to give questions that are linked to our class content, so that students can't just find answers on the Internet'* (p20). We believe that breaches of ethical behaviour are not indicative of institutional failure but rather a reflection of a student's poor decision making (42). *'We expect students to be self critical as we are self critical in our research work'* (p10). We appreciate the role of wider society in establishing moral codes (22), and are mindful not to let recent technological developments change our understanding of what integrity entails (19). We are not confident that academic dishonesty is uncommon among our students (25) and this may have a bearing on how we address academic integrity.

We think of ourselves as gatekeepers of the professions and of academia. In this context we are tough but fair in responding to academic misconduct.

### **Group 3: Teaching-oriented social reformers**

We focus on student learning and aim for social reform. For us researching with integrity needs to 'do good in the world' (14). *'We're teaching practices and ways of working in the world, not just research'* (p34). We are *'producing graduates who will make a difference in the world'* (p13). We do not expect students to understand the importance of academic integrity before they begin their research (3). *'Academic integrity is something you learn as you are researching...coming in [students] can't fully understand anything'* (p23). We don't teach the rules (34). *'Academic integrity must be learned through practice and guidance'* (p23). *'Students should feel comfortable to come forward and ask for help so they can make good choices. It's easy to get it wrong and not even know'* (p23). We don't spend time focusing on catching cheats (11). We think it is *'better to reward good research practice rather than punishing misconduct'* (p6). If a student cheats *'we should acknowledge it'* (p10), *'provide feedback'* (p10, p20) and view it as a *'learning opportunity'* (p34, p10, p20). We think that when students cheat by fabricating data, this is an institutional failure (42). *'Community responsibility is just as important as individual responsibility. If a student falls over, there's a problem with the system'* (p28).

We foster future generations of academics and citizens. We are demanding teachers, forgiving judges and we always have students' and society's interests at heart.

#### ***Group 4: Academic integrity modellers who emphasise student responsibility***

We strongly disagree that student misconduct represents institutional failure (42). Students need to take responsibility for their own behaviours. We do not trust wider society to distinguish right from wrong, and therefore we must address integrity in our roles as academics (22). But we are not convinced that it is our role to teach academic integrity (1). However, we do model integrious behaviours (6). *'It is about integrating ethics into your work, doing a lecture on ethics is not the right approach'* (p2). Students either have or they don't have moral principles and there is not so much a teacher can do about it (2). We do also structure the learning environment to make it easier for the students to do the right thing (8), but assessment of knowledge in the disciplines should not be confused with assessment of integrity. The idea of allocating marks for academic integrity is not viable (12). We think that students need to make up their own minds about what is honest practice and act accordingly (21). *'Teachers can do their best to model good behaviours, but ultimately individuals make up their minds about how to act'* (p52). Likewise, as long as we are open about what our research involves there is no need for it to conform to any particular moral code (17) or necessarily do good in the world (14). We are not adamant that academic integrity is a value that needs to be promoted institution wide (16). We tend not to involve university administration if issues arise (31). In cases of misconduct, we prefer not to make a fuss about it. *'If we suddenly start to make a big deal, that would signal that something is wrong and raise suspicion, when in fact there are no problems'* (p40).

We fly the flag for academic freedom and individual choice. Students must take responsibility for their own behaviour.

#### ***Group 5: Academic integrity skill-builders***

We think that the practices of academic integrity can be taught like other academic skills. We think of academic integrity as the successful use of a range of academic skills or abilities, all of which can be taught. However, we don't think we can teach students the values associated with academic integrity (23); values are personal to the student (23). *'You can teach the practices, but what [students] do with it is up to them'* (p16). We expect students to understand the importance of academic integrity before they begin their research (3) but we also consider academic integrity to be the responsibility of the institutional community, not just the students (35). When a breach of academic integrity occurs we are likely to involve administrative staff (31). *'Having clear guidelines and a process in place is reassuring'* (p30).

We are the teachers who make sure that our students know how to act with academic integrity.

## **Discussion**

What academic integrity is, how it is taught and how it should be addressed in higher education are complex and highly subjective constructs. Yet the Q methodology approach has identified five patterns of viewpoints on academic integrity. Some of the perspectives brought forward in such an analysis may appear controversial, and probably are to a certain extent. Nevertheless, this framework for studying views on academic integrity may reveal insights that cannot easily be grasped through other methods. We propose that these contradictions be subjected to scrutiny in future studies.

We need to emphasise that: the viewpoints expressed by individuals as they sort statements are not necessarily stable over time (Watts and Stenner 2005) although we hope that the group descriptions assembled from many sorts may be; the research may not capture all viewpoints that may exist in these institutions (some academics invited refused to participate); and that the outcomes of this research are limited to some extent by the quality of the statements being sorted. Despite the researchers' effort to eliminate ambiguity in the statements, different interpretations are inevitable. Indeed, participants may make *'vigorous attempts to impose their viewpoints on any set of statements they are given'* (Watts and Stenner 2005, 76). The five groups have much in common with one

another. In establishing good academic integrity practices, all agree that process, not just the results, is important and that academic integrity is more than following rules. On *how* it is addressed in higher education, all agree that it is an integral part of the research process, that academic departments on the whole do appreciate it when academic staff attend to academic integrity in their supervision and that individual academic staff should not be making up their own minds about academic integrity. On whose *role* it is to address academic integrity, all agree that it is the job of academic staff to do it, that academic staff do have the competence to teach it and that they do find time to address it.

The groups also have substantial areas of disagreement. One major dichotomy relates to perspectives on *how* academic integrity should be taught and whether it is teachable at all. Other dichotomies focus on notions of responsibility, the role of academic integrity specialists and on the nature of academic integrity and separates the practices of academic integrity from its underlying values. Similar ambiguities and differences among academics regarding whether values can and should be taught by them and where the responsibility to do so lies, have been identified by Escámez, López and Jover (2008).

These issues get to the heart of what academic integrity is, how it should be taught and whose responsibility it is. We use below three different frameworks to interrogate these differences. We first tentatively explore what the different group viewpoints might look like from the students' perspective as a possible narrative from one student to another. We then use a recognised teaching framework (Biggs's *Levels of Thinking about Teaching* framework, Biggs and Tang 2007) to add a 'scholarship of teaching and learning' approach, and finally we apply an ethical interpretation.

From the students' perspective, teachers whose viewpoints focus most on Group 1 may provide the clearest guide to what academic integrity is. *Group 1 does not shy away from teaching what the rules are. They also provide learning opportunities within which rules may be analysed and understood.* Group 5 may provide a complementary picture of academic integrity for students. *Not only do they have one eye on the rules, they ensure that departmental and institutional processes are compatible with the rules. Integrity is like a skill. Rules and codes are tools in your toolbox. You just need to learn how to use them. These academics will ensure that you learn, and you will be OK in higher education.* Group 2 provides something else. *Group 2 may not appear to teach academic integrity at all, but they are gatekeepers for the professions and for academia and they 'live integrity' rather than 'teach it'. They are tough but fair.* Students may struggle to understand what Group 4 contributes, but their message is clear to those who have a chance to engage with them. *Group 4 academics will tell you that university teachers cannot make you an integrious person. You need to take responsibility for this yourself.* Academics in Groups 2 and 4 take on the role of ethical exemplar, which has been identified as a key role of supervisors (Gray and Jordan 2012). This leaves Group 3. *These academics will share the students' journey to academic integrity every step of the way.* They appear to take on the role of mentor, which has also been found vital for supporting integrity among students (cf. Gray and Jordan 2012). Depending on their supervisors' views of academic integrity, the role they adopt for themselves, and the importance they attach to teaching it, students may end up with a highly varied experiences and understandings of academic integrity. The findings suggest the need for investigating student experiences in future studies.

It could be tempting to assign different groups within this research as representing teacher-centred or student-centred approaches to teaching (e.g. Trigwell and Prosser 1996). Key factors in this dichotomy could be their relative enthusiasm to engage students in critical conversations, their willingness to structure the learning environment to make ethical choices easy and their notions of relative student/teacher responsibility. On this basis, some groups are clearly more 'student-centred' than others. Other interpretations are possible, however. A more nuanced interpretation might emphasise that the learning here takes place in the context of research supervision and, at least in the minds of the university teachers involved, this may be conceptualised as something other than teaching. Some of the viewpoints identified here have much in common with ideas of apprenticeship (Pratt, 1998), rather than with conventional (for many academics) lecture-based teaching (although it needs to be stated that person-role focused models, such as traditional apprentice-models of learning

and teaching are contested as focusing on dyadic relationships rather than processes, and drawing on implicit pedagogy while not sufficiently acknowledging student agency (e.g. Pearson and Brew, 2002).

With respect to the *levels of thinking about teaching* framework (Biggs and Tang 2007), Group 2 people express some viewpoints representative of the highest level (level 3), focusing on what students do, rather than what students are (level 1) or what teachers do (level 2). In particular, Group 2's emphasis is on supporting learning through appropriate learning activity; in this case supervised but often relatively independent research. Group 1 and 5 people appear to sit within level 2 through their strong focus on what they do as teachers. They work to foster the development of understanding of the rules or a set of skills needed to follow the rules, and they take great responsibility for teaching these. A similar style of analysis might place Group 4 as Level 1 teachers who emphasise the importance of individual abilities, while distancing themselves from the responsibility of teaching. They focus on student character (for example they are the only group to agree that students either have moral principles or they do not). An alternative way of analysing each group in a teaching context is to explore the distribution of teaching awards amongst the defining sorts for each group, although it is important to note that different institutions use different criteria to determine teaching excellence (Shephard, Harland, Stein and Tidswell 2011). Although the distribution was different for each institution, teaching awardees were common in Groups 1, 2 and 3. In general terms, students and peers appear to respect the teaching abilities of these groups. This observation warrants further research to establish the relationship between groups and teaching approaches and activities. These analytical approaches emphasise that higher education in general is not of one mind about teaching excellence in the context of research supervision.

Another framework that lends itself to interpreting the group descriptions in this research is individual ethics adherence. In terms of ethical values, the standout group is Group 3. These academics can be characterised as virtue-ethicists (e.g. Macfarlane 2009). They want research and researchers to do 'good in the world'. Equally important as the results are the individual's motives. They may evaluate each suspect case of misconduct individually to determine the nature of the students' intentions; were they good or deceitful? Consequently, they do not involve administration or follow set procedures by default. Group 1 also has some elements of virtue orientation, but their interest in rules and their application places them with the rules-ethicists of Group 5. Group 4 may represent a particular stance on rules, that of maximization of individual freedom (cf. Vallentyne, 2012), i.e. one must not limit others' freedom of choice. This one "rule" is set upon the notion that nothing is valuable or value-less in itself, but that these are attributes that humans make. From this follows that every human being has a right and an obligation to determine what is valuable. In order to do this, individuals must have freedom to explore their own conceptions and values. Group 4 has strong views on the need for students to make up their own minds about integrity. Group 2 may also be rule-ethicists but with a focus on rules/norms decided by society rather than by individuals. It is notable that no Finnish academics occurred as defining sorts for Group 5 and only 2 as defining sorts for Group 2. It is possible to relate this to the Finnish tradition of integrating ethical concepts and ethical values, emphasising personal decision-making, in the teaching of ethic codes in some fields (e.g. Numminen et al. 2011).

We end with some views on the policy implications of this research, to our institutions and to higher education in general. It appears that university teachers at our institutions are united in respecting the importance of academic integrity, but not of one mind about what it is, how it should be taught and whose responsibility it is to teach it. This seems to us to be compatible with perceptions in the literature, and found within the inductive phases of our research in our own institutions, that our teachers and our students are confused about integrity policies extant in higher education and about their roles within these. Yet integrity policies and strategies in higher education are, of necessity, designed to achieve something. Is the goal to identify the lowest common denominator of viewpoints expressed by academics, some form of compromise or consensus position, or an aspirational goal, rarely achieved by any?



Hidden within this data set are some key academic integrity issues for which no clear dichotomy of viewpoint exists in our data and where no groups responded particularly negatively or positively. One such issue involves collaboration between students (e.g. item 10). Academics may be collectively confused. As educators, we know that collaboration is vitally important for learning, central to notions of social constructivism and to be encouraged. But other demands, generally in relation to the assessment of individual learning and assurance of individual integrity, conspire against this necessity. Another such issue concerns whistleblowing and whether or not students should report on other students who cheat (item 30). A third issue regards academics' need for professional development support to address academic integrity (item 32). Academics' may not recognise their training needs regarding pedagogies for teaching academic integrity suggesting that staff development needs to take the lead on identifying competence gaps and seek ways to promote good practices among academics. We suggest that, perhaps, all of the patterns of viewpoint about academic integrity have a contribution to make in overcoming the confusion, whereas any one of the viewpoints on its own may not. These are critical issues for higher education and they may need higher education's full complement of skills, values and aspirations to overcome them.

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