Inclusive Learning and Assessment Practice: Feedback from d/Deaf and Hard of Hearing Students

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1. Introduction

Studies show that in Higher Education (HE) awareness of the needs of d/Deaf[1] and hard of hearing students (dD/HH) is poor (eg Daniels and Corlett 1990, Olohan 1995, Lang 2002). The proportion of dD/HH students entering HE in the UK has increased since implementation of the DDA IV (1995) but is still well short of the comparable proportion of hearing students. At only 0.5% of all students who disclose a disability, the proportion of dD/HH students studying at MMU is about one-third less than for HE institutions as a whole in the UK. In a previous article in *Learning and Teaching in Action* (Nicholson 2007), the author presented some of the findings of a broader study that explored the learning and teaching experiences of dD/HH students at MMU in relation to the physical learning environment. In this paper, data from the same study are used to consider student-tutor and student-student interaction during learning and assessment activities. The background to the study and details of data collection methods are provided in Nicholson (2007).

The aim in this article is to identify barriers in the context of learning and assessment activities for dD/HH students and explore practices and strategies for overcoming those barriers. The focus is on direct interaction with tutors and student peers rather than on institutional provision, practice and policy.

1 Refer to Nicholson (2007) for an explanation of d/Deaf.

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While there are many good things happening within MMU at the institutional level, they will amount to little if dD/HH students do not encounter good practice at the 'coalface' of learning – in their direct interactions with tutors and peers. From the questionnaire survey (35 respondents) and informal structured one-to-one interviews (10 conducted), a number of key themes were identified from participants' accounts of their learning experiences at MMU:

a) **Issues relating to the** fundamental nature of deafness (communication with tutors and peers; hidden aspects of the disability; language barriers)

b) **Support from tutors and from** technical and human aids to communication

c) **Barriers during learning and** assessment activities (ground rules for classes; good practice; issues around assessment)

d) **Deaf awareness and inclusive** practice

These are now considered in turn though there is, inevitably, some overlap between themes.

2. The nature of deafness

2.1 Communication

Many difficulties faced by dD/HH students arise from a lack of understanding by society in general of the fundamental consequences of deafness and hearing impairment and their impact upon communication (Lilley *et al.* 2007). For example, it is widely assumed that hearing impairment equates solely with a reduction in sound *volume* and this is why some people, erroneously, feel it is useful to shout when communicating with a deaf person. In reality, the majority of dD/HH students who have a permanent hearing loss have sensorineural deafness which also substantially reduces sound *quality* (Table 1). Moreover, any increase in volume may prove ineffective for people with severe or profound hearing loss and shouting may only serve to worsen communication because it distorts lip patterns making it more difficult to lipread. Other factors affecting communication include:

Table 1: Causes and effects of the main types of deafness

Type of deafness	Indicative causes	Effects
Conductive	Wax build-up, perforated eardrum and infection.	May be temporary, affects the outer and middle ear. Reduces sound volume and the ability to hear faint sounds.
Sensorineural	Birth injury, disease (eg mumps), medication, long term exposure to loud noise, ageing.	Affects the inner ear and is permanent. Reduces sound volume and the ability to hear faint sounds. Also reduces the clarity and crispness of sound and therefore affects the ability to understand speech (hearing aids only increase volume, not clarity).
Mixed	A combination of the above.	A combination of the above.

Unilateral and/or asymmetric hearing loss: Where only one ear is affected (unilateral) or where hearing loss is unequal (asymmetric), the ability to localise sound (ie tell where it is coming from) can be severely affected:

"I always sit near the front in classes and work out which side of the room would be best to sit on. However, this depends on how many people are in the class and on the activity likely to be going on. If there are people sitting behind me I can't hear them."[2]

"In lectures, I sit near the front at the right hand side (because my hearing aid is on my left ear)."

Several participants commented on the need for members of a discussion group to 'show themselves' before speaking. This need is also a consequence of the difficulty of identifying the speaker due to asymmetric or unilateral hearing loss:

"Because my deafness is concentrated in one ear I have poor directional discernment. I can sometimes hear a voice but cannot tell who or where it is coming from."

Preferential loss of some sound frequencies: This can impair the ability to hear certain *types* of sounds (Figure 1). dD/HH students may be able to hear some tutors and peers more clearly than others. Often, there is a gender divide because female voices tend to sit in the higher frequency range, and males in the lower:

"I have middle and high frequency hearing loss and so struggle a lot more with soft female voices than men's."

Referring to Figure 1, the area enclosed within the red line indicates the frequencies of the human voice at normal conversational levels together with letters of the alphabet. Notice that softer sounding letters (eg m, n, b) fall in the low frequency range and harder consonants (eg s, f) lie in the higher frequency range. This explains why some dD/HH students can hear some people but not others, even when they are speaking at a comparable volume.

Lipreading for communication: People who have been dD/HH from birth or a very young age are much more likely to rely, to an extent, on lipreading to supplement sound. Those who have become deafened
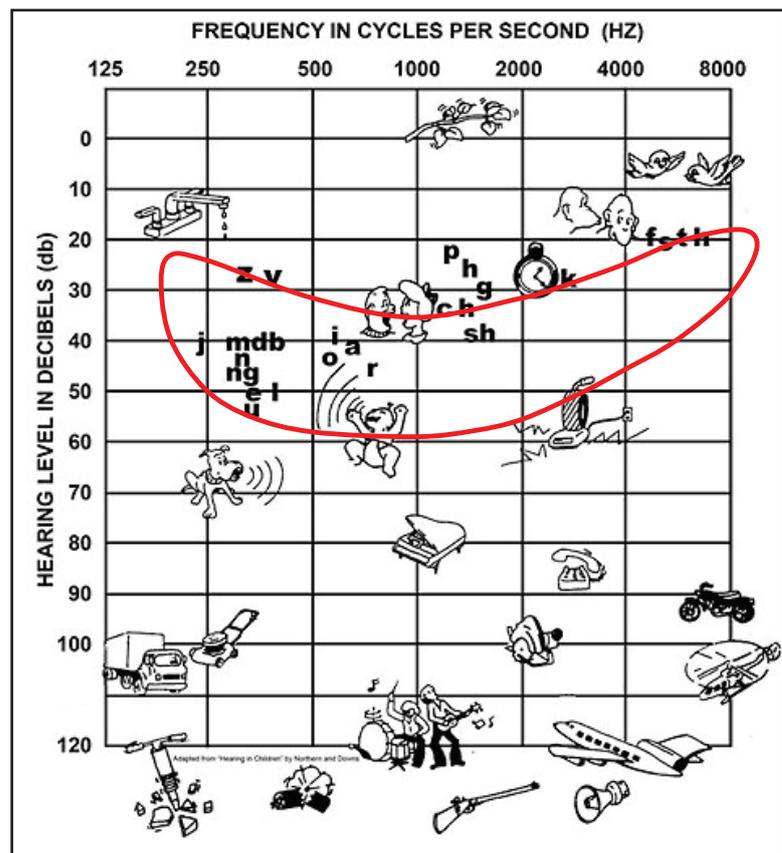

Figure 1: Audiogram superimposed with approximate frequency locations of familiar sounds (adapted from Northern and Downs, 2002).

2 Quotes from students are slightly paraphrased from the original for increased fluency. Quotes were either obtained textually from the questionnaire survey or verbally from face-to-face interviews.

later in life tend not to have developed lipreading skills, and for them, voice projection and clarity of sound are much more important. The main issue for lipreaders is the ability to see the speaker's face clearly:

"I have a problem when tutors walk about in lectures and classes. This is a significant problem as I cannot see their face when they walk about."

"Also, they [tutors] sometimes turn towards the screen so I can't see their face to lipread."

However, problems may also be encountered if the speaker's face is simply too far away for lipreading to take place (eg as in some large lecture theatres, laboratories and fieldwork situations) – the optimum lipreading distance is 1-2m.

Clearly, there are a range of potential consequences of students not hearing tutors. Pedagogically, students may be left with significant gaps in their knowledge and understanding of important facts and concepts. If they then rely on their peers to fill those gaps, they may be affected by mis-information. Participants gave examples of when they had missed important instructions:

"I have missed several revision classes because I had missed the information being given that those classes were available. I think all lectures should be accompanied with handouts. It's very difficult to concentrate on listening and also have to take notes; I miss a lot that way."

"Sometimes when instructions are given out, I miss out on what is being said. Instead I rely on friends and do what they do."

"No major problems here but I sometimes struggle to hear instructions given at the beginning of exams."

2.2 A hidden disability?

It is interesting that the AGCAS Disability Development Network Report on the destinations of 2006 disabled graduates (Leacy *et al*. 2008) provides a distinct category for graduates with a 'Hearing Impairment' and they are, therefore, not included in the 'Hidden Disability' category. This is ironic because many of the consequences of deafness are, in fact, hidden and many dD/HH people regard their disability as hidden. Some 'hidden' problems faced by deaf and hard of hearing students include:

- Stress and distraction caused by tinnitus (suffered by 50% of the dD/HH student participants):

"My tinnitus is sometimes more prominent during groupwork, so it is distracting and very stressful."

"Sometimes my tinnitus makes it difficult to concentrate in exams – the silence makes the tinnitus more prominent and it is distracting and annoying."

- Isolation from peers caused by difficulties in communicating (Lang 2002)

- Tiredness caused by the intense concentration needed to lipread:

"People do not understand how much concentration it takes to lipread and how tiring it is. It is very hard for me to concentrate on lipreading and also to understanding the concepts that are being spoken about – this is why it takes longer for me to grasp things."

- Physical discomfort of technical devices such as hearing aids

- Related medical difficulties (eg loss of balance, insulin-dependent diabetes, tinnitus-induced headaches, sinus infections):

"I have constant tinnitus which is made worse by physical activity, stress and noise. I am also a chronic asthmatic and prone to chest and sinus infections. When I get these (more often than most people get colds etc), then my hearing is even worse."

These hidden consequences of hearing impairment are in addition to the fact that deafness itself is not always apparent to others.

2.3 Language barriers

A common complaint of dD/HH students is the difficulty they face when attempting to communicate with others who have a strong foreign or regional accent. The problem arises from a lack of familiarity with the different lip patterns, sound clarity, phraseology and voice intonation:

"I often have difficulty understanding people with foreign accents. I have to ask the notetaker to write *everything* down. There was one Chinese lecturer who had a very strong accent **and** a very quiet voice – I really struggled to understand him."

There is a general lack of awareness among academic staff that severely or profoundly deaf students also face *English* language barriers; English is the *second* language for sign language users who face similar difficulties to foreign language students from overseas. It is well known that deaf children may experience delayed development in understanding of speech, comprehension of language and vocabulary, and text production (eg Brenza and Kricos 1981, Holt 1993). They may also not develop

the same clarity in their own voice as hearing people. Thus, even deaf people whose first language is English may experience a range of communication difficulties experienced by dD/HH students:

"I feel my understanding is the same as it is for other students but it is more difficult for me to express my understanding in writing. I have more grammatical errors, my vocabulary is more limited and I take more time to understand new concepts and to think critically."

"I find I can't focus a lot on terminology, my deafness means my vocabulary isn't as good as others."

3. Support and aids to communication

The experience of dD/HH students at MMU is significantly affected by the nature of support they receive from those around them. In many cases, participants simply sought encouragement from their tutors:

"Generally, there is a need for greater support. Tutors should be more friendly, encourage students and increase their confidence so that they feel they can approach the tutor for help and support. They should put students at ease, be open and encouraging. Tutors should also be proactive and ask students if they need help; coax them if necessary."

"Why don't you ask students if there is anything you can do to help or improve communication or other deafness-related difficulties?"

Participants also had quite a lot to say on the topic of whether to speak directly to their tutors about their hearing impairment and the mixed

views obtained may reflect the age, maturity and personality of the individuals concerned:

"I think it is important that staff are aware that I have a hearing impairment. I would be happy to tell my lecturers but I haven't because there are very few opportunities to approach them. Having said that, I am aware that some students might be too timid or shy to do this or just lack confidence."

"I don't like to go up to a lecturer and tell them I am deaf because I am a bit shy, I don't know them, I don't want to be treated differently, I don't want to have a lot of attention focussed on me and in any case, I don't know what difference it would really make anyway."

"Some students may not even think of telling anybody about their deafness – they may assume they already know or they may think it is not important enough."

"I think the University should provide much more encouragement and opportunities for students to come forward and speak to individual academic staff about their difficulties. If academic staff knew that they had a deaf student in their class they might be more willing to think about it and adapt their teaching."

"I think academic staff should be informed about deaf students in their class through 'official' channels but I also believe it is important for disabled students themselves to approach staff and to make that personal contact - you can't always expect other people to tell staff for you - you have to do some things for yourself."

Most of the students surveyed make use of technical aids to communication including hearing aids, radio aids, and personal loop systems. Some dD/HH students use a dictaphone to record lectures. This enables them to review the material later in a quiet environment and make adjustments, as necessary, to the sound volume and tone. It also enables students to fill in any gaps of material they may have missed during class. It is important that tutors support the use of dictaphones and agree to their use. This may mean avoiding walking around during lecture delivery and wandering away from the lectern where the dictaphone is placed. Other dD/HH students use loop systems that require speakers to use a mike:

"I have three main problems in lecture classes; people at the back talking, lecturers walking away from the mike, and the mike not being switched on (I need this for my portable loop system to function)."

In seminars and groupwork where a portable loop is available this may mean passing the mike from person to person during discussions. There is considerable evidence (Figure 2) that dD/HH students prefer lectures where on-screen facilities (eg PowerPoint or interactive whiteboards) are used. Item-by-item revealing of bullet points or the use of a laser pointer, in particular, enable dD/HH students to follow an oral presentation more accurately and can pick up a lecture at the right point if they miss something:

"I like tutors who use a laser pointer during PowerPoint presentations because it makes it easier to follow exactly where they are at any point in time, especially if I miss something."

Around a third of respondents make use of Language Service Professionals (LSPs) including communication support workers,
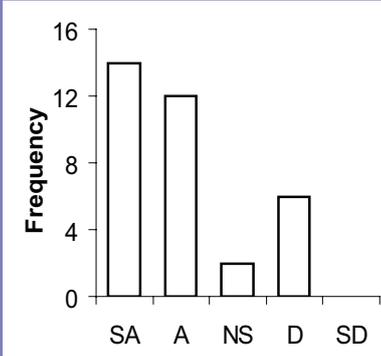
Figure 2: Level of agreement with the statement

"I prefer lectures based around PowerPoint slides and/or interactive whiteboards compared with mainly spoken lectures".

SA	strongly agree
A	agree
NS	not sure
D	disagree
SD	strongly disagree

notetakers, sign language interpreters and speech-to-text reporters.

"I have a notetaker for lectures – this takes the pressure off me having to 'listen' and take notes at the same time - I can look at the lecturer and screen instead of having my head down writing."

"I prefer a notetaker to a speech-to-text reporter because if you have a notetaker you can still look at the lecturer and the PowerPoint slides but if you have a speech-to-text reporter you have to watch the text screen."

An important thing for tutors and peers to remember here, is to always speak directly to the dD/HH student and not to their LSP.

4. Learning and assessment activities

4.1 Ground rules (directed at participants)

One of the most problematic learning activities for dD/HH students is where interactivity (eg student-student or tutor-student) takes place such as in discussion seminars and groupwork. Several participants raised the concept of instigating 'ground rules' for such classes:

"I have problems during group discussions and seminar classes because there are overlapping conversations. Even if there are only two people speaking at once I can't follow what is being said and find individual words difficult to decipher. I think there are two solutions: First, people should take turns to speak (but this needs better group management from the tutor), and second, people should raise their hand before they speak. This indicates to the 'chair' that you wish to speak and also any deaf person can see who is speaking."

One participant (a student of Lipspeaking, a course delivered by tutors who are themselves deaf) was able to report on good practice that already takes place in his Department:

"I get on fine in class because everything is repeated three times. We always operate 'ground rules' on my course and this includes sitting in a semi-circle for groupwork. When we have discussions, we have a mike that is passed round for the loop system."

These suggestions are good practice anyway and prepare all students for formal meetings in the workplace.

Here are some practices (mostly derived from interview and survey comments by the participants) that might be included in a list of 'ground rules' for groupwork and discussions:

- Appoint a 'Chair' to manage the group discussion and maintain discipline (eg stop background chatting, stick to ground rules). This need not necessarily be the tutor – it could be an appointed student member of the group.

- Place seats in a semi-circle or other layout where each individual can see the face of everyone else, including the tutor.

- Limit the group size where possible and have only one group in a room at the same time.

- Require all participants to 'show themselves' before speaking (eg by raising a hand or obtaining 'permission' from the Chair).

- The Chair should repeat contributions from others if necessary (especially during interactive elements in lectures where there are questions and/or answers from the floor).

- Prohibit overlapping conversations (ie speak one at a time).

- Always speak to the deaf student, not their LSP and encourage everyone to participate (including 'quiet' or shy students).

4.2 Good practice (tutor-controlled)

Participants commented on a number of other areas where they felt tutors could improve their teaching practice with reference to dD/HH students:

- Consideration of background lighting and colour: a tutor silhouetted in front of a bright

window, 'busy' decor or a projector beam is a problem for dD/HH students attempting to lipread. While tutors cannot control the nature of the teaching environment in many cases, they may be able to make modifications to others such as offices (eg for one-to-one and small group tutorials), work placement and field environments. For example, in the field a tutor can stand in such a location that they are not silhouetted by bright sunlight (or downwind, so that their voice is not carried away).

- Allow students to make their own decisions about where to sit in a classroom:

"During classroom activities (especially groupwork in labs and workshops), it is important that I can 'place' myself in the room and not be forced to work somewhere that is not appropriate."

- It may also be appropriate for dD/HH (or all) students to select their own group members in groupwork scenarios since they are probably best at judging who they are able to communicate with:

"I regularly have groupwork with people I know already and are used to me and know that I lipread….. , but with new students, yes I would have problems."

"I work in a small group of about ten students and they all know I am deaf so they speak louder or repeat the questions if necessary."

"The sub-groups of about 8 are usually split alphabetically. I went to the tutor and asked if I could go in a group with my friend (her surname is much earlier in the alphabet) - this was allowed - I needed my friend to help me understand what was going on."

- Build in regular breaks into classes (lipreading requires enormous concentration and is very tiring).

- Use good communication tactics (eg face the person you are speaking to – not the screen; don't obstruct the view to your face and mouth; speak clearly; speak slightly slower and with moderate volume and fluency):

"Another problem is in classes where the tutor uses a flipchart – this is very common in the rooms where there is no interactive whiteboard or other technical equipment. The trouble is, the tutor is then standing with their back to me for a lot of the time."

- Provide a textual back-up for any information given orally (eg online, handout, on-screen):

"WebCT is easy to use and follow and means that I don't miss anything although it still isn't as useful as having someone explain the work. I have found it very useful though as I have been able to refer back to it if I have missed any of a lecture because I haven't heard. It is a good back up and reassuring to know it is there."

- Provide lecture notes and other resources in advance of the class (see Figure 3):

"If lecture notes are provided before the class, or even made available after, it allows me to put more effort into reading rather than trying to listen – so it's less stressful."

- Make greater use of non-verbal means of communication and support for dD/HH students where appropriate (eg email, WebCT, online discussion rooms, SMS, chat rooms, virtual office hours):
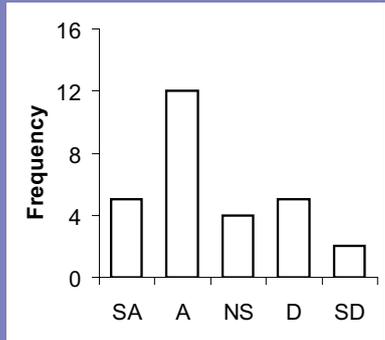

Figure 3: Level of agreement with the statement

"My experience of practical work such as field and laboratory classes would be greatly improved if instructions and supporting material were provided online before the activity took place".

SA	strongly agree
A	agree
NS	not sure
D	disagree
SD	strongly disagree

"E-mail, online chat and text messaging (SMS) are a great help to my communication with other students and tutors."

"MSN Messenger has helped me a lot as it enables me to stay in touch with coursemates and chat via texting, what to discuss etc. My coursemates update me to make sure I know what we are doing."

Many of these measures would benefit hearing students who find textual means of communication less stressful than oral means (eg shy students).

- Respond to emails from dD/HH students promptly because they rely on this means of communication and support much more than hearing students:

"I have more difficulty getting assistance from lecturers than other students because I can't use a phone to contact them and because face-to-face communication is difficult with some staff. I prefer to contact them by email but some staff don't respond to emails."

4.3 Assessment

A number of aspects of assessment have already been alluded to (see also Nicholson 2007). Several concerns were also raised about oral assessments:

"I am always nervous and worried that I may not be loud enough."

"Often, because of my deafness I tend to be nervous about whether they understand me or if I am talking too fast."

"Hearing questions at the end can be a bit of a problem - I often say at the outset that I have a hearing problem and that people need to speak clearly."

"Not being able to hear the questions at the end is one of my biggest fears. It would help me if questioners made themselves known before speaking. It would also be helpful if the tutor could assist in repeating questions from others."

In addition, there may be further potential difficulties if delivering a presentation via a sign language interpreter or with the assistance of another LSP.

Currently, many adjustments to assessments for disabled students made on the basis of a Personal Learning Plan (PLP) involve either setting alternative assessments or making additional arrangements or accommodations (eg flexible assignment deadlines or the use of

a PC in an examination). However, there are difficulties associated with this somewhat exclusive approach (Wray 2003). Not least of these, is the student's own desire not to be treated differently, and to be able to operate within an education system that is managed in a genuinely inclusive way:

"I don't like to draw attention to my deafness. I also do not want to be seen or treated as disabled. I want to be able to take part and do things the same as everyone else does."

5. Deaf awareness and inclusion

5.1 Deaf awareness

Participants were asked if they felt that their tutors were generally deaf aware and disappointingly, the majority thought not:

"I think tutors in general are not deaf aware. Students are easier to talk to. Staff are more intimidating and have less time and patience. Talking with other students is less formal. I am always concerned when talking to a lecturer; what impression will they get of me because of my deafness - someone who is not deaf aware might think I am a bit slow."

"In general, academic staff don't seem to be aware of the best way to communicate with me. They should repeat questions put by other students because I can't hear them. They also need to speak more clearly."

"At High School, tutors were much more deaf aware than they are at Uni. I think that at the start of the year, a talk should be given to students on how to address/deal with deaf students (and other

disabilities) and staff should have a compulsory seminar on how best to communicate with deaf students."

"I am surprised that tutors can't communicate better with deaf students. There is so much awareness of anti-discrimination against other groups such as ethnic groups and more visible disabilities, but they don't seem to be aware of deafness as an issue."

One student experienced tutors that had expressed frustration and impatience when asked to repeat or explain things that hadn't been heard:

"I don't think that tutors should show disapproval on their faces if I ask them to repeat something".

It is of note that several participants thought their peers were more deaf-aware than their tutors although there was one exception:

"I think that the other students in my group are not helpful and make me feel as though I am retarded. Most of the other students are a lot younger so they don't accept me and I feel isolated."

Lack of deaf awareness among peers can lead to problems of isolation due to lack of interaction. This has knock-on effects for learning because the dD/HH student may not be able, effectively, to experience or practice collaborative working. Reduction in the quality of social interaction can also lead to a lowering of self esteem and this was certainly the case for the student just quoted.

Clearly, there is a need for much greater deaf awareness, particularly among academic staff, and this would help to resolve many of these communication difficulties. However, good practice also means providing

support and encouragement to dD/HH students (and indeed to **all** disabled students) and promptly implementing Personal Learning Plans (PLP). Participants told of a number of situations in which PLPs were simply not being implemented. In some cases this was due to procedural problems (eg PLP preparation delayed or not distributed to the right people) but in others it was blamed on a lack of deaf awareness and tutors simply not taking the PLP seriously:

5.2 Inclusive learning

The author was particularly struck by a comment from one participant that reflected a high level of awareness among dD/HH students of the diverse needs of the student population as a whole:

"Academic staff should remember that not all students are perfect – they have disabilities of all kinds as well as different mental health conditions and personal situations – don't make assumptions about them."

Others said:

"Be aware that there might be students in your class who have not disclosed a disability, but who might still have a hearing impairment (or any other disability)."

"Students should be explicitly asked about disability-related issues in their unit feedback/ evaluation surveys."

In addition to increasing deaf awareness among staff and the use of good, inclusive teaching practice, it is also suggested that a culture of inclusivity can be better developed among *students* by including teaching of diversity and inclusion as a formal component of core or key skills modules. Such training could address issues

relating to collaborative working, peer assessment, communication and social interaction. This would increase the employability of our students and make them better prepared for collaborative social and professional activities they undertake on graduation.

6. Moving forward

6.1 What's currently happening at MMU?

There is a significant range of activities going on in MMU that demonstrate it is serious about addressing the needs of its diverse student population. There is not space here to outline all of these activities but they include, for example, the Revised Disability Equality Scheme (RDES 2007, p7-8) that commits MMU to taking a proactive stance on eradicating all forms of discrimination against disabled students. This includes the intention to "*promote positive attitudes towards disabled people*", "*develop an inclusive learning, teaching and working environment*" and "*remove any barriers to accessing education, facilities or support to ensure disabled students achieve the highest level of programme outcomes appropriate to their motivation and ability*". The Equality Impact Assessment currently under way will provide information on our progress in this respect.

In the same vein, the current draft of the University Learning and Teaching Strategy (version 3, p2) has as two of its six objectives: *"to provide a learning experience and support for our learners that encourages and properly sustains a diverse learning community"* and *"to strive to provide a learning environment that is free from discrimination and focussed on success for all learners".*

Furthermore, Learning Support have recently reviewed and revised the PLP process to ensure a more rapid and effective distribution to

appropriate persons and provide better support for disabled students. Faculty Student Support Officers are part of this process of providing student support for learning and assessment activities. The Learning Support web site now has a range of resources to assist tutors in adjusting teaching and assessment activities for students with different disabilities (http://www.mmu.ac.uk/academic/ studserv/learningsupport/pdf/ Hearing.pdf) and students can also participate in a Disabled Students Forum for additional support from peers.

6.2 How can we improve current practice?

It would appear from this research that there are four areas in which academic staff could improve their interaction with dD/HH students and hence the opportunities for these students to achieve success:

a) **Deaf awareness:** Training is needed on a broad scale in order that academic staff can better understand the nature of deafness, its impact on communication and language and other hidden effects. This training should also draw attention to the wide range of communication tactics that can be adopted to improve communication between tutors and dD/HH students.

b) **Tutor support:** Academic staff must present a patient, supportive and encouraging face to dD/HH students and proactively invite requests for assistance. Textual back-up for information delivered orally (including the provision of notes *prior* to classes) is increasing but should be standard practice. Particular care should be given to respond to e-mail and other non-verbal communications from dD/HH students.

c) **Inclusive learning and assessment activity:** Academic

staff should put inclusive teaching practices in place to address the needs of dD/HH and other students. These could include the use of 'ground rules' for small group discussions and seminars and the ability for students to select their own group members in groupwork situations. In lectures, simple measures include the use of a laser pointer to indicate progress and the incorporation of breaks.

d) **The physical learning environment:** While it is recognised that academic staff, individually, have little control over the nature of classrooms allocated to them, modifications can be made to teaching delivery to overcome the inherent barriers associated with some. These include using the microphone or other technical aid systems provided, giving consideration to positioning where background lighting or colour could be an issue, and the appropriate arrangement of tables and chairs in small classrooms.

7. Conclusions

While it is encouraging that there is some significant activity going on at institutional level, the central argument of this article is that to be effective, it must have a positive and direct impact on student learning. Since academic staff are facilitators of that learning, it is their activities and interactions with the students that are fundamental to the success of any drive for inclusion at institutional level. This study suggests, that for dD/HH students, while there are some pockets of good practice, we still have a long way to go. The author suggests that a major barrier to progress on inclusive practice in learning and teaching is the misguided perception that multiple adjustments are needed to meet the varying needs of each 'category' of student (disability, age, gender, faith, sexuality, race etc). Further, these adjustments will take a

disproportionate amount of time to prepare and will have an adverse impact on 'normal' students.

Let's deal with this. This mythical 'normal' student probably does not exist. In reality, while the majority of our students do not disclose a disability, around 50% of our students have part-time jobs and may experience difficulties with a lack of flexibility in our provision; a significant minority have childcare and other caring commitments; others have mental health issues that are undisclosed; others face difficulty because of language, religious and cultural barriers, financial and personal situations – and the list goes on.

Any image of our student population as comprising a 'normal' group and 'the rest' – some sort of mixed bag of people who need 'special' treatment is clearly not the basis for a vision of inclusive practice foreseen by some (eg Silver *et al.* 1998, Komesaroff and McLean 2006). Rather, we ought to evaluate our practices and determine ways in which we can plan, design and deliver a teaching experience that simultaneously meets the needs of the diverse student body as a whole. There are ways of doing this, though it is not easy (Wray 2003). For example, the author challenges the reader to re-visit the recommendations for good practice made in this article and find any that (a) would hinder a hearing student and (b) *not* benefit a hearing student. Certainly, research by others indicates that improvements put in place for the specific benefit of one group of disabled students usually have a positive impact on other students (Smith 1997, Richardson *et al* 2004, Angelides and Aravi 2007). The point is, *inclusive* should be 'what it says on the tin', *inclusive.* It should not be about making *x* adjustment for student *y*, and *w* adjustment for student *z* – it should be an all-encompassing approach to learning and teaching practice that includes *everybody*.

A sea-change is required in the way that we academics approach our teaching. To achieve truly inclusive practice, a student-centred approach is needed above all. This is unlikely to happen overnight but might just happen in a similar fashion to the electronic revolution that has developed over many years building a cottage industry and individual innovation. Hopefully, the end result will be the removal of organisational, pedagogical, sociological, environmental and technological barriers to learning for dD/HH students and, indeed, for *all* our students.

8. Acknowledgements

9. References

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