

# ***Peer interaction in learning***



## **Theoretical background**

The term peer learning refers to many different strategies which can be used in education to help learners. It is often used in addition to the traditional way of teaching. Peer learning can take many forms i.e. collaborative project, private study groups, discussion seminars, seniors students helping junior students etc.

Peer learning has a long history. It is possibly as old as any form of collaborative or community action, and probably has always taken place, sometimes as a natural process, sometimes by a deliberate effort to teach/learn in that manner. Most societies would have some system of passing on useful knowledge on through the next generation, and this would often be a case of son to father, mother to daughter, or master to apprentice, or more commonly in the modern world, pupil to teacher. Peer learning is different in that it is not an much more experienced individual teaching the information, but the spread of this information via the learners own peers who have only recently learned this information, and the assistance being provided by said peers too. It has some distinct advantages over traditional learning.

One of the major advantages of peer learning in modern school systems is that it has been shown to be effective in allowing minority groups to integrate better, and the shared experience has increased the likelihood of continued positive interaction (Rohrbeck et al. 2003). This implies the sense of inclusion that peer learning creates is useful in not only educational but social manner. Other studies have found similar results, with a general improvement in reading ability of those students seen disadvantaged after the implementation of a PAL system. (Fuchs et al 1997). Further studies confirmed this has meant peer learning is now a widely adopted system in areas seeking to combat poor reading skills in their school population (Simmons et al., 1994)



However, peer learning is not without its difficulties and disadvantages. For example, as listed in the models section of this page, many different systems and methods of peer learning have been suggested, and found effective under different circumstances, but equally many have been found to be ineffective in others. (McMaster et al. 2006) The problem, perhaps, lies more in the inaccessibility of these strategies. That is, teachers have insufficient opportunity for training and on-site assistance to become proficient in using them, and many are not easy to implement, especially with large groups of students with a wide range of academic needs (Marston et al., 2003; Vaughn et al., 2000). Another more recent study found that in most cases, with an absence of any special learning requirements, pupils and staff preferred traditional teaching methods to peer assisted learning for educational purposes. (Sevenhuysen et al 2014) It therefore seems to be the case the children with learning disabilities benefit from collaborative learning more than those without, and the assisted nature of this style of learning may have some role in this.

Overall, studies and reviews of different types of peer learning have been shown to effective in certain conditions and with certain pupils and ineffective in others, and most

reviews argue that any use of peer assisted learning in a classroom should be based on necessity and availability of resources (McMaster et al. 2006).



## Different models of peer learning

### *Peer assisted learning PAL*

PAL is characterized by peer tutoring. A senior student is helping the younger student with developing not only knowledge and skills, but also confidence and motivation. PAL is used in all levels of educations in addition to the traditional way of teaching. This technique is beneficial not only for a junior student but for a senior helper, as well. An important aspect of PAL is that the 'tutor' and the 'student' are at the same position. The junior student is aware that the senior was in a very similar position and shared the same experience very recently. Quite often senior students show better understanding of the particular problem with learning than the lecturer and are able to help their peers

very effectively. It is not necessary for the senior student to have a very high level of expertise. It is not uncommon that the helper, while teaching, is learning themselves. Topping and Ehly (1998) distinguished few different models of PAL:

- Peer Tutoring- In this model the senior student's role is the tutor role and the aim is to deliver the knowledge or skills to the junior student.
- Peel Modelling- The senior student might not only provide the knowledge but also a learning behaviour which might be intentionally or unintentionally imitated by the learner. Modelling has been found to have a direct effect on learner self- belief, motivation, enthusiasm and cooperation. Seeing a successful student, who was in a very similar position recently, with similar tools and obstacles to overcome, can help to gain confidence.
- Peer education- Peers can help not only with the academic content but also can be a great source of knowledge in any non-academic related discipline.
- Peer Counselling- Many personal issues can be discussed with trusted peers and emotional support can be received from them. Peers can often be a great source of emotional support in the students' life-related issues.
- Peer monitoring- refers to keeping an eye on the junior students work and checking if his/hers strategies for learning are effective and appropriate.
- Peer assessment- peers formatively and qualitatively evaluate the outcomes (for example an essay) of other students

## **Jigsaw**

Jigsaw was developed by Professor Elliot Aronson and introduced in 1971 in Austin, Texas. The reason behind the development of Jigsaw lay not only in purely academic context but was rather results of racism. The recently desegregated city found itself faced with schools filled with children from very different and competitive backgrounds.

Jigsaw technique involves dividing students into groups. Each group is assigned the same topic with each member told to research a specific aspect from it. In every group, one member is assigned one specific sub-topic. For example, if three groups were assigned to research Scotland's history, one member from each group is told to research a battle, another a king, and another a war hero. After learning the material, students are re-formed into groups based on what their research topic was. They are encouraged to share what they have learned with others who studied the same

sub-topic. Afterwards, they return to their original group to share what they have learnt. Group formation is presented on picture 1.

The Jigsaw technique is mainly used in primary and secondary schools. However, recent study, which applied the Jigsaw in a university setting, found a positive change in students' confidence, and it has been suggested that the jigsaw technique can be successfully used in universities in order to increase learning and change students' attitudes about their scholarly abilities (Crone &Portillo, 2013).

**FIGURE 2**

**Jigsaw formation.**

1. Gather in home groups (three to six members grouped heterogeneously).



2. Gather in expert groups (students reorganize to work with other members to learn about their topic).



3. Return to home groups (students return to their home groups to present what they learned from their expert groups).



4. Assessments.

Students are given group and/or individual quizzes. In addition, the teacher guides students in evaluating how well their groups worked together and assists them to think of ways to improve their cooperative skills for future activities.

**Picture 1.** Group formation of students using jigsaw technique

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[Elliot Aronson's website on Jigsaw.](#)

[Collaborative learning in Park Lane primary in London.](#)

On a side note- How powerful and life changing Jigsaw can be, is illustrated in the letter from Carlos, the boy from the first class in which jigsaw was used, written to Elliot Aronson, 10 years after the class.

## A LETTER FROM CARLOS

Autumn, 1982

Dear Professor Aronson:

I am a senior at U.T. [University of Texas]. Today I got a letter admitting me to the Harvard Law School. This may not seem odd to you, but let me tell you something. I am the 6th of 7 children my parents had — and I am the only one who ever went to college, let alone graduate, or go to law school.

By now, you are probably wondering why this stranger is writing to you and bragging to you about his achievements. Actually, I'm not a stranger although we never met. You see, last year I was taking a course in social psychology and we were using a book you wrote, *The Social Animal*, and when I read about prejudice and jigsaw it all sounded very familiar — and then, I realized that I was in that very first class you ever did jigsaw in — when I was in the 5th grade. And as I read on, it dawned on me that I was the boy that you called Carlos. And then I remembered you when you first came to our classroom and how I was scared and how I hated school and how I was so stupid and didn't know anything. And you came in — it all came back to me when I read your book — you were very tall — about 6 1/2 feet — and you had a big black beard and you were funny and made us all laugh.

And, most important, when we started to do work in jigsaw groups, I began to realize that I wasn't really that stupid. And the kids I thought were cruel and hostile became my friends and the teacher acted friendly and nice to me and I actually began to love school, and I began to love to learn things and now I'm about to go to Harvard Law School.

You must get a lot of letters like this but I decided to write anyway because let me tell you something. My mother tells me that when I was born I almost died. I was born at home and the cord was wrapped around my neck and the midwife gave me mouth to mouth and saved my life. If she was still alive, I would write to her too, to tell her that I grew up smart and good and I'm going to law school. But she died a few years ago. I'm writing to you because, no less than her, you saved my life too.

Sincerely,  
Carlos

## ***Online interactions***

Peer learning can also be performed with the use of technology and internet.

One of the forms of peer learning can be through blogging.

The main advantage of discussion using blogs in comparison to the discussion during lectures is – time. It gives the time to think or to find relevant materials before joining discussion. Many students are too shy to raise their voice in front of the large number of students in the lecture hall, some might find themselves wondering if their question isn't too stupid to be asked publicly. Blogs give the opportunity to avoid these problems. Creating a blog comment involves reflections, stepping back, and analysing the information from the blog in relation to our knowledge. It often encourages the readers to looking for additional information about the topic which in consequence results in deeper knowledge. In addition, classroom discussions are mostly teacher- student oriented, while blogs create the opportunity for student- student discussion.

Yang and Chang 2012 investigated the use of educational blogs, created by students, in addition to the traditional ways of teaching at university. It has been found that positive attitudes towards blogging and engagement in discussions had significantly impacted students' academic achievements. Thus, blogging seems to be an effective way of peer interaction in learning, and it has been found to improve students' achievements.

### ***Additional reading-***

[Peer Instruction: Ten years of experience and results](#)

[Peer interaction and learning in small groups](#)

[Is Peer Interaction Necessary for Optimal Active Learning?](#)

[CASE STUDY- Collaborative Problem-Solving In First Year Physics](#)

[Catalytic assessment: understanding how MCQs and EVS can foster deep learning](#)

[Chance favours only the prepared mind: Incubation and the delayed effects of peer collaboration](#)

[A Case Study of Online Collaborative Work in a Large First Year Psychology Class](#)



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