

Identity and belonging in social learning groups: the value of distinguishing the social, operational and knowledge-related dimensions

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Abstract

Collaborative learning has much to offer but not all learners participate fully and peer groups can be exclusive. The paper examines how belonging or 'congruence' in learning groups is related to identities of gender, age, ethnicity and socio-economic status. A study of student experiences of collaborative learning on three different blended learning courses illustrated how learners negotiate identity congruence with peer groups to belong and engage. An analytical framework that distinguishes social, operational and knowledge-related identity congruence has emerged. Contrary to received wisdom, the social aspect appears least important for learner engagement while knowledge-related identity congruence is fundamental. Some of the consequences of identity incongruence, particularly concerning gender and maturity, are discussed and the paper points towards the pedagogies which might enable identities of group members to shift so that collaborative learning can flourish.

Introduction

Those working in further and higher education increasingly recognise that learning occurs in social contexts (Lave & Wenger, 1991) and is not an independent cognitive process. Wenger's (1998) concept of learning in a community of practice is widely referenced and well renowned, but his assertion that learners must shift identity as they participate in communities is not well explored by those who apply his ideas to pedagogy and design. Meanwhile, widening participation practitioners have made use of the concepts community and belonging to encourage a diversity of learners into higher education. However, after prioritising the university entry level, they are only beginning to follow widening participation issues into the formal learning communities, groups and cohorts which form the backbone of teaching and learning experiences (Barefoot, 2004; Yorke, & Longden, 2007). This paper builds on this work to unpack the concepts of belonging, participation and social learning. Using evidence from a qualitative study of e-learning and blended learning groups and cohorts, it demonstrates how belonging means negotiation of what I term identity congruence between identities of gender, ethnicity, class etc. and the activities of the group (Hughes, 2007) and how learning requires identity shifts, or even identity transformation, for individual members.

The paper begins by developing a distinction between three interrelated aspects of identity congruence between individuals and learning groups to explain the complexity of learner participation in higher education. Firstly, there is social identity congruence: the personal identification with peers which draws on representations of identity. Secondly, there is identification with the processes, practices and technologies of social learning, which I term operational identity congruence. Thirdly, identification with the ideas, concepts and knowledges that are under construction gives knowledge-related identity congruence.

A study is next introduced which illustrates the three dimensions of identity congruence. It suggests that these aspects of identity congruence between individuals and groups do not have equal significance for learning. Contrary to received wisdom, the social aspect is least important for membership of learning groups and it is knowledge-related aspects which are fundamental to engagement and learning.

Learners differ in their opportunities and preparedness to negotiate identity congruence and this has consequences for those who wish to improve engagement and participation in learning. Learners who do not 'belong' in a learning situation and who are not enabled to make identity 'shifts' may eventually withdraw. The paper concludes by drawing attention to the pedagogies which might best promote learners to undertake the necessary identity transformation.

Participation in higher education as negotiation of three dimensions of identity congruence

Wenger's (1998) work provides a framework for answering questions on how learners engage with formal learning groups, cohorts and communities. He describes social learning as mutual engagement with others and participation in communities of practice which have a common enterprise or purpose and which negotiate their own meanings and repertoires. He also argues that taking part in a learning community of practice involves identity transformation when members move from peripheral to full membership of the learning community. Belonging to a community of physicists inevitably means identifying as a physicist. But, any group or community does not operate in isolation from other groups, and to engage fully individuals must reconcile learning group or cohort identities with wider social identities from other community memberships.

Before exploring how learners negotiate this identity congruence, it is necessary to clarify what is meant by identity. Participation in education has long been associated with social identities of gender, class, profession and ethnicity. Statistics from advanced industrial countries such as the UK, show that higher education favours success by females and those from high socio-economic groups and, in the UK, those from working class and ethnicity minority groups

attend lower status institutions (Universities UK, 2005). The figures can be explained by exclusive structural factors such as entrance requirements, but this is an oversimplification which views identity in terms of deficit and does not capture the complexity of individual experience and agency.

To provide an alternative to socially determined theories of identity, many sociologists and cultural theorists argue that identity is an elusive construct. Goffman, (1978) illustrated how identity is a product of a context-dependant performance rather than a social determinant of behaviour and this has been followed by Butler's (1990) argument that gender is performative and not fixed. Terms such as 'female' or 'male' have many manifestations, and what it is to be female is contingent and subject to continual re-interpretation.

Nevertheless, individuals strive for, and are expected to display, a coherent identity and thus identity categories such as gender, ethnicity or class appear to have some stability. But because of a multiplicity of identity performances and changing discursive meanings of identity, there will be contradictions and identity positions will not always be available or possible to maintain. Thus, identity is always constrained. For example, belonging to a formal learning community or learning group requires reconciliation of conflicting identities of class, gender and ethnicity with educational communities and practices (Baxter & Britton, 2001; Read, *et al.*, 2003; Ball, Reay & David, 2002). Contradictions, for example, between academic language use and language used by working class communities require negotiation; if the tension is unresolved, then exclusion may

be an outcome. Moreover, identity and belonging feature significantly in the often unacknowledged emotional aspects to learning (Beard *et al.*, 2007).

Wenger (1998) argues that the process of reconciling identities from different community memberships involves both communities and individuals. As individuals move from peripheral participation to core membership, the individual changes while the community re-negotiates meanings and practices too.

However, Wenger does not provide detail of how the affective processes of reconciliation of multi-membership occur, nor does he concede that communities are not always benign and can be exclusive (Fuller, *et al.*, 2005). Because identity is performed, identity reconciliation will be an ongoing negotiated process rather than something that is achieved with permanency. I term this dynamic relationship between individual identity performances and group behaviours identity congruence. Identity congruence refers to an experience when an individual's displayed social identities such as ethnicity, maturity, gender and occupational status are consistent with the identities made available by a group or community. Identity congruence gives the self a coherent and emotionally acceptable sense of identity *in situ*. But, if aspects of a learner's identity are not congruent with the identities available in a learning group or larger community then the learner will either have to persist with compromised self-esteem or be confined to the margins.

Use of e-learning in higher education has made some of the issues of identity and belonging more visible because of the permanent traces of learner interactions which are (usually) absent in the classroom. Recent research on virtual learning has highlighted some of the problems of group and community working. Virtual groups also do not attract full participation from all members, some may be passive observers or 'lurkers', others might make a minimal contribution and some might opt out altogether. These unresolved problems with dynamics can be readily accessed through electronic records (McConnell, 2006). From empirical examination of the micro-processes of negotiation of identity congruence in learning situations, three dimensions of identity congruence can be distinguished: social, operational and knowledge-related and these will be explored next.

Social identity congruence

Social identity congruence concerns building relationships in a group or community around aspects that are unrelated to the group's learning project such as common leisure interests. In universities and colleges there is evidence for the importance of such socialising in a social 'backstage' where students discuss matters outside of the academic contents of their studies, share information about teachers, practical details for assignments and occasionally also discuss the course content (Selwyn, 2007; Salmon, 2000; Palloff & Pratt, 2001). A recent

study of first year undergraduates in the UK suggested that learners value such social support and friendships highly (Yorke & Longden, 2007) although embodied effects from, for example, late night socialising can also impact negatively on learning (Beard *et al.*,2007).

The importance of social identity congruence has been exaggerated in the e-learning literature because of the concerns that virtual communication lacks social presence and learners feel isolated. It is argued that alienation occurs through a lack of physical cues of identity and behaviour which give communication its immediacy and intimacy (Rogers & Lea, 2005; Gunawardena & Zittle, 1997; Salmon, 2000; Wheeler, 2007). However, Hughes & Scott (2005) have argued that the perception that virtual communication is impersonal may well arise from a lack of appreciation of the complexities and nuances of communication hidden in texts as well as unfamiliarity with the medium. Those who argue that virtual learning is detached from reality also diminish the importance of learner experiences of remoteness in campus-based learning.

Operational identity congruence

Learning group behaviours or 'dynamics' have been much studied (Hartley, 1997).

All groups must negotiate how they will operate in practice. When learners align practices of other communities to which they belong, such as gendered performances of leadership, with the learning practices of the group they are

producing identities which are congruent with the group; this is operational identity congruence.

Groups may select technologies to mediate their interactions and support group behaviours, but there are social factors underlying technology use that give meaning to any technological function. Technologies are often designed for a specific audience and they acquire social meanings as they are used or appropriated. For example, mobile phones are part of a youthful lifestyle and are used in different degrees as fashion accessories and networking devices (Wilska, 2003). Technologies are gendered (Cockburn, 1985; Grint & Gill, 1995) not only as artefacts but also as skills and processes: for example, IT skills, computer hacking and programming are associated with discourses of masculinity (Hapnes & Sorenson, 1995). Learners negotiate these discourses as they interact, experiencing operational identity congruence or incongruence with a learning group which employs a particular communication technology in a particular way.

Knowledge-related identity congruence

Learners may find that their identity positions are incompatible with some forms of knowledge. There is plenty of evidence that discipline 'choice' is a misconception and that the discursive practices of gender and class promote or constrain learner engagement with disciplines rather than cognitive factors alone (Ball *et al*, 2002; Clegg & David, 2006; Reay *et al.*, 2005). As a consequence there are female and male subjects: females dominate in health and humanities and males in engineering or physical science, and an academic-vocational spectrum of courses reproduces social class and aspects of ethnicity (Hughes, 2000; Thomas, 1990; Ball *et al*, 2002).

Within a disciplinary area, learner commitment to the many forms of knowledge available will also vary. For example, discourses which link maturity with commitment or femininity with co-operative work (Waller, 2006) are highly influential. Solomon (2007) describes how some young male mathematics undergraduates were not concerned about having a deep understanding of mathematics as long as they could attain the correct answers quickly using a formulaic approach. These students showed alignment with local practices in their classroom group which rewarded correct answers and speed rather than participation, but, unlike the females, they did not negotiate identity congruence with a community of mathematicians who really understand the subject.

Promoters of widening participation have tended to concentrate on peripheral methods of engaging learners, such as providing additional support and raising aspirations, and ignored the very pertinent issue of how learners will identify with knowledge in the teaching and learning environments they encounter (Barefoot, 2004). There are some key questions for those concerned with inclusion to address. How do learners develop identity congruence with learning groups? What are the consequences of incongruence? Are all three dimensions of identity congruence equally important for persistence with studying?

An answer to these questions requires a detailed analysis of learner interactions. As mentioned earlier, online learning groups provide an ideal opportunity to study the negotiation of identities not only because of the records automatically generated, but also because learners themselves have access to the records of the group interactions and this assists them in reflecting on the experience. But, with the exception of some wholly distance learning courses, groups rarely work collaboratively online without other contact by telephone or in person. Therefore blended learning groups provided the material for a study of learner experiences of identity and belonging.

A study of identity and belonging in virtual and blended learning groups

The study on identity and belonging in learning groups was initially conducted in a UK 'teaching' university based in a large city and with a very diverse student intake. Three modules were selected because they were taught through blended

learning and included collaborative online group work. These were from different disciplines: IT, Sports Science and Education, each with different gender, ethnicity and age profiles to provide richness of data. However, interviews indicated that the collaborative element was very minimal in the education module so these results were not included and a further study was undertaken at a second university with a comparable profile of learners as a replacement for the education module.

The year three undergraduate IT and sports science modules both compelled groups to work collaboratively online for an assessment, while the postgraduate education module enabled groups to co-operate in a discussion board to give each other feedback on specific tasks and to discuss new concepts and ideas.

For the IT module 13 (11 female, 2 male) students out of 45 volunteered and were interviewed about their experiences of working in virtual or blended learning groups. For the Sports Science module 12 (10 female, 2 male) out of 18 volunteered. These interviews were mostly conducted in students' homes or at venues suggested by them and were in depth, often over an hour in length. In the education module 25 (19 female, 6 male) out of 26 students took part in a reflective online discussion on their experiences of e-learning which they used for a assessed piece of reflective writing. The richness of this available material

made interviews superfluous. Completions and student marks were also reviewed and tutors were invited to comment on the findings.

Although both the IT and Sports Science students were mixed in terms of age, ethnicity and gender, white females were over-represented, perhaps because the students were invited to volunteer for interviews (the interviewer was a white female and males may be less keen to volunteer). The education students were professionals with a majority of mature, white women and since they all except one took part in the study this further skewed the sample. Ethnic minorities were also under-represented in the study (11 in total from ethnic minorities) again perhaps because of voluntary interviews. However, since the results were not used statistically, it was considered that there was sufficient diversity to provide insight into group online behaviours for the purposes of the study.

To avoid deliberate identity constructions in response to interview questions, apart from questions on age, ethnicity and gender, the participants were not asked directly about identity or belonging. Rather they were asked for accounts of their positive and negative experiences of working collaboratively online. This had a disadvantage that some respondents made little reference to identity and belonging. Nevertheless, others gave unprompted insight into aspects of identity that were clearly significant and critical to them. The reflections of the education

students, who were instructed to explore positive and negative experiences of e-learning, were also spontaneous and there was no prompting by the tutor while the reflections were being constructed. Transcripts of interviews and a transcript of the reflective discussion were reviewed for statements about belonging and identity in the learning groups or cohort. The material was coded for different ways in which identity in/congruence was negotiated using critical discourse analysis (Fairclough, 1995) to interpret identity constructions. These narratives included interpretations of the actions of self and others as well as identity claims made in statements using the first person.

The findings discussed next provide evidence of how individual members negotiated the three different aspects of identity congruence or incongruence within virtual groups and communities.

Social Identity congruence and learning with others

Social identity in/congruence in groups was negotiated through either establishing commonality of identity or dis-associating with difference. Learners described feeling more comfortable in groups where there was consistency in performed identity. Introductory messages on a discussion board showed how learners sought out others with similar interests, previous experience or emotional responses to e-learning such as trepidation or excitement. While this may be a useful stage in gaining confidence with the mechanics of virtual communication (Salmon, 2000) or overcoming alienation (Gunawardena & Zittle,

1997), there is a downside in that learners can resent differences or subgroups can emerge which exclude other group members. I will review some examples of these two concerns below.

Role resentment arising from difference

A mature, female sports science student described herself as socially incongruent with her group:

Most of them were young people anyway so I wouldn't have much in common with them, they were all rather shy.... and to be honest I helped loads of people, that's the irony of it all, and some people realised that at the end of the course, quite a lot of students, I gave them quite a lot of my time and helped them with computer skills and essay writing skills and research skills....So, the younger ones kind of look to you for guidance even though you got a lot more on than they do, you know it's amazing.

Mature students are widely assumed to be conscientious despite external commitments, and here she presents a consistent identity which also includes an acceptable gendered role of nurturer of others. But, she constructs

herself as different from the group on the basis of age, confidence (not shy), her perceived role as teacher or mentor to the other students and through being more pressured than junior peers. In doing so she appears resentful of her unique role in the group.

Sub-group formation

Sometimes learners formed sub-groups and negotiated identity congruence within the sub-group to differentiate themselves from the rest. In the IT module, a sub-group identity of visibly active commitment to the collaborative task was performed by three white females who also presented themselves as friends. The youngest sub-group member stated:

There weren't enough members of our group logging on, there weren't much communication apart from the beginning where they would say 'hi my name is and I am in your group' and that's it, that's all it would be geared for. But there were three members who used to log on and we used to try and communicate with each other but we felt that we did most of it. We did nearly everything.

But, forming sub-groups is not an inclusive way of working and no attempt was made to explore why other members were passive or perhaps waiting to be

drawn in after introducing themselves. It was assumed that the others were complicit with the situation as one member put it: “

the sort of people that were quite happy to let someone else do it.” Membership of the sub-group would be unavailable to those whose social identities were not congruent with such confident and active communication styles and who were not encouraged to re-negotiate their position.

Another example from the sports science module also suggests that friendship groups can be exclusive, in this case involving ethnicity:

A white female described her group:

I enjoyed group work, but as long as everyone pulled togetherwe had an issue where we had five in the group, I think it was me, Mark and Emma and there was a guy Tony and Salma and we had met, me Mark and Emma we had met about three times, but they never bothered to come and meet and we got a bit fed up with it and then what happened was the actual groups split because there was an ethnic minorities group that was needed for the [name of task] so they actually went over to the ethnic minorities group and we kept ourselves to ourselves and because we are good friends we got on really well, we did loads of work.

She describes congruence with the other white students Mark and Emma, ‘good friends’ who ‘pulled together’, but is critical of two members who by implication

are from ethnic minorities. The racial tension was resolved as these two students had the opportunity to join another group specifically set up for ethnic minority students.

Although social identity congruence was allied to positive reflections on collective working, social incongruence was not necessarily coupled with operational problems. In the first example the group was successful operationally in producing a good outcome despite the resentment of the older member. But there were difficulties with negotiation of operational identity congruence too and I turn to these next.

Examples of operational identity incongruence

Students in the second example above might have been excluded operationally—perhaps because they could not access the technology. Two further examples from use of asynchronous discussion boards and online collaborative assignments demonstrated operational identity incongruence and illustrate how participants must navigate both the technologies and methods employed by the group and that groups do not necessarily take responsibility for exclusive actions.

Asynchronous discussion boards

Asynchronous discussion boards are often claimed to give campus-based learners who work, mature learners and part-time learners flexibility of study (Littlejohn & Pegler, 2007). In the study, there were several students whose first

posting for a discussion was much later than the group majority, but this pattern of participation was not operationally congruent with the group.

An Asian mature female from the education module joined the discussion late. She went on to reflect on her experience:

There was a "sell by date" to the contributions... As much as I appreciated I could go to the discussion board at any time, it appeared late entrants rarely got any feedback.... This technical aspect was particularly retarding for me when I had to send my work online.

This learner was unable to negotiate operational identity congruence with her group. Her consistently gendered performance of self as having limited IT skills, exercising caution over using IT and delaying her message posting was not congruent with the way the group functioned to give feedback only to early entrants to the discussion. Her experience goes against popular assumptions that the flexibility of asynchronous communication –of which this student was clearly aware- guarantees operational identity congruence for all. Had this student taken part in the negotiation of group process, she might have been able to interact with others who joined later or persuaded others to give her feedback, but her position as an ethnic minority 'outsider' in a predominantly white group might mean that such negotiation is not easy. The group apparently did nothing to help either.

The role of the co-ordinator in collating and

submitting collaborative work online

VLEs and other software offer space to produce joint assignments and upload collaborative pieces of work for viewing by tutors and peers. Collaborative groups needed a co-ordinator or leader and group members negotiated operation identity congruence around this. Groups in which members had very different inputs or which contained members who left their input until the eleventh hour caused conflict or anxiety for some of the leaders.

In the IT module, a mature white female who took over sole leadership of a group and responsibility for submitting the group assignment online expressed anxiety:

I always check my emails in the morning, sometimes in the evening anyway and some of it was checking to see if anybody in our group had put anymore work on because I was getting a bit panicked. And some of it was just like at the end to see if the other groups had got theirs done... I kept thinking 'oh god, oh god' and it was 10.50 when I got it on and it had to be on by 11 and I kept thinking 'oh oh they have got theirs on'.....

There were members of the group that didn't really put an awful lot of input in until right at the end and I was thinking 'oh my god' this is going to be a nightmare. Then at the end they just went 'there you go, loads of work, really good work' and one seemed like a real space cadet and the stuff

that he come up with was phenomenal. You know saw him the first week and saw him the last week and he was like 'don't worry, don't worry' and I was thinking 'oh I am worried'.

In this example the group co-ordinator was very unhappy in the role because her operational identity was consistent with producing material well in advance of the deadline, submitting the final product in good time and depended on all other members sharing responsibility for the quality of their contribution, none of which apparently occurred. Her actions were regulated by discourses of conscientiousness and aversion to risk which provide a consistent identity narrative for a mature female.

By contrast, the 'space cadet' younger white male performed a laissez-faire approach with trust in the ability of the group to produce a successful product close to the deadline. He, like many others, perceived the group's function to be individuals preparing their contributions to combine just before the cut-off time for the group submission, in his words to "put in our statements at the very last day", without the need for group interaction.

This is a risky approach, but in this case it paid off. Such a risk-taking identity is readily available to confident males, working or busy students or those who are less committed to academic study. But, the lack of operational identity

congruence between the group co-ordinator and the rest of the group meant that this was not a pleasant experience for her.

Negotiating knowledge-related Identity congruence

There are many forms of knowledge circulating in higher education including: formal disciplinary knowledge, locally established disciplinary knowledge (Solomon, 2007) and tacit personal and professional knowledge (Schön, 1986; 1991). But,

why do some learners appear uninterested and disengaged from the different forms of knowledge they encounter in higher education while others engage?

These accounts of learner experiences of working together online provided some insight into identity constructions concerning tensions over academic and local practitioner knowledge, engaging with co-operative knowledge and the relative status of teacher and peer knowledge. They illustrate how engagement with, and ownership of, the different forms of knowledge is not necessarily congruent with individual identities.

Formal knowledge, local knowledge and academic language

The formal language of academic writing and the informal speech used in conversation are clearly very different. Learners have to negotiate the degree of formality in online communication which may be simultaneously written and conversational. There will be affordances from the medium itself; expectations are that synchronous communication, 'chat', or social networking such as using 'blogs' will be informal, while a structured conference set up for producing an academic assignment might encourage use of academic conventions such as referencing.

In the study, there was evidence that the academic language required for the postgraduate level education module required a shift of identity for those who were teaching in professional or vocational disciplines. One white female on the education module introduced herself:

I am currently working as a Lecturer Practitioner Midwife...Looking forward to getting to grips with this course and hope that I can keep up with all those academics out there!

She was in a group which used very formal academic language in their online communications. She later added:

Communicating to people on line felt quite impersonal especially when the course got started and we didn't know each other very well.....I felt it had

to be as formal as an academic assignment at times and although ground rules were devised at the start and everybody was so friendly this became and still is quite a worry for me.

The comment indicates that she is uncertain about the appropriate language use in the discussion group. On the one hand she found the communication style impersonal and academically formal; on the other hand she describes the group as friendly and being clear about ground rules.

The confusion over the formality of knowledge generated online arises because of a blurring of the distinction between what Wenger (1998) terms participation and reification. He argues that in communities of practice there is a balance between the more ephemeral discussion or negotiation (participation) and making the product of negotiation more concrete through writing or some other physical representation (reification). In classroom based groups there is usually a clear distinction between any unrecorded informal discussion activity and written products or records such as an assignment. Transitions between practitioner and academic identities might readily occur at the point of reification. However, in an online discussion both the informal process of discussion and more formal products are captured. If a distinction between participation and reification is blurred online, uncertainty over when to negotiate new academic identities may produce incongruent identity experiences for learners such as the one above. Thus, the apparent flexibility of use of language online might not be helpful for

learners making transitions between personal or professional knowledge and formal academic knowledge. Linguistic and stylistic expectations from teachers and other learners could be made much more explicit.

Collective knowledge and co-operation

Successful co-operation depends on two stages. Firstly, a person must be willing to share knowledge and put this knowledge into a public domain where it is available for critique. Secondly, and perhaps less obviously, others must negotiate identity congruence with this knowledge by interacting with it in a constructive way.

Participants in the study expressed identity congruence with collective knowledge through pleasure in receiving shared knowledge.

A white younger female on the IT module experienced congruence with the group and drew on an accessible feminine language of explicit emotions in constructing her experience of collective working:

I think it was quite nice to see what people in other groups had put up for everybody to see. That was quite a nice sort of feeling thinking that people were sharing their information and things like that, that was quite nice. Yes I quite liked that, I sort of felt a bit more in touch with things, even from home or whatever.

Contrast this with the testimony from a white mature male from the same cohort where a difference in commitment stems from different levels of interest between him and a female peer.

I read everything up there but to be honest, a lot of them (messages) were of no interest. (Female name) was more into it and I let her get on with it really. I saw them (the group) several times in the week anyway so there was no point in me using it really.

He does not appear to identify with the collective discussion: the messages were of 'no interest'. His dissociation from the conscientious female who is 'into it' provides a comfortable masculine identity. However, to disassociate himself from a masculinity that is disinterested in learning (Connell, 1995), he shifts to using lack of operational identity congruence, a preference for meeting the group physically rather than virtually, to justify his lack of interest in the online text and, consistent with his maturity, manages to presents himself as an engaged student.

Tensions over intellectual

authority between teachers and peers

The source from which knowledge is disseminated influences its status and authenticity (Fairclough, 1995). One issue that was repeatedly mentioned in the education course was

a difference in status between knowledge presented by the tutor and that disseminated by other learners.

The education course promoted social rather than individual learning and not surprisingly most students valued peer knowledge. Nevertheless, several students negotiated a position of being a collective learner provided that the tutor was present to authenticate the collective knowledge as in this example from a white female:

I also feel it was a strength having comments posted on (the VLE) by the tutor. There was a visible presence which I valued. I guess I found this useful as it gave me sense of security knowing that we were on the right track.

A mixed-race male education student was more dismissive of collective knowledge in favour of the supposed authentic discipline knowledge ascribed to the tutor. He gave his views on a 'legitimate academic source of information':

They (students) may not value the opinions of other students on the discussion forum as much as they value the tutors (sic) opinion and if this is not forthcoming they may lose motivation.

He uses 'they' to refer to other students rather than the first person which is normally used in written reflective statements, although it is likely that he is portraying a personal experience of being de-motivated by peer learning. This detached objective style of writing is consistent with a masculine style of discourse and in particular scientific discourse (his first degree was in psychology). Such an identity construction which devalues peer knowledge was not congruent with the education cohort and it is not surprising that he later disengaged from the course.

The concept of learning from peers is more of a challenge for such a science student because in science education factual scientific knowledge is privileged over any social and contextual knowledge about science (Hughes, 2000). By contrast, a social science, arts or history student who is familiar with multiple perspectives and knowledge as socially contingent would find the notion of learning from peers as well as authoritative 'experts' much more palatable.

Contrast the quote above with a posting from a black male from a visual arts background:

From the different messages posted, one could almost pinpoint members' understanding viewpoints about a given subject. Also by reading the messages, it was possible to fill in the gaps or add to one's own knowledge/understanding of the topic being discussed.

Interestingly, he also does not use the first person commonly used by the females in their reflective writing and although he identifies with collective knowledge, he gives his statement a flavour of masculine objectivity by using 'one's own' instead of 'my'. Thus, this male student is able to present a comfortable identity in relation to collective knowledge building.

We have seen how learners negotiate identity congruence as they make transitions between different forms of knowledge. I suggest next that negotiating knowledge-related identity congruence is most important and is the dimension in need of most attention from educators.

The relative importance of social, operational and knowledge-related identity congruence

The findings from the study suggest that, counter to received wisdom, social identity congruence is not essential in formal learning. Although social and operational identity congruence are linked, they are not interdependent. Socially congruent groups may develop operational congruence when they learn

productively together, but so can socially incongruent groups. Rapport is often built socially through finding areas of commonality, but operational identity congruence may require members act differently (Hartley, 1997). In the group containing a mature student amongst younger students she was able to use her experience to successfully guide and help the others despite feeling out of place socially.

In addition, groups need a certain amount of diversity to ensure that they are not too inward looking and stagnant. Wenger (1998) argues that not all communities of practice are learning communities. As new members join and negotiate fuller participation, they bring with them contacts with other communities and new ideas. In other words they bring diversity to the common enterprise and this is what enables the community as a whole to learn and develop. A community which requires new members to become replicas of existing members may become stifled and resistant to change and growth; a community that does not allow diversity will not be a learning community. Thus, a learning community or group needs to find ways of viewing outsiders as potential members and establishing sufficient congruence between these individual identities and the evolving group identities.

A group which quickly develops social identity congruence therefore may not function well. Friendship and social support may be invaluable for belonging to wider institutional communities in the university, but social identity congruence

does not necessarily facilitate knowledge-related identity congruence as demonstrated by the example of the student who was uncomfortable communicating on an academic level with an apparently friendly group. Friends may also form sub-groups and exclude other potential members.

If social identity congruence does not guarantee engagement with new knowledge then neither does operational identity congruence. The study suggested that there were operationally congruent identity positions for a group with its subgroup of active conscientious students who set themselves apart from passive, unconfident or less motivated students. Such groups appeared to work successfully in producing a 'joint' outcome without conflict because the group mark was shared equally. However, those who were disengaged from the task had no opportunity to develop knowledge-related identity congruence with the group and are unlikely to have learnt much from an experience which is tantamount to collusion.

Knowledge-related identity congruence appears to be the essential ingredient for social learning with operational and social matters aiding but sometimes abetting the learning process. Engagement with the group knowledge provided a strong sense of belonging and those who did not engage with collective knowledge building processes were the ones who expressed dissatisfaction or even withdrew from the course. This leads to a concluding question of which

pedagogies might best enable learners to negotiate identity congruence in all three aspects, but especially concerning knowledge construction.

Conclusion: A pedagogy for identity transformation

This online study has made visible some of the social, operational and knowledge-related aspects of identity congruence which learners negotiate when taking part in learning groups and cohorts. I have suggested that these are inter-related and that a high degree of social identity congruence in a formal learning situation is less important than the others and may even be counter-productive to learning. Operational identity congruence may be necessary for positive group dynamics and inclusive practice, but, without knowledge-related identity congruence learners will not fully engage.

Identity congruence develops through identity shifts and even transformation. Learners who lack confidence or perceive themselves to be 'slow' could take risks and be more active. Some learners might make the shift from non-academic to academic identity while others might come to value collective knowledge and rely less on the authority of the teacher. But, such shifts cannot occur in isolation from other aspects which make up a sense of self: they will challenge gender and other social identity constructions and sometimes require an identity transformation which is not, in the short term at least, easily achieved.

Placing responsibility onto learners to shift their identities and become members of learning groups and communities does not diminish the role that groups and sub-groups have in creating an environment where learners can negotiate new identities. For example, groups and sub-groups could be responsive to those with different participation patterns. Thus, in a learning group, participants must be prepared to shift identity to accommodate new members to avoid being exclusive and narrow.

In formal learning, teachers too have a responsibility to cultivate a pedagogy that enables identities to shift and transform. A pedagogy for identity transformation considers the detailed interactions of learning groups rather than viewing learners as having deficits and expecting them to conform. Such a pedagogy might enable re-negotiation of gender or other identities in learning groups or reconciliation of language use and academic background. It would encourage individuals to relinquish a personal investment in one type of knowledge and re-invest in new knowledge while at the same time expecting that groups become receptive to a diversity of knowledges.

A pedagogy for identity transformation is not new; it embraces methods which already engage and challenge learners such as: critical reflection, role play, Problem Based Learning, self-directed learning and carefully aligned assessments which motivate learners. But, a distinction between social,

operational and knowledge-related identity congruence shows that popular solutions to encourage belonging and participation by harnessing more social and operational spaces for learners, such as offered by a plethora of new web technologies, without the foresight to widen opportunities for negotiating knowledge-related identity congruence are unlikely to accomplish their goals.

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