UCL Academy: Learning Sets

When students learn to work together, to reflect upon how well they work and how to improve their work patterns, they are motivated to achieve and succeed. Improvements in their self-esteem as well as poise and confidence are quickly seen.

(Brown and Thomson, 2000, p.14)

A fundamental feature of teaching, learning and the student experience at the UCL Academy is the Learning Set. Engineering and facilitating learning which utilises the Learning Sets has taken many forms ranging from group problem solving and group based research to editorial teams and musical ensembles. These approaches, be they cooperative or collaborative in nature, have begun to yield interesting results in terms of progress and attainment. Such progress and attainment is clearly not academic alone, as Brown and Thomson suggest above, it is also in those areas we teachers recognise but can't quite put our fingers on: so called 'soft skills'.

Learning *with*, *through* and *because* of such a construct has also generated some interesting challenges. Planning for and managing learning, engaging the disparate learners within each Set and, for the students themselves, dealing with the reality of learning with the same people day after day.

This paper aims to give a flavour of some of the benefits of engineering and facilitating learning through a Learning Set and an elaboration upon three principals that shape these sets, in order to guide our thinking around how we can utilize these sets as 'Trojan Horses' for the development of effective lifelong-lifewide learning attributes within the UCL Academy.

The Learning Set and Interdependence

What the Learning Set offers is the opportunity for individual learners to develop the craft of interdependence (a communal sharing of knowledge and skills). An extensive evidence base exists which suggests that encouraging interdependence between learners promotes a shift from cognitive self-interest to mutual interest, a development in positive learning and social relationships and an increased openness to being influenced by and influencing others. The Set stimulates socialised-learning and through this interdependence and its many benefits. Interdependence however does create conflict, social and cognitive, but evidence suggests that this conflict provides learners with the opportunity to strengthen their cognitive powers and develop social skills such as social mediation. Social mediation needs to be learnt through dealing with social challenges. For some however it needs to be taught. Intervention work attending to this capacity within the UCL Academy, facilitated through our Nurture provision, has proven to have a positive result on the development of a group's ability to work more effectively as a Learning Set.

Socialised-learning, facilitated by the Learning Sets, generates an environment that can foster individual responsibility coupled with interdependence both of which are perceived to generate high levels of effective learning. Cohen (1994) identifies that,

Groupwork is an effective technique for achieving certain kinds of intellectual and social learning goals. It is a superior technique for conceptual learning, for creative problem solving, and for increasing oral language proficiency...improve[ing] intergroup relations by increasing trust and friendliness. (p.6)

These suggestions are supported by Johnson and Johnson (2008) who found that learners engaged in socialised-learning spent considerably more time on task and tended to be more involved in these activities, attaching greater importance to success, and displaying a greater willingness to learn. A potential reason for this could result from social-indebtedness, or positive peer-pressure; reciprocation stimulated by sharing and a desire to please those considered socially important.

When fully exploited the Learning Set also offers the opportunity for knowledge-construction, meaning making through dialogue and the development of the vital capacity of self-direction, all key features of a Collaborative Group Learning pedagogy.

This is merely a small sample of the social, cognitive and academic benefits of learning with, through and because of the Learning Set construct, yet it does begin to highlight that designing learning experiences to fully utilise the power of the Learning Set could reap huge rewards for learners in all aspects of their development to becoming learners lifelong-lifewide. A further aspect of interest to the Academy, in the application of this learning construct, is the emerging research relating to adolescent brain development.

Constructing the Learning Set

Principle 1: a Learning Set of 5-6

When constructing groups the size plays a large role in shaping what type of learning can occur. Large groups of seven facilitate effective dialogue. This is due to the generation of decreased risk with increased size. However large groups often prevent all from contributing, some through choice, epitomised by the principal of *social loafing*, where an individual offers little but expects much. Such groups also don't facilitate the generation of social-indebtedness and as such interdependence. Small groups of 4 or less fail to offer opportunities for consensus building and restrict the availability of differing standpoints or varying skills sets. Evidence also suggests that such groups subdivide offering little group cohesion.

When wanting to impose little structure, enable fluid leadership and generate both social-indebtedness and interdependence, a group of five or six is seen to be most beneficial. Hamm and Adams (1992) argue that such a group

> *provides opportunities for trial and error, and it provides a safe environment for asking questions, expressing opinions, and taking risks…since each student brings unique strengths and experiences to the group, respect for individual differences can be enhanced.*
>
> (p.13)

This view is supported by Bruffee (1993) who suggests that studies indicate that six is the optimum size for cooperative consensus building (an effective means of generating interdependence and an important feature of a Collaborative Group Learning pedagogy). Six also offers other learners a degree of security when completing collaborative tasks. If one learner fails to contribute, the learning of others within the group is not seriously hampered as it merely return to the optimum of 5 participants.

As such a Learning Set of 5-6, applied throughout the Academy, offers the ideal size for generating the type of beneficial learning outlined above and learning which begins to be truly collaborative in nature.

Principle 2: a sustained Learning Set

A further consideration when constructing groups is whether to change the group membership regularly or to maintain it over an extended period of time. Hawkes (1991) suggests that social coherence is time consuming to achieve and both cognitively and socially complex for those trying to attain it (teachers and learners alike). As such keeping learners in the same small group may be more efficient in terms of time and in generating social coherence than mixing them up periodically. It is also suggested that maintaining the same group composure benefits the development of and helps create a community of discourse through which the interpersonal and small group skills of the members this in turn may greatly influence the level of members achievement and productivity. Johnson and Johnson's (2008) research found,

The longer a cooperative group exists, the more caring their relationships will tend to be, the greater the social support they will provide for each other, the more committed they will be to each other's success, and the more influence members will have over each other.

(p.32)

It is in this area that the UCL Academy is markedly different from other institutions using socialised-learning techniques such as Learning Sets. Our ability to maintain the longevity of these groupings is unique, and this unique situation is already proving to have positive impact upon our learners.

Principle 3: a heterogeneous Learning Set

Social-constructivist/constructionist thought suggests that a *novice* should learn *with* and *from* an *expert*, with each benefitting from this interaction. What is being suggested is inequality in skill and not power, appreciating that every learner is a novice and expert in different contexts. The most effective social interactions are those where joint problem solving between asymmetrical learners occurs. Initial dependence on the more able other (fellow students within the Learning Set) will evolve into interdependence and eventually independence; in Vygotskyian terminology the thinking process has moved from being *other-regulated* to being *self-regulated.* This supports a view that the group should be academically, developmentally and culturally heterogeneous, as learners at different stages of development, possessing differing skills and attributes can all benefit one another, the 'more able' enhance their skill/knowledge through application and the 'less able' develop those skill/knowledge through being tutored. This organisation can result in their being as many 'tutors' as students.

Heterogeneous groups also help enhance the verbal communication skills of weaker students as they learn the language of the 'more able'. Intellectual difference is of great benefit when the main purpose of the group is to solve problems or to clarify or elaborate. Heterogeneous groups can provide opportunities for group support, encouragement and assistance and generates dissent and discussion due to conceptual conflict rather than conformity resulting from a culturally mixed group, all of which affords learners with opportunities to develop a wealth of attributes beneficial to learning. As such by constructing Learning Sets with members of varying skills attributes and capacities we are able to shift the learning relationship from being teacher-learner to learner-learner; truly learner centric.

In the summer of 2012 Academy staff sought to apply these principles in order to create the Academy's first Learning Sets. Ongoing observation and new research emerging

relating to how to construct such groups will lead to an evolution in the processes applied to the allocation of students to Learning Sets in the future.

In summary, utilizing a sustained, heterogeneous Learning Set of 5-6 in learning spaces has the potential to be a 'Trojan Horse' for the effective development of a huge wealth of capacities and attributes crucial in the development of UCL Academy's lifelong-lifewide learners. The challenge for the Academy lies in how best to fully utilise this construct.