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# **Age difference and face-saving in an inter-generational Problem Based Learning group**

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# **Age difference and face-saving in an inter-generational Problem Based Learning group**

## **Abstract**

This study used Grounded Theory methodology to investigate whether learning in a Problem Based Learning (PBL) group was influenced by student demographic diversity. Data comprised observations, in the form of video footage, of one first year PBL group carried out over the period of an academic year, along with student interviews. Using the concepts of 'Face' and Face-Threatening Acts to critically explore student interactions, it appeared that inter-generational issues could reflect and create positions of power. At interview, all individuals constructed themselves as similar to or different from others in the group first and foremost by age suggesting this is a primary concern for students. The data also highlighted many occasions, linked to generational difference, where students failed to share knowledge and experiences or to engage critically in deep exploratory learning. This finding is not reported in the PBL literature.

Keywords: Problem-Based Learning; face; face-saving; inter-generational classrooms; learning interactions

## **Note on Transcription**

Extracts used as illustration in this paper have been presented using one of two methods:

- i) For illustrations of interactional data, standard conventions for linguistic analysis have been used as originally described by Sacks, Schegloff and Jefferson (1974) so that the reader can appreciate the fine grained detail present at this level of analysis. Transcription conventions used in this paper can be found at the end. Such illustrations are presented in normal font.
- ii) For illustrations of content and themes only, i.e. where interactional analysis is not the focus, word for word transcriptions are provided using verbatim subject content but no linguistic transcription conventions. Such illustrations are presented in *italic font*.

## **Introduction**

This paper reports one particularly interesting and unanticipated finding from an EdD thesis. The aim of the thesis was to study a group of eleven, level 4 (QAA 2008), radiography students participating in PBL for the first time in order to understand how developing relationships might influence learning. Although all students were British, the group was mixed in terms of demographic variable (e.g. ethnic and racial backgrounds, age, gender and educational experience and level). This is typical and deliberate for the PBL groups on the programme being studied, because it has been suggested group inhomogeneity will bring diverse perspectives to the discussion, enriching the learning experience (Mills, Woodhall, Bellingham and Noad 2007; McLean, Van Wyk, Peters-Futre, and Higgins-Opitz 2006; Singaram, Dolmans, Lachman and van der Vleuten 2008; Singaram, van der Vleuten, Stevens and Dolman 2010). What is less clear in the literature is whether such mixing can be detrimental in any way. This is an important question given the way Internationalisation, Widening Participation and Lifelong Learning Agendas will contribute to changing the profile of the Higher Education classroom (Burr, 2008). This observational study therefore explored how relationships between people from dissimilar background are constructed and managed in the group learning situation and whether learning is influenced as a result of communication strategies employed.

<<Table 1 here>>

The paper starts with an overview of PBL in order to orientate those readers who may be less familiar with this learning approach, and to explain why a study of diversity is particularly relevant in this style of learning.

## **Problem Based Learning as context**

PBL is a small group learning method which is initiated by the presentation of a problem or trigger. Students discuss the learning required to gain a better understanding of the issues related to the trigger and are guided towards their own set of learning objectives. The objectives guide the subsequent learning which is usually undertaken individually. The group then reconvenes to share their learning and co-construct new knowledge (Barrows 1986).

Models of PBL have evolved, however, and may differ significantly from the one originally described by Barrows (Maudsley 1999, Wood 2003, Macdonald and Savin-Baden

2004). More broadly, PBL curriculum design is now diverse. In fact, Savin-Baden described seven modes ranging from a single module of PBL to a fully integrated curriculum approach (Savin-Baden, 2003). However, one of the defining features is whether the problem drives the learning (problem-based) or is the purpose (problem-solving) (Ross, 1997). In problem-based learning students have no prior knowledge of the problem content, whereas in problem-solving curricula, problem-solving skills are addressed in scenarios where the students require prior knowledge about the problem (Ross 1997).

In the PBL tutorial, discussions are usually directed by the students: one student is nominated as ‘chair’, whose job it is to keep the discussion on track, and another is the ‘scribe’ or note-taker (Wood 2004). The discussion is facilitated by a tutor who is responsible for guiding students in their PBL roles rather than providing subject-specific knowledge. PBL is therefore student-centred rather than teacher-centred (Kember 1997); the learner is active participant rather than passive knowledge recipient, defining their own learning outcomes and determining how to go about achieving these.

This was not a study of PBL per se, however, but of how social relationships might influence learning interactions. This is particularly important in the PBL context though as PBL is based on a socio-constructivist model of learning where learners must engage in dialogue in order to construct learning together (Schmidt et al 2011). Furthermore, this dialogue is generally Socratic in nature, requiring the students to explain, question and defend complex concepts. Secondly, PBL puts the ‘problem’ before the learning. This means students are expected to admit ignorance, identifying what they do not know, hence putting themselves at risk of criticism by others.

Because of the importance of group dynamics and the influence of relationships on social-constructivist learning, there have been several studies exploring the influence of the group in PBL. Such studies have considered students’ perceptions of good and poor groups (Dolmans, Wolfhagen and van der Vleuten 1998); whether group dynamics influence test result outcomes (Nieminen, Sauri and Lonka 2006); if there is differential participation in the group based on gender (Duek 2000; Mpofu, Das, Stewart and Dunn 1998) and ethnicity (Singaram, Dolmans, Lachman and van der Vleuten 2008); and how interactions might be analysed to understand the typical PBL session (Visschers-Pleijers, Dolmans, de Leng and Wolfhagen 2006; Volet, Summers and Thurman 2009).

However, the study being reported here is concerned with the influence of diversity on developing relationships in PBL and there have been fewer studies focusing on this

concept. Singaram, van der Vleuten, Stevens and Dolmans (2010) investigated whether PBL has the potential to integrate students from diverse ethnic backgrounds. They showed that although students had high expectations of learning from different ‘others’, in reality they experienced power and dominance in the discussion group and students who perceived themselves as less able or powerful failed to participate. However, because their research aim was to explore participants’ perceptions rather than analyse interactions, this focus group study captured reports rather than observations. The results therefore failed to shed light on how relationships between students of different racial groups impact on learning.

Woodward-Kron and Remedios (2007) observed a group of 10, culturally and linguistically diverse, physiotherapy students during a 50 minute PBL tutorial in an Australian university. Using discourse analysis, they demonstrated different communication strategies between students from different cultural and linguistic groups. They showed that Australian students dominated the session in terms of number of interactions. They suggested the failure of non-Australian students to interact went beyond language differences and was related to cultural features, recommending that students from Asian backgrounds should be provided with skills and communication strategies to enable them to gain and hold the floor. However, this looked at individual students as the unit of analysis rather than exploring how relationships between students might influence learning.

The PBL literature, therefore, includes studies which consider diversity but there are no studies of group diversity which look specifically at learning interactions as the unit of analysis and, furthermore, none have focussed on age as a social category of interest in PBL.

### **Face as a conceptual analytical tool**

The construct of ‘face’ was used to understand and explain the learning interactions in this study. According to Goffman (1967), face is an aspect of human communication which is concerned with claiming regard and esteem from the ‘other’ in the interaction. There is a tacit agreement between interactants to uphold the face of another in normal communication managed through, for instance, the choice of words, turn-taking manoeuvres, the use of mitigation and other non-verbal and/or non-linguistic aspects. However, when people interact, there is the potential to threaten the face of the hearer (or speaker). Brown and Levinson (1987) call these interactions Face Threatening Acts (FTAs). FTAs are ‘managed’ through a range of communicative ‘politeness’ strategies such as word choice, tone of voice

and mitigation. However, FTAs may be so acutely felt that the choice is one of avoidance altogether, i.e. the potential speaker and/or hearer chooses to remain silent.

The notion of FTA's described by Brown and Levinson has been criticised, in particular for the claim that what causes face threat and the consequent politeness strategies used are universal across all cultures. For example, Gu (1990) and Ide (1982) consider politeness from the Chinese and Japanese perspectives respectively, highlighting that in these cultures face is based on societal expectations and norms rather than individual choice. From this perspective, it could be argued that what one student considers to be face-threatening in PBL another may not, dependent on many factors related to both individual and/or wider culturally-held beliefs.

However face as a concept *is* universal and it is the differences in what constitutes face and face threat across different cultures that can be the cause of communicative failure in inter-cultural groups (Spencer-Oatey and Jiang 2003). It is this point which is of interest to the study reported here as the intention was to determine whether the apparent diversity of sub-cultures (age, ethnicity, gender, educational background etc) present in the group would influence student-student understanding and communication.

In summary, the aim of this research was to explore how students from diverse backgrounds manage the complex communication demands which are an inevitable feature of social-constructivist learning approaches such as PBL. The research questions were:

- (1) What face-threatening communicative interactions do students encounter in the PBL tutorial?
- (2) How does a diverse mix of students manage these face-threatening communicative interactions to achieve their learning goals in the PBL tutorial?
- (3) What is the impact of this communication on group and individual learning?
- (4) What measures can be taken to support diverse groups of students to communicate effectively in PBL?

## **Methodology**

The research questions were 'how' and 'what'. As Creswell (2009) points out, these are qualitative, concerned with exploration and discovery. Furthermore, there were no pre-assumptions because, as the literature review has highlighted, little is known about these sorts of students in this sort of context. The aim of the study was not to look for causal

relationships or to control for variables as is the way in experimental scientific methods but to explore, describe and interpret human relationships within the setting of naturally occurring variables.

Grounded Theory (GT) was used because it not only grants the researcher the flexibility to adapt data collection and analysis as themes begin to emerge, but it also provides a structured method of managing the data and creating an argument. GT has also been described by others as an appropriate approach for naturalistic studies (Silverman 2006, Creswell 2009, Wolcott 2009).

The principles of GT require the researcher to minimise pre-conceived ideas (Cutcliffe 2000). Whilst it is relevant to have an understanding of the literature to identify what areas need to be explored, Strauss and Corbin (1990) advocate that the literature review is not given a privileged position but is used as a another source of data to help define and explain emerging themes from the primary data. In this paper, therefore, additional literature related to one specific emerging theme of interest is presented after the results in order to provide the reader with an authentic account of the chronology of the study.

## **Data collection**

### *Participants and context*

The study participants comprised one first-year (level 4 QAA) group from a BSc (Hons) Diagnostic Radiography cohort. This programme uses a hybrid PBL model with weekly triggers and some fixed resources such as lectures and tutorials to support the learning. The study was carried out over the full life span of the group from October 2007 to May 2008. Ten PBL sessions were videoed in total but these were not all equally spread due to clinical placement, assessment and holiday blocks that were interspersed at various intervals.

There were 11 students, aged 18-57, 6 females and 5 males, from a range of ethnic, educational and social backgrounds. This was a convenience sample because the researcher required regular access to the students and also needed to understand the particular model of PBL employed in the study context. For these reasons the study was conducted at the institution where the researcher was employed. The particular group was chosen because all members of the group had to unanimously consent to participation. This was the only group of the five making up the programme cohort where such consent was achieved. Table 1 is intended to illustrate the group diversity but is deliberately vague to retain anonymity. For instance, there was only one Pakistani student so to link the Pakistani student to the

pseudonym used would render the pseudonym ineffective.

#### *Data types*

Two types of data were collected: interview data and observational data. Findings from interviews and observational data were complimentary in that putative comments and assumptions elicited at interview could be confirmed or otherwise in the observational study. This is a standard approach for GT; as data is collected it is coded (see below) so that subsequent sampling and data collection can be refined to investigate emerging codes from the initial data which then guide further data sources so that the process of data collection is controlled by the emergent theory (Morse and Field, 1996). The following interview and observational data collection strategies illustrate this inter-related approach.

*Interview data.* The students took part in two focus group interviews (FGI); November 2007 and May 2008. Individual interviews were also conducted in the first week of PBL and in the week following the first FGI. For pragmatic reasons (related to participant availability) only 9 out of the 11 students were interviewed twice during the period of the study, 1 student was interviewed once and 1 student was not interviewed at all individually, although she was present for the first group interview.

The purpose of the first individual interview was to determine each student's expectations of PBL and to ensure there was a common understanding of the concept. The second interview aimed to explore the student's perspective of PBL, whether their experiences matched their expectations and the emerging roles which appeared to be developing in the group.

The first FGI aimed to determine how the students constructed themselves as a learning group. This was reflected back to individuals in their second interview to identify and explore self and group perception of each individual's role in the group. The second FGI was to determine whether the students' opinions of the group and the PBL process had changed over time.

Therefore, in keeping with a Grounded Theory approach, interview schedules were based on reflecting previous responses back to the students for discussion (Glaser and Strauss, 1967).

Audio recordings were used to capture interview data and this was transcribed verbatim. The interviews were loosely structured to elicit narratives about student

experiences of PBL. The interview data was explored using a thematic analysis to identify risk factors for Face Threatening Acts and aspects of diversity identified by the students.

*Observational data.* This comprised video footage of ten 3-hour weekly PBL tutorials (total 30 hours). A discourse analysis of Face Threatening Acts (FTAs) was undertaken, that is; those interactional activities identified from the interview data as face-threatening, to explore how students managed interactions during these FTAs and whether concerns about managing face interfered with the achievement of the learning goal. Nvivo 8 (QSR International) qualitative analysis software was used to manage the data. Interviews and data analysis were conducted by one researcher; the lead author. Ten per cent of transcript data was also reviewed by a second researcher to test the reliability of the emerging themes.

### **Data analysis**

The four-stage method of analysis for GT, as described by Strauss and Corbin (1990), was followed, that is:

#### ***Stage 1 - open coding***

The data in the form of transcripts were explored for themes which were assigned to unrelated categories to conceptualise the emerging issues.

#### ***Stage 2 - returning to the literature***

The literature was re-visited to identify what was currently known about the themes and to inform the analytical framework. This provided an informed understanding of the phenomena, for example the concept of Face was identified as a means of explaining some of the students' concerns and the Face-Threatening Act highlighted as a relevant focus for exploring interactions using discourse analysis.

#### ***Stage 3 - axial coding***

Codes with commonality were grouped so they could be subsumed into larger conceptual categories and those with a large number of data items were broken down to identify conflicting and complementary sub-categories. Relationships between and across these resultant codes were then proposed to produce axial codes.

#### ***Stage 4 - selective coding***

Theory was derived by combining the axial codes into a logical argument. In other words, codes or categories developed at the axial coding stage were not merely hierarchical categories of the original codes but were linked together to describe how students manage

interactions in a PBL learning situation where there is cultural diversity between group members.

### **Ethical issues**

Ethical approval was granted from the University of Huddersfield Research Degrees Committee and the University Ethics Committee at the institution where the study was conducted. Students and staff provided informed consent to be videoed, and for the analysis of their discussions to be published. Participant verification was not sought due to the sensitive and critical nature of the interpretation which may have interfered with the developing dynamics of the group and influenced the naturalistic setting.

### **Findings**

By allowing the students to describe themselves and their group, and through analysing their interactions, the results revealed how diversity across a range of social categories influenced the way relationships developed for this learning group and their influence on communication and learning (Robinson 2011). However, for brevity this paper will explore just one of these social categories. It has been chosen as worthy of priority here because it was mentioned by every student without prompting as an important identifying feature and one which might influence their learning. The discourse analysis also supported this finding. Furthermore, it is not reported in the PBL literature to date. This is the category of age and the concept of inter-generational learning.

### **Key Finding: Inter-generational Differences**

What follows is a description and analysis of how students constructed themselves as members of the group. It will show i) how students constructed themselves and their group in terms of age, ii) what they assumed their own and other generation would bring to the table, and iii) whether these assumptions were borne out.

#### ***Student construction of age as identity***

When asked individually at interview whether they saw themselves as being different from or similar to the others, all 11 students made some reference to age without being specifically asked about this. This was not the case for any of the other demographic or social categories.

They also tended to polarise themselves and others into one of two groups; either younger or older:

*“I’m an older member of the group, but there’s younger members of the group as well”*

*Marian (40) int 1*

*“like they’re all a lot older cos I thought there would all be like younger people”*

*Emma (18) int 1*

Furthermore, students raised anxieties with regard to age differences:

*“you think you go to uni, they’re all from college but it’s the opposite isn’t it? I’m like in the minority”*

*Emma (18) int 1*

*“... extremely aware of the age difference that I’m literally 25 years older than everybody else in that group”*

*Joyce (50) int 3*

Nevertheless, students could also see potential benefits to working with students from other age groups:

*“some of them are quite a bit older than me, they might have like past knowledge about things, and they know a bit more things than me or think about things in a different way”*

*Laura (19) int 1*

Whereas older students thought that younger students would have ‘fresher knowledge’:

*“...their knowledge is much fresher on a lot of the background stuff is sort of straight from school learning rather than background knowledge from life”*

*Anne (41) int 2*

Students also talked about what their own age group could bring. Younger students believed they had the benefit of more recent education:

*Emma (18): we’ve still got everything in our heads*

*Pam (18): yeah we’ve still got that way of learning in our head kind of thing*

*focus group 1*

Whereas older students believed they were more likely to say when they did not understand something:

*“I think it’s because we were willing to look stupid or say that you don’t understand something*

*Anne (41) focus group 1*

Thus younger students were perceived to have more recent subject knowledge which would be readily retrievable. On the other hand, it was assumed that older students could share life experiences and would have the courage to facilitate exploratory questioning. It would appear then that there was a general acceptance by students that working with other generations would be beneficial.

In keeping with GT, the next stage was to return to the literature to ground the emerging observations in what was currently known about the issues related to the inter-generational learning environment and to determine whether new ideas were emerging. What follows therefore positions the data from the study being reported here within this body of knowledge.

Mixed-age groups have not been investigated in the PBL literature, but inter-generational classrooms have been researched in other contexts. Most of these have concerned early years and compulsory education (Lemerise 1997; Veenman 1995) and although a number of higher education settings have been analysed, these have tended to be with reference to didactic classroom activities (Bishop-Clark and Lynch 1998; Howard, James and Taylor 2002; Howard, Short and Clark 1996; Confessore 1993; Howard and Henney 1998) looking at comparisons between the behaviours of students of different ages rather than their interactions and the how these impact on learning.

One study which did consider perceptions of intergenerational communication in learning involved students in UK Further Education (FE) (Brooks 2005). In this study students and staff were interviewed and observed across six different FE institutions with the aim of identifying perspectives on the mixed age classroom. Although some respondents reported that older students might benefit less from mixed age classrooms citing classroom disruption by younger students as a possible cause of dissatisfaction, there appeared to be a positive response to intergenerational learning which Brooks suggested could lead to a reduction in age-related stereotypes. However, these perceptions were not validated with interactional analysis. The data from the study being reported in this paper was therefore re-interrogated to establish whether it supported Brooks’ claims, and determine whether the expectations cited by the students about the benefits of intergenerational groups were replicated here.

### *Age-related stereotypes*

As well as using age as a classification, students used stereotypical identities and roles in the way they constructed younger and older groups of people:

*“yeah I don’t know what you think of me saying this but I see you, she’s like the mum of the group”*

*Pam (18) focus group 1 (talking about Marian (40))*

And older students equated younger students with their own children:

*“in some ways because they are as young as my kids, I can see where they’re coming from in some ways”*

*Anne (41) int 1*

Evidently students not only constructed identity as being from the same or another age group but attributed those identities with stereotypical characteristics based on external personal relationships. Students were therefore seen as sons and daughters, mothers and fathers rather than student peers. Associated with such roles comes implicit hierarchical and symbolic power because, as McCann, Dailey, Giles, and Ota (2005) suggest, in most cultures age is a legitimate position from which to claim symbolic power. A more fine-grained discourse analysis of interactions illustrated the influence of these power struggles on learning.

In the following example, Pam (18 years) demonstrates critical analysis in questioning the validity of a reference source for an alternative medicine advert that is being used to support a standpoint. Jay (39 years) has a personal interest in alternative medicine and defends this concept rather than addressing the learning issue, i.e. the value of the reference source:

- 1 Pam it’s it’s it’s gonna be ((flexes arms round back of head with face slightly down and tugs on  
2 ponytail)) slightly biased though °isn’t it° they’re wanting you to (0.1) go to them (.) they’re  
3 gonna swing it their way aren’t they ° (1) °don’t you think° (0.5) it’s not (0.1) gonna be (.)\_as  
4 (.)((pulls down on front of jumper)) good as what you’re gonna get off the ((scratches her  
5 back)) NHS (.) direct website °and stuff like that° (.) ((looks at tutor)) I don’t think =  
6 Jay = well I I disagree with that because I know erm I know one of my friends he had really bad  
7 dermatitis and went to ( ) everybody and couldn’t get it sorted out and went to a traditional  
8 Chinese=  
9 Pam = yeah I understand [what you’re saying ((scratches brow))  
10 Jay [you know practitioner in London and he was sorted (0.5)

Here Pam's body language suggests she is uncomfortable in making her point. Following Jay's (39 year old) disagreement she fails to defend her argument further opting for FTA avoidance.

In the next extract from PBL session 4, Pam attempts to present her argument that x-ray exposure factors need to be increased when a patient has osteoarthritis. Joyce's body language subsequent to this suggests she is not convinced by Pam and turning to Jay she appeals to him for support of her own standpoint. She also looks at the tutor for clues as to whether Pam's argument is valid (line 3). Pam's lack of conviction expressed in her body language and quiet voice does not persuade Joyce, who persists in pressing her own standpoint forward at line 16 without a reasoned argument. Jay agrees with Joyce in spite of a lack of argument: lines 22 and 23. Quality debate and learning appear to take second place to considerations of face-saving underpinned by power.

1 Pam °it wouldn't be as clear if you've not got the right exposure factors°  
2 ((looking down all the time she is speaking, wearing a baseball hat which  
3 hides her face, Joyce looking at Pam then facilitator))  
4 (0.5)  
5 Joyce but that would just be ((turns to look at Jay)) a standard exposure factor  
6 ((looks at Pam)) for that  
7 Pam °yeah (.) yeah ((looking down))  
8 (0.2)  
9 Joyce obviously depending on different factors of the patient but-  
10 Jay yeah I I think you know I I think that we er we need to know obviously for  
11 (0.5) a typical kn- knee [ what (0.2)  
12 Joyce [yeah  
13 Jay factors you know what mAs we should [have it's a thicker it's a [thicker=  
14 Joyce [( )  
15 [yeah  
16 Jay = part of the body so (0.2)  
17 Joyce you wouldn't adjust the exposure factors because somebody's got oste erm  
18 osteoarthritis would you (0.2) cos that would just be that would [indicate =  
19 Jay [that that's  
20 what I thought an' all  
21 Joyce =from the normal x-ray that there's something wrong with that knee  
22 Jay yeah that that's what I was thinking as well and I that's what I'm more like  
23 (2) I'm like Joyce on that one  
24

Two more examples show another younger student, Emma (18), changing her notes following questioning input from older students. On both occasions Emma was originally correct and presented her information in a direct way, as can be seen by the downward tone and emphasis on the factual information. The power of doubt raised by the older students was sufficient to persuade her otherwise

- 1 Emma well it's a knee joint isn't it.  
2 Ian which joint?  
3 Emma a knee [joint].  
4 Joyce [knee?]  
5 Ian definitely a knee joint?=  
6 Joyce yeah definitely a knee joint?  
7 Anne is it (?)  
8 Emma °oh well it could be an elbow then°

PBL session 5

- 1 Emma I've got umbilical and left lumbar region anyone got that?  
2 (3)  
3 Ian no I put right lumbar  
4 Emma I don't know (1) is it right?  
5 (3)  
6 Anne it comes out at the bottom of the stomach and goes onto that side  
7 ((Emma changes her notes))

PBL session 9

Whilst it is inappropriate to identify causal relationships in qualitative data, it is interesting to note that in each of the examples the younger students were not confident enough to defend their arguments when challenged. Furthermore, triangulation with other data shows there was a general impression that the group was owned by the older students. In the following statement, Ed (33) refers to the younger students feeling more 'at home', thus portraying them as 'visitors' whilst the older students are 'hosts':

*"the younger ones are more natural with us because before they were probably ... more reserved. Especially Pam, but now she's probably feeling a little more at home with us"*

Ed (33) int 1

## **Discussion**

The results suggest that for this PBL group age diversity might have negatively influenced the quality of learning. The following discussion draws on the themes of age, power, face and FTAs which emerged from the data to theorise on why this might be. It concludes by considering the role of socialisation; important for reducing FTAs but which must be proactively managed in a groups where little commonality exists between its members.

### ***Age and power***

Age as power in this PBL group might be classified as what Bourdieu describes as the doxa (Wacquant 2006), the natural taken-for-granted attitude of everyday life, which is not something that exists objectively but is a result of shared meaning between people influenced by the same cultural and historical background. Age as a potential source of symbolic power is a doxa tolerated because, in most cultures, it is a 'legitimate' position from which to claim power (McCann, Dailey, Giles, and Ota 2005). This is why the frequency with which age was mentioned, along with individual expressions of anxiety associated with being in the minority age group, makes age a potential source of discrimination and power.

Observation of learning interactions confirmed these assumptions. The younger students were less frequently held in esteem by the older students and when there was contradiction in learning or understanding, it was most frequently the older students' input which was settled on as being correct. Whilst the younger student had arrived at the correct learning outcome, this was sometimes dismissed as incorrect by the others. Therefore, despite an acknowledgement by all students that younger members had much to contribute, they did not do so, frequently opting instead for FTA avoidance.

Ironically, the youngest student went on to graduate with first class honours and achieved higher marks than anyone else in the PBL group. At the end of the first year the perceptions of the mature students about this young woman had changed. Jay (39) said in his final interview that he was surprised at how well she had done and admitted to undervaluing her input. His comments suggested that she was unique as a young person rather than that his perceptions of young people had changed, however; implying persistence of the doxa. Baron and Kerr (2003) refer to this as 'exceptional case bias'

where stereotypical views are clung to even in the face of disconfirming evidence, because re-thinking attitudes and stereotypes is an uncomfortable, personal challenge.

### ***Managing face-threat in the PBL learning context***

Where power differentials exist, it appears those in a subordinate position are more likely to feel the effects of face threat and therefore more prone to FTA avoidance. Indeed power differential has been shown by those studying face to be a key moderator in interactions, not only in an interactant's linguistic, non-linguistic and non-verbal moves but also in the decision to engage or not in the FTA (Spencer-Oatey and Jiang, 2003). However, in a group learning or working situation this would have a negative impact on all concerned, since the benefit of diversity is not realised and group discussion becomes uni-dimensional. This study has therefore helped to highlight the power struggles previously hidden in the PBL classroom and shown that these can have a negative impact on learning. It is important for the tutor to identify such problems and understand how they might be tackled. One approach might be to promote social interaction.

Face theory posits that FTAs become easier to manage as individuals become socially close because of the increasing ability to predict how an utterance will be received by the hearer and there is also confidence in the stability of the relationship. Therefore, as students get to know each other and become less socially strange, it becomes easier to know how the message will be received and there may also be accommodation or divergence towards one another's styles (Gallois, Ojay and Howard 2005). This argument suggests FTAs should diminish over time as group socialisation occurs. However, a comparison between PBL sessions 1 and 10 showed that there were more FTA-related silences, and of longer duration, at the end of the year (see table 2).

<<Table 2 here>>

It is clear, people have to engage in social conversation with one another to enable relationships to develop and in a group which is age diverse there may be less inclination or opportunity to engage in social interaction. As Jay states:

*"I'm trying to engage with other people who I wouldn't normally meet you see on a Friday night. So I'm talking to people you know like, who are quite different to me..."*

*Jay (39) int 1*

Although small sub-groups of students from the study PBL group did socialise outside the PBL tutorials, these groupings were founded on common identities related to age and age-related roles, such as being parents. Byrne's theory of social attraction reviewed by McPherson, Smith-Lovin and Cook (2001), suggests that groups will segregate when it comes to social networking, in particular on the grounds of race and ethnicity, and age. It is hardly surprising, then, that students in diverse PBL groups do not report socialisation beyond the PBL activity itself, also reported by Singaram, van der Vleuten, Stevens and Domans (2010). Again, this observation is in contrast to assumptions made by Brooks' (2005) respondents that inter-generational learning groups could help to overcome age-related stereotypes through social interaction. It is suggested that, for this group, age diversity has been a barrier to social integration, the consequence of which is retention of the social distance between students. In such a situation, the group does not develop and FTAs will continue to cause difficulties.

## **Conclusion**

Whilst students were cognisant of working with those from different age groups, there appears to be a discrepancy between what they assumed this would mean for their learning and what was observed. There were several occasions where younger students were over-ruled by mature students and the data suggests symbolic power, associated with age, persists in the learning environment. However, there were also many occasions when students from all age-groups failed to engage in a more critical discourse with their colleagues. It is suggested that this is also due to intergenerational diversity resulting from persistence of social distance between group members, a situation in which FTAs are more acutely experienced. For PBL to work in these conditions, tutors need to provide appropriate support such as facilitating social and emotional preparation and development of the group to ensure students feel sufficiently comfortable to face challenges and to encourage and support others through those challenges too. It is also beholden on the facilitator to eke out barriers to the social development of the group and to challenge prejudices and stereotypes that might marginalise individuals and stop the group moving forward in reaching their learning goals.

Although this study only looked at one small group of students, its longitudinal timeframe and observational nature enabled a rich description of how students

developing relationships can influence learning. Using face, and in particular the face-threatening-act as a focus of analysis it offered an alternative lens through which to understand the pressures for students engaging in constructivist learning particularly when there is age diversity in the group. Further studies could use the concept of face in the same way to determine the influence of other contextual and demographic variables on how the management of communication during a potentially face-threatening act can influence learning.

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#### Transcript conventions used in this paper

- Underlined text indicates stressed speech, where the utterance is prolonged or emphasised.
- Degree signs (°) around an utterance indicates quieter tone.
- [Square brackets] indicates the point at which a current speaker's talk is overlapped by the talk of another, the bracket being the point of overlap.
- = sign indicates "latching" i.e. no interval between the end of a prior and start of a next piece of talk.
- Numbers in brackets indicates elapsed time in seconds. A period in a bracket (.) indicates a very short pause.
- ((Double brackets)) indicates non-linguistic or non-verbal actions.
- Empty brackets ( ) indicate that the utterance was not clear

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