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# Including young people with disabilities: Assessment challenges in higher education

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**Abstract**   Within a European context, facilitating the increased participation of marginalized groups within society has become a cornerstone of social policy. In higher education in Ireland this has generally involved the targeting for support of individuals representing groups traditionally excluded on the grounds of socio-economic status. More recently, people with disability have been included in this consideration. This approach has tended to focus on physical access issues and some technical supports. However, access is multifaceted and must include a review of pedagogic practices, assistive provision (technological and personal), student's engagement with their workload (e.g. recording) and evaluation procedures: achieving accreditation levels commensurate with ability.

This small-scale Irish study examined the experiences of two groups of young people with physical disabilities and with dyslexia in two higher education institutions. It was apparent that for students with physical disabilities and with dyslexia, assessment practices were fraught with additional limitations. Assessment practices were mediated for these students through the physical environment, the backwash effect of assessment on curriculum, the availability and use of assistive technology, and through the attitudes of staff and students. It can be concluded that access issues within higher education have been inadequately conceptualized and as a result failed to address fundamental issues around assessment for students with physical disabilities and with dyslexia.

**Keywords**   Access · Assessment · Attitudinal issues · Assistive technology · People with disabilities

## Introduction

In common with our European counterparts, Irish government policy articulates a commitment to increasing access to higher education institutions for people from traditionally

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marginalized groups. Within an Irish context this has usually consisted of a variety of access courses aimed at people who are socio-economically disadvantaged. More recently attention has focused on the participation of people with disabilities within the education system and more specifically within higher education. Access to higher education has been conceived in terms of guaranteeing physical access, providing some limited access through quotas devised by the higher education institutions usually on a 'grace and favour' basis. Despite these initiatives people with disabilities remain seriously underrepresented in higher education.

Education for people with disabilities, like other forms of social provision, is shaped by popular perception and by providers' understanding of the target population and its needs. There is little evidence of concerted efforts to ensure that the educational disadvantage often experienced by people with disabilities at all levels of the education system is being seriously addressed. The dominant medical discourse governing provision for people with disabilities can influence all levels of provision. Facilitating access is complex and multi-layered, therefore focusing almost exclusively on 'point of entry' issues can be misleading and counter-productive. Belatedly, there has been an increased recognition that higher education urgently needs to address the critical issues of curriculum access and assessment procedures. This research aimed to document the experiences of a group of people with disabilities within two Irish higher education institutions and explore the effects of institutional barriers on their opportunities to succeed.

## Irish context

Guaranteeing access to education for people from historically marginalized communities has achieved prominence within Irish policy initiatives and legislation in the last decade. The Education Act (Government of Ireland, 1998), for example, lists among its objectives 'to promote equity of access to and participation in education and to promote the means whereby students may benefit from education'. It is increasingly recognized that access issues cannot be based on the 'individual deficit' model traditionally employed to explain the under-representation of people from marginalized communities within higher education (Skilbeck & Connell, 2000). The Report of the Action Group on Access to Third-Level Education acknowledged that under-representation of people with disabilities in higher education is "the consequence of attitudinal and environmental barriers, both within higher education and external to it, which preclude and diminish the possibility of students participating within that process" (Department of Education and Science 2001, p. 63). Within this report, there is a limited recognition that access issues are multi-layered and an observation that "traditional assessment procedures may not be effective in assessing the knowledge of some students with disabilities" (Department of Education and Science, 2001, p. 65). However, apart from this comment there is no serious consideration of assessment procedures.

Despite the policy initiatives young people with disabilities remain on the margins of higher education in terms of representation and participation. Little improvement in participation rates was reported from 1994 when students with disabilities comprised 0.7% of the student population (AHEAD, 1994) to 1998/9 when the relevant figure was 0.8% (Hoey, 2000). Meanwhile, in the United Kingdom, participation rates for students with disabilities within higher education ranged between 3.9% and 4.5% (Borland & James,

1999). In addition, students with specific learning disabilities (dyslexia) comprise the largest group within the designated population with disabilities in higher education (Hoey, 2000).

Barriers to participation

Numerous explanations have been offered to explain the lack of representation of people with disabilities within higher education. Mc Donnell (2003) and Priestley (2001) point to the inequitable social structures that inhibit the participation of people with disabilities. Some commentators emphasize the lack of positive societal expectations for these young people as experienced in primary and post-primary schools (Department of Education and Science, 2001; Kenny, Neela, Shevlin, & Daly, 2000). Despite anti-discrimination legislation and pro-inclusion government policies the persistence of attitudinal barriers has been cited as a major inhibiting factor in the participation of people with disabilities in medical programmes in the United Kingdom and Australia (Konur, 2002; Ryan & Struhs, 2004). Within higher education, contributory factors to the lack of participation include pervasive difficulties such as physical access, lowered expectations and poor levels of awareness (Borland & James, 1999; Chard & Couch, 1998; Collins, 2000; Holloway, 2001; Tinklin & Hall, 1999). These pervasive difficulties can result in people with disabilities not achieving accreditation levels commensurate with their ability and undermine their capacity to contribute to university life.

Internationally research into the participation of people with disabilities in higher education is comparatively recent and limited in scope. Researchers often focus on physical or sensory disability and analyse its impact on rates of entry to, and participation in, particular disciplines (Ryan & Struths, 2004). Despite increased awareness of the crucial issue of guaranteeing physical access, the higher education environment can be essentially disabling (Borland & James, 1999; Collins, 2000; Reindal, 1995; Tinklin & Hall, 1999). At an institutional level, disability has been conceptualized on an 'individual deficit' model that offers support to the person with a disability though with little concomitant impact on institutional practices (Holloway, 2001; Hurst, 1996; Reindal, 1995). As a result, the effects of existing academic practices on the participation and success of people with disabilities in higher education has tended to be ignored and rendered invisible.

## Implications for assessment

Context

Although systematic analyses of the range and nature of assessment practices in higher education are lacking, there is plenty of evidence that prevailing assessment practices are suitable neither for all students (Beaman, 1998; Birenbaum, 1997; Scouller, 1998; Willie, 1987) nor for all institutional purposes (Astin & Lee, 2003). In addition, research in the area has tended more towards institutional-level issues such as, assessment and institutional quality and improvement (Cabrera, 2001; Peterson, 2000), student attrition and retention (Beck, 2001; Kahn, 2001), entry selection (Bridgeman, 1998; Mori, 2002; Young, 2000), methods and student learning (Minbashian, Huon, & Bird, 2004; Scouller, 1998; Tynjälä, 1998), and faculty and staff (Grunwald & Peterson, 2003; Heck, 2000; Samuelowicz & Bain, 2001, 2002) than towards research on students' individual or

group experiences of assessment, particularly from a sociological or social justice perspective.

Where such analyses have been reported, they have tended to focus on the traditional social divisions of race, class, and gender (e.g. Bridgeman, 1998; Young, 2000) while the newer social movements (Bradley, 1995) have received little or no attention. Thus, there is little understanding about how disabled students experience assessment in higher education nor of the effects of assessment on them. The ways in which assessment practices may discriminate against students with disabilities remains unclear although concerns about cultural, racial, and socio-economic bias in assessment design (Nitko, 1996; Reardon, Scott, & Verre, 1994; Willie, 1987) suggest a need for similar and extended work in relation to disability as well as other areas of the new social movements, particularly given the growing explorations into the social divisions that surround bodily differences (Bradley, 1997).

Assessment practices are created, not given. They are decided at an institutional, departmental or faculty level. Every assessment practice represents a selection of one method of assessment over another. Decisions are made about modes and techniques of assessment and about the purposes and audiences that are prioritized. It is worth noting the very wide range of available assessment options from which assessment selections are made. Decisions about modes include whether the assessment approach is summative or formative, formal or informal, external or internal, terminal or continuous. Decisions about techniques—the means through which assessment data are gathered—are made from a very wide range of possibilities that include, at least, written, essay, multiple choice, thesis/dissertation, oral, aural, practical, fieldwork, laboratory report, individual project, group project, profile, portfolio, diary, log, work placement rating, report, skills record, summary, research project, review, poster, and exhibition. Decisions are also made about whether referencing systems are norm-referenced, criterion-referenced, or self-referenced. A commitment to including learners with disabilities requires more analytic consideration of modes and techniques of assessment. Re-worked understandings of intelligence and ability require this also (Gardner, 1983, 1991). Learners learn differently, people express their understanding differently (Perkins & Blythe, 1994) but assessment practices do not always take account of this.

Assessment has both intended and unintended consequences, and consequences are greater for some students than for others. The modes and techniques used to assess probably have the most immediate influence on how a learner will experience an assessment practice, and they significantly influence how inclusive an assessment practice is felt to be. For example, the over-reliance on written techniques of assessment can exclude many learners from successful assessment experiences as can the practice of requiring learners to communicate all they know about a topic within a limited and rigidly imposed time frame. These constraints can affect disabled students even more harshly, particularly those students who need use of assistive technology, a scribe or extra time.

Research methodology

This project adopted a small-scale qualitative research procedure designed to document the experiences of two groups of students with disabilities in two higher education institutions. Students with disabilities in two higher education institutions were informed of the project through the access officers and invited to participate. A total of 36 students indicated a willingness to participate and 16 actually attended the sessions. A semi-structured interview schema was devised to ensure comprehensive overview of major issues relating to

provision in higher education for students with disabilities. Interviews were tape-recorded and transcribed. Analysis was developed through close textual readings of interview transcripts and the data were classified under category headings.

There were nine female and seven male participants and relevant details including participant ages, academic courses and their disability are contained in Table 1. Seven of the participants had dyslexia, reflecting their dominance within the population of students with disabilities. Three participants had hearing impairments (one person had a physical disability also); two had visual impairments; four had physical disabilities (one had acquired her disability in adult life). It was evident that on average the participants were at least 1 year older than the norm for their peer group. Health and personal reasons appeared to account for this discrepancy though this issue was not directly addressed with the participants. Arts degrees were the most popular choice for participants though equal numbers were enrolled for Science and Business Studies courses.

Findings

Participants in this study wanted to pursue their chosen course to the best of their ability. Here, access to, and mode of provision of, supports was significant. 'Supports' included process and product: attitudinal changes in college staffs, and provision of assistive personnel and technology. Participants had by far the most difficulties in the domain of attitudinal change.

The built and physical environment

The built and physical environment causes access problems much of the time for physically disabled students, but intensely so during assessments. The terminal, written, once-off, summative examination caused particular problems for participants. Incidental factors inherent in this method of assessment, affect many or most students but they cause much more disruption to students with disabilities. The built environment, a challenge at the best of times, has additional implications for students with disabilities during examinations. 'Rationed' installation—occasional ramps, one toilet—does not open the whole building, or

**Table 1** Research participants

| Name | M/F | Age (years) | Course | Disability |
|------|-----|-------------|--------|------------|
| Mike | M | 20 | Business Studies | Hearing |
| Barry | M | 20 | Arts | Dyslexia |
| Ian | M | 21 | Arts | Visual |
| Sinead | F | 21 | Arts | Dyslexia |
| Eleanor | F | 21 | Arts | Physical |
| Kate | F | 21 | Business Studies | Physical |
| Peter | M | 21 | Business Studies | Dyslexia |
| Cormac | M | 21 | Medicine | Dyslexia |
| Shauna | F | 22 | Science | Dyslexia |
| Helen | F | 22 | Science | Hearing |
| Conor | M | 23 | Science | Dyslexia |
| Frances | F | 24 | Arts | Hearing/Phy |
| Moira | F | 24 | Arts | Visual |
| Niamh | F | 31 | Arts | Physical (acq) |
| Mark | M | 31 | Arts | Physical |
| James | M | 50 | Engineering | Dyslexia |

all that goes on in it, to the physically disabled student. Some participants spoke of Herculean journeys in mid-examination, to a remote toilet and back. Unacceptable and unavailable levels of resources of time and energy are demanded in negotiating many seemingly accessible buildings. Such token inclusion not only constitutes *de facto* exclusion but can have a direct effect on the achievement of physically disabled students, being assessed under pressurized examination conditions where every minute counts, and where external discomforts and incidental factors get in the way of performance on the day.

Backwash effects of assessment on learning

Difficulties attending one key requirement—getting lecture notes—was a burning issue for both students with dyslexia, and for students with disabilities that made it difficult to take notes. Participants were aware from very early in their courses, therefore, of the backwash effect of assessment on curriculum, teaching and learning. For these students, achieving success to the best of their potential meant having access to lecture notes, the currency required for preparation for and delivery of assessments. Several participants had difficulty getting lecture notes, however.

> They (lecturers) wait until two or three weeks to give me the notes and so it is difficult to keep pace with the lectures. (Barry)
> He (lecturer) got a letter at the start of the year stating that I was dyslexic and needs a copy of all the notes. He didn't take it seriously. The gloves came off ... we can't give you notes as you will give them to all your mates. (Peter)
> First year was easier than the rest as all my lecturers in first year were told to be nice... but as I progressed through the different departments I ran into the more seasoned academics. One was wondering what I was doing here. (Sinead)

This highlights how the competitive individualism intrinsic to an assessment structure can be invoked as a way of excluding disabled students and as an anti-learning mechanism. This model of learning and assessment is so pervasive and unproblematized that the lecturer could articulate a belief that, rather than interfere with the competitive hierarchy of the examination by (possibly) ''assisting'' non-disabled students by (possibly) giving them access to lecture notes, disabled students with an entitlement to lecture notes could be denied them, although their assessment could be jeopardized without them.

Thus, the fundamental outcome was not the development of disabled students' assertiveness, but the removal of a practice (note provision) from its proper structural position, to the position of a private 'grace and favour' arrangement. This both expressed and reinforced perceptions of disabled students as objects of charity, and nuisances. Though some participants actively resisted this re-conceptualization of a crucial equity issue:

> It shouldn't be up to lecturers to decide who to give notes to. There should be disability training for all staff including admin who need to know your needs and entitlements. (Conor)
> It should be explained to the lecturers. I definitely felt like a second-class citizen coming into the lecture. (Shauna)

Assistive technology

Full access demands that students can 'engage' with courses: take notes, read, produce essays, do experiments. All of these activities are related to students' assessment

experiences, either directly or indirectly. To ensure that disabled students can engage, they require adequate assistive technology; it is obvious that equity demands they have such provision ab initio. The technology itself can cause problems, but far more often, the problems lie in the unanticipated demands implicit in the process of using it. Institutional commitment seems to be limited to providing the support (electronic or personal) though the student has to learn to effectively use the support. For instance, for the student who needs to dictate to a scribe, the skill of doing this is the equivalent of writing for another; but the hitherto unseen scribe arrives at most a few days before the examination. The dictating student is in a sense, reduced to operational semi-literacy:

> I did try the voice-activated software but it is too slow. Your style of writing goes out the window when you are dictating. It is very difficult to keep your train of thought when dictating. I always do very badly in my exams whereas in my ordinary essays I reach a higher standard. (Niamh)

Obviously, this type of examination support does not ensure that students with disabilities can participate on an equal basis to their peers.

The validity of dyslexia is contested at an institutional level is sometimes perceived as a strategy to confer unfair advantage. As a result students who have dyslexia can attract suspicion among their peers:

> Friends were saying that I did not need support when I got it in school. They treated me differently. So in third level I play it down. I learnt from past experiences. (Sinead)
> Some of the girls thought the extra time was 'a bit much'. Sometimes I am defending my case, but most times they're just happy. (Shauna)
> Dyslexia is viewed as a strategy for getting unfair advantages. (Conor)

## Attitudes

Attitudes and provision are interconnected: institutions that can afford to respond, can afford to recognize a difficulty, and are heard as having done so ('actions speak louder than words'). As will be seen, the lived experience proved more complex. Negative attitudes were the single biggest barrier reported by participants:

> Someone to come out and say that having dyslexia is not all bad—give them the facts and the tools to cope. We are told that there are students with dyslexia but the only time you get to see them is during exams. I was just left on my own. (Conor)
> It would help if people stopped pigeon holing people. Not saying to people like me 'you cannot do this because you are disabled', but looking at what I can do, with the necessary supports in place. (Moira)
> One lecturer wouldn't believe I was deaf, I suppose because I could talk. (Mike) Such treatment bespeaks a huge lack of awareness. As another participant in this group said:

> You have to be forceful, especially if the disability is less visible. (Peter)

In summary, participants found that they received good support from the Disability/Access Officer; the physical environment was inadequately adapted to ensure full inclusion; their access to lecturers' notes was erratic; and assistive provision (personal and equipment) was delivered too late, and inappropriately. The last meant that participants avoided accessing supports, to escape stigma; or found it difficult or impossible to access them effectively, due to lack of skill in support personnel or in student.

Participants' strategies to cope included or resulted in being assertive beyond what is called for in normal student life; accessing notes: this became part of individualized student-lecturer relationship; efforts to compensate for this (finding friends whose notes could be copied, photocopying, which drained energy and impeded academic/social opportunities; dropping out, for a year or longer; repeating courses; dependency on parents/ siblings for accommodation and transport; disability-related caution in selecting and evaluating 'friends'; isolation exacerbated by trying to avoid dependency on friends, by work load, and by transport and accommodation requirements.

## Discussion

Limited assessment options

Many of the difficulties experienced by participants in higher education arose directly from assessment. In the first instance, the range of assessment practices is limited, often demonstrating a heavy over-reliance, not just on written forms of assessment but on terminal, once-off assessment by examination. Added to this is an emphasis on summative rather than formative assessment. Furthermore, there is little evidence that the implications for individuals or groups of using selected assessment modes and techniques are given any consideration. Together, this leads to a failure to support learners to achieve as well as they might, a refusal to use assessment to enhance learning, and the unnecessary exclusion of many students.

Backwash effects of assessment on learning

Learning and assessment are inextricably linked. Regardless of the modes and techniques of assessment used, learning of some kind will occur and the pervasive backwash effect of assessment onto curriculum means that the kind of learning that takes place may be more a function of the assessment structure than of the aims, objectives, or understanding goals of the curriculum. As Boud (1995) points out, when arguing that assessment for accreditation or certification cannot be separated from assessment for learning, assessment always leads to learning ... the fundamental question is 'what kind of learning?' Scouller (1998) found that different assessment methods were related to distinct patterns in learning approaches and in students' perceptions of the levels of intellectual abilities being assessed. Students assessed by end-of-course multiple choice question examination were more likely to employ surface learning approaches, while students assessed by assignment essay were more likely to employ deep learning approaches and to perceive the assessment method as assessing higher levels of cognitive processing.

Options not alternatives

Under present arrangements, the best students with disabilities may hope for is that some accommodation may be made in their assessments. This might amount to no more than assistive technology, a scribe, or a little extra time. In such a scenario and in our quest for more just assessment practices, the argument for alternative assessments is inevitable. In calling for alternative assessment, we draw attention first to the nomenclature. We do not suggest, although the term itself suggests, that there is "one proper way" to do assessment and that all other ways are alternatives to this. In many instances, the terminal written

examination might aspire to the position of the ''one proper way''. Nonetheless, it represents no more than one option, an alternative invoked at some moment in the past and re-enacted across disciplines, institutions and generations, its significance a reflection of its historic weight. Under this weight, it is easy for the needs of disabled students to become invisible. For students in this exploratory research study, the range of assessment practices was extremely limited and was felt by them to be entirely outside of their control. In such a light, we do well to remember that each and every assessment practice is an alternative to some other one, no matter that such alternatives are not explicitly invoked when assessments are devised.

### Hidden curriculum/embedded institutional epistemologies

Assessment practices are not the subject of regular scrutiny and are almost certainly not scrutinized for how they discriminate against some individuals and groups. Choices made historically about assessment are contemporaneously implemented but not contemporaneously interrogated. In the absence of interrogation, apparently good and incontrovertible characteristics may be conferred on long-standing assessment practices, ''objectivity'' often chief among them, notwithstanding Elliot Eisner's urging to recognize objectivity for what it is: ''a concept built upon a faulty epistemology that leads to an unrealizable idea in its ontological state and a matter of consensus ... in its procedural state'' (Eisner, 1992, p. 14). Nonetheless, the taken-for-granted nature of the assessment *modus operandi* readily conceals discrimination and makes it easy to explain achievement (and underachievement) in terms of individual deficit rather than unjust and partial institution practices.

The reliance on a narrow range of modes and techniques derives from an epistemology of assessment that assumes we can know what learners know, regardless of what we choose to exclude of their knowing. When we measure what a learner knows through what he or she can write about a topic in an hour, we assume this to be an adequate measure of the student's knowledge or understanding of the topic. This, despite the fact that, through the enactment of a particular set of assessment choices, we have chosen to disregard all that the same student might demonstrate of their understanding were he or she to be facilitated in communicating that understanding through a different set of assessment choices, e.g. a portfolio, a project, an artefact or visually, orally, kinaesthetically. While we are clearly not arguing from a position of general relativistic skepticism regarding assessment itself (Williams, 1998), we believe the dominance of late modernity with its appeal to foundational and universal truths (Pinar, Reynolds, Slattery, & Taubman, 2000) is strongly evident in the use of a limited and limiting range of assessment practices, experienced by students in this study. At the same time, a post-structural approach, that would resist the pronouncements of standardized-test makers and emphasize understanding rather than memorization and recitation (Kincheloe & Steinberg, 1993), seems more in keeping with the cognitive ideals of higher education.

There is a strong case for making explicit the embedded epistemologies of assessment practices. While they are implicit, the effects of assessment practices are erroneously assumed. Hidden, their effects are assumed to be, at best, neutral and, at worst, homogeneously negative; that is to say, dominant thinking assumes that assessment practices either do not affect students at all, or if they impinge negatively, the harmful effects are similar for all. In fact, choices made about assessment practices—such as modes and techniques of assessment; and referencing, purpose and audience priorities—clearly affect students differentially and frequently negatively. It is difficult to imagine any component

of prevailing assessment practices that would assist students with disabilities and thus, they impinge even more negatively on disabled students.

Excellence and equity are not mutually exclusive

The seeking of inclusive education in universities may be opposed, challenged and resisted by university staff; it may be seen as an attempt to undermine academic freedom and integrity, the science and theory of knowledge, freedom of speech and academic standards (Nunan, Rigmor, & McCausland, 2000, p. 86). In his seminal paper, Charles Willie argues that although the excellence movement in education is fundamentally concerned with "how to exclude rather than with how to include", excellence and equity are not mutually exclusive (Willie, 1987, p. 485).

Much emphasis can be made of standards but the nature of quality implied in those standards is rarely analysed. Prevailing assessments are not satisfactory (Beaman, 1998) and there is evidence from the compulsory education sector that formative assessment raises standards. The importance of formative assessment in student learning is frequently acknowledged, but is not well understood across higher education (Yorke, 2003). An influential review of assessment in the compulsory education sector on the impact of classroom assessment on learning, *Inside the Black Box* (Black & Williams, 1998), found strong evidence not only that formative assessment raises standards but that a good deal is known about how to improve formative assessment. It also found that a problem with much current assessment practice has been that it emphasizes assessment *of* learning rather than assessment *for* learning, missing opportunities to use assessment to improve learning.

In short, research evidence suggests that assessment as a regular element in classroom work holds the key to better learning. Improving learning through assessment depends on "five, deceptively simple, key factors" (Assessment Reform Group, 1999), namely the provision of effective feedback to pupils; the active involvement of students in their own learning; adjusting teaching to take account of the results of assessment; a recognition of the profound influence assessment has on the motivation and self-esteem of students, both of which are crucial influences on learning; the need for students to be able to assess themselves and understand how to improve.

Notwithstanding arguments that formative assessment may be either constructive or inhibitory towards learning (Yorke, 2003), these literatures provide a compelling argument for developing more inclusive assessment practices with their evidence for individual and institutional improvement. There is good to be gained from assessment reform, therefore. Although reform assessment alone will not solve the problems faced by disabled students in higher education, it represents an opportunity to reflect on enduring patterns of inequality and to ensure that all students have access to the resources, curricula, and pedagogies they need to learn effectively (Reardon et al. 1994, p. 3).

Inclusive assessment benefits all

More inclusive assessment practices are likely to be of benefit to many students, not least because current assessment practices are not diverse enough to suit students' diverse ways of showing their knowledge, understanding or skill. Students learn in different ways and it makes sense, therefore, for them to be able to use different methods to show their understanding of what they have learned (Perkins & Blythe, 1994). Students' individual differences in assessment preferences have been found to overshadow disciplinary group

differences and differences in assessment preferences are strongly related to learning strategies and orientations (Birenbaum, 1997).

Individual benefits may accrue from the use of more diverse methods. For example, the kind of learning that higher education aims at—understanding, conceptional change and the development of critical thinking—has been found to be more likely to occur when students are assessed by more diverse, continuous methods than when they are assessed by terminal examination (Tynjälä, 1998). Institutional benefits may also accrue. The development of innovative assessment models in the context of non-traditional teaching techniques such as group learning suggests that it is possible not only to employ a wider and more inclusive range of assessment practices but, in doing so, to introduce learner-focused approaches in ways that also improve curriculum design and pedagogy (Quarstein & Peterson, 2001).

There are common threads in a number of recent assessment literatures in defining and developing good and equitable practices, including the literatures on performance assessment, authentic assessment, intelligence-fair assessment, portfolio assessment, and most recently assessment for learning (Assessment Reform Group, 1999; Black & Williams, 1998). These literatures have common features including the making explicit of assessment choices, learner involvement, diversity of methods, and coherence between syllabus aims and assessment approaches. Authentic assessment, for example, refers to forms of student work that reflect real-life situations and challenge students' ability to test what they have learned in those situations. It is based on actual performances of what we want students to be good at; needs more complex and challenging mental processes; acknowledges more than one approach or right answer; emphasizes uncoached explanations and real products; has transparent criteria and standards; and involves trained assessor judgement (Hargreaves, Earl, & Ryan, 1996, p. 129).

In moving towards more inclusive assessment practices, there is no need to re-invent the wheel. The development of inclusive assessment practices can draw on work carried out in other contexts. We agree with Peter Knight (2002) who argues convincingly that the extensive archive of international research about assessment in the compulsory education sector where many of the same problems have been faced, can illuminate thinking about quality and curriculum in higher education and inspire better change practices. In relation to assessment practices and disability, drawing on the experiences of the compulsory education sector is particularly apposite, since the creative and inclusive nature of assessment developments in the special education sector has much to contribute to mainstream education practices (Hanafin, Shevlin, & Flynn, 2002).

Argument for scholarly treatment of assessment and disability

In his influential book *Scholarship Reconsidered: Priorities of the Professoriate*, Ernest Boyer (1990) argued for a re-appraisal of scholarship within the academy to include not just the traditional research model (the scholarship of discovery), but conceptually new areas of scholarship: the scholarships of teaching (research on teaching and learning), integration (across and between disciplines), and application (concerned with the actual, consequential problems of individuals, groups and institutions). The scholarship of teaching, with its evidence-based research on teaching, learning and assessment in higher education, is a relatively recent development. Within this scholarship, some attention has been paid to assessment issues (e.g. Astin & Lee, 2003; Birenbaum, 1997; Kahn, 2001; Knight, 2002; Quarstein & Peterson, 2001; Samuelowicz & Bain, 2001, 2002; Scouller, 1998; Tynjälä, 1998; Yorke, 2003), including how courses re-designed for scholarship of

teaching initiatives, informed by multiple assessment methods, can improve student learning and development (Cottrell & Jones, 2003).

Scant attention, however, has been paid to the implications of assessment practices for students with disabilities. This exploratory study shows that the implications of assessment for students with disabilities are profound, encompassing ideational, practical and social justice concerns. The practice of assessment in higher education is mediated for these students through the physical environment, the backwash effect of assessment on curriculum, assistive technology, and attitudinal factors. Based on the tentative findings of this paper, there is a compelling argument for a scholarship of teaching, integration and application in relation to assessment and disability. Such an undertaking would explore the implications of assessment choices and practices for people with disabilities across a range of disciplines and at their intersections, and attempt to deal with problems encountered at individual and institutional level in higher education in relation to disabled students' assessment experiences.

Changing established mind-sets around traditional notions of appropriate assessment procedures represents a considerable challenge. It will require a series of initiatives that address societal issues around assessment and accountability. The current dominant assessment practices have widespread support within the wider community and in particular from both employer and professional bodies. In addition, higher education institutions face internal difficulties around restricted funding and narrow entrenched views about teaching and learning. Higher education institutions can begin this process through a proactive approach that explicitly links access initiatives for people with disabilities to appropriate supports and equitable assessment procedures. Further, higher education institutions need to be convinced themselves and influence others that these more equitable assessment procedures will considerably enhance the quality of scholarship, teaching and learning for all students not just those who have disabilities. The task of effecting real change is considerable but in our view unavoidable.

# References

AHEAD (1994). *Students with disabilities in higher education: Survey on provision for students with disabilities in higher education for the academic year 1993/4*. Dublin: Ahead

Assessment Reform Group (1999). *Assessment for learning: Beyond the black box*. Cambridge: Assessment Reform Group, University of Cambridge School of Education

Astin, A. W., & Lee, J. J. (2003). How risky are one-shot cross-sectional assessments of undergraduate students? *Research in Higher Education*, *44*(6), 657–672

Beaman, R. (1998). The unquiet ... even loud, andragogy! Alternative assessments for adult learners. *Innovative Higher Education*, *23*(1), 47–59

Beck, H. B. (2001). Establishing an early warning system: predicting low grades in college students from survey of academic orientations scores. *Research in Higher Education*, *42*(6), 709–723

Birenbaum, M. (1997). Assessment preferences and their relationship to learning strategies and orientations. *Higher Education*, *33*(1), 71–84

Black, P., & Williams, D. (1998). Inside the black box: Raising standards through classroom assessment, *Phi Delta Kappan* online. http://www.pdkintl.org/kappan/kbla9810.htm.

Borland, J., & James, S. (1999). The learning experience of students with disabilities in higher education. A case study of a UK university. *Disability and Society*, *14*(10), 85–101

Boud D. (1995). Assessment and learning: Contradictory or complementary? In P. Knight (Ed.), Assessment for learning in higher education. (pp. 35–48). London: Kogan Page

Boyer, E. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching

Bradley, H. (1995). *Fractured identities*. Cambridge: Polity

Bradley, H. (1997). Social divisions. In C. Ballard, et al. (Eds.), *The student's companion to sociology* (pp. 142–151). Oxford: Blackwell.

Bridgeman, B. (1998). Potential impact of the addition of a writing assessment on admissions decisions. *Research in Higher Education*, *39*(6), 663–677

Cabrera, A. F. (2001). Developing performance indicators for assessing classroom teaching practices and student learning. *Research in Higher Education, 42*(3), 327–352.

Chard, G., & Couch, R. (1998). Access to higher education for the disabled student: A building survey at the University of Liverpool. *Disability and Society*, *13*(4), 603–623

Collins B. (2000). Perceiving success? An investigation into disabled students' and academic staffs' perceptions of the factors that inhibit disabled student's occupational performance in Trinity College Dublin. Unpublished undergraduate thesis, University of Dublin.

Cottrel, S. A., & Jones, E. A. (2003). Researching the scholarship of teaching and learning: an analysis of current curriculum practices. *Innovative Higher Education*, *27*(3), 169–181

Department of Education & Science (2001). *Report of the action group on access to higher education*. Dublin: Stationery Office

Eisner, E. (1992). Objectivity in educational research. *Curriculum Inquiry*, *22*(1), 9–15

Gardner, H. (1983) *Frames of minds: The theory of multiple intelligences* (2nd ed.). New York: Harper and Row; (1993) London: Fontana Press.

Gardner, H. (1991). Assessment in context: The alternative to standardized testing. In Gifford B. R., & O'Connor M. C. (Eds.), *Changing assessments: Alternative views of aptitude, achievement and instruction*. (pp. 77–120). Norwell, MA: Kluwer Academic Publishers

Grunwald, H., & Peterson, M. W. (2003). Factors that promote faculty involvement in and satisfaction with institutional and classroom student assessment. *Research in Higher Education*, *44*(2), 173–204

Government of Ireland (1998). Education Act Dublin: Stationery Office.

Hanafin, J., Shevlin, M., & Flynn, M. (2002). Responding to student diversity: Lessons from the margin. *Pedagogy, Culture and Society*, *10*(3), 411–425

Hargreaves, A., Earl, L., & Ryan, J. (1996). *Schooling for change: reinventing education for early adolescents*. London: The Falmer Press

Heck, R. H. (2000). Administrative effectiveness in higher education: improving assessment procedures. *Research in Higher Education*, *41*(6), 663–684

Hoey, P. (2000). *Students with disabilities in higher education: Initial findings of the survey on provision for students with disabilities in higher education for the academic year 1998/9*. Dublin: Ahead

Holloway, S. (2001). The experience of higher education from the perspective of disabled students. *Disability and Society*, *16*(4), 597–615

Hurst, A. (1996). Reflecting on researching disability and higher education, In Barton L. (Eds), *Disabilities and society: Emerging issues and insights* London: Longman

Kahn, J. H. (2001). Social-cognitive predictors of first-year college persistence: The importance of proximal assessment. *Research in Higher Education*, *42*(6), 633–652

Kenny, M., Mc Neela, E., Shevlin, M., & Daly, T. (2000). *Hidden voices: Young people with disabilities speak about their second level schooling*. Cork: South West Regional Authority

Kincheloe, J., & Steinberg, S. (1993). A tentative description of postformal thinking: The critical confrontation with cognitive theory. *Harvard Educational Review*, *63*(3), 296–320

Knight, P. T. (2002). Learning from schools. *Higher Education*, *44*(2),283–298

Konur, O. (2002). Assessment of disabled students in higher education: current public policy issues. *Assessment and Evaluation in Higher Education*, *27*(2), 131–152

Mc Donnell, P. (2003). Developments in special education in Ireland: Deep structures and policy making. *International Journal of Inclusive Education*, *7*(3), 259–269

Minbashian, A., Huon, G. F., & Bird, K. D. (2004). Approaches to studying and academic performance in short-essay exams. *Higher Education*, *47*(2), 161–176

Mori, R. (2002). Entrance examinations and remedial education in Japanese higher education. *Higher Education*, *43*(1), 27–42

Nitko, A. (1996). *Educational assessment of students*. New Jersey: Prentice Hall

Nunan, T., Rigmor, G., & McCausland, H. (2000). Inclusive education in universities: Why it is important and how it might be achieved. *International Journal of Inclusive Education*, *4*(1), 63–88

Perkins, D. N., & Blythe, T. (1994). Putting understanding up front. *Educational Leadership*, *51*(5), 4–7

Peterson, M. W. (2000). Organizational practices enhancing the influence of student assessment information in academic decisions. *Research in Higher Education*, *41*(1), 21–52

Pinar, W., Reynolds, W. M., Slattery, P., & Taubman, P. M. (2000). *Understanding curriculum*. New York: Peter Lang

Priestley, M. (2001). Introduction: the global context of disability, In M. Priestley (Eds), *Disability and the life course: Global perspectives* Cambridge: Cambridge University Press

Quarstein, V. A., & Peterson, P. A. (2001). Assessment of cooperative learning: A goal-criterion approach. *Innovative Higher Education*, *26*(1), 59–77

Reardon, S. P., Scott, K., & Verre, J. (1994). Symposium: Equity in educational assessment. *Harvard Educational Review*, *64*(1), 1–4

Reindal, S. M. (1995). Some problems encountered by disabled students at the University of Oslo—whose responsibility? *The European Journal of Special Needs*, *10*(3), 227–241

Ryan, J., & Struhs, J. (2004). University education for all? Barriers to full inclusion of students with disabilities in Australian universities. *International Journal of Inclusive Education*, *8*(1), 73–90

Samuelowicz, K., & Bain, J. D. (2001). Revisiting academics' beliefs about teaching and learning. *Higher Education*, *41*(3), 299–325

Samuelowicz, K., & Bain, J. D. (2002). Identifying academics' orientations to assessment practice. *Higher Education*, *43*(2), 173–201

Scouller, K. (1998). The influence of assessment method on students' learning approaches: Multiple choice question examination versus assignment essay. *Higher Education*, *35*(4), 453–472

Skilbeck, M., & Connell, H. (2000). *Access and equity in higher education: An international perspective on issues and strategies* Dublin: Higher Education Authority

Tinklin, T., & Hall, J. (1999). Getting round obstacles: Students with disabilities' experiences in higher education in Scotland. *Studies in Higher education*, *24*(2), 183–194

Tynjälä P. (1998). Writing as a tool for constructive learning: Students' learning experiences during an experiment. *Higher Education*, *36*(2), 209–230

Williams, K. (1998). Assessment and the challenge of skepticism, In Carr D. (Eds), *Education, knowledge and truth. Beyond the postmodern impasse*. (pp. 221–236). London: Routledge

Willie, C. V. (1987). On excellence and equity in higher education. *Journal of Negro Education*, *56*(4), 485–492

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher Education*, *45*(4), 477–501

Young, J. W. (2000). Sex differences on the SAT: An analysis of demographic and educational variables. *Research in Higher Education*, *41*(3), 401–416