

Peer Assisted Learning

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Introduction

Most of us love the idea of helping one another. How about using this then as a basis for formal education? This is in essence the premise of peer assisted learning. Commonly referred to as PAL or peer assisted learning schemes (PALS), the common theme is that education is delivered and received by people of similar stage in their learning. Reciprocity is the key!

So how might we set up such a scheme? And why? This chapter outlines what peer assisted learning is and the evidence for its use. The step-by-step guide for planning your own programme will demonstrate how to structure effective peer assisted learning that is powerful, sustainable and enjoyable. Whether you aim to be a peer educator, a PALS co-ordinator or simply want to know more about PAL, this chapter is for you.

The pros and cons of PAL

PAL in general has become very popular in *clinical* education but it can also be used in a variety of other settings, including the medical humanities. Many medical schools have used PAL as a way, in part, to deliver undergraduate teaching. This is particularly true of 'cross-year' PAL where one senior peer works with a small group of younger peers. The evidence suggests that this format (which is similar to 'traditional' small-group learning) works well¹.

The Pros and Cons of PAL...

Pros^{2,4,9}

- higher levels of cognitive reasoning
- improved interpersonal skills
- enhanced self-worth
- increased motivation for learning
- greater active learner engagement
- improved group discipline
- development of teaching skills
- lesser demand on institutional resources
- modest curriculum adaptations to accommodate it
- cost-effective education

Cons⁹

When compared to traditional models of teaching, PAL can

- increase need for training and resources, particularly at the start
- result in variable extents of curriculum coverage
- raise concerns about governance, appropriateness and effectiveness

PAL is praised for its ability to inspire learners to participate and contribute to the learning activity². This gives learners ownership for their own learning³, which subsequently leads to

better conversational and cognitive participation⁴. Through PAL, peer educators can develop generic skills such as communication, organisation and presentation^{5,6} as well teaching skills and deeper understanding of the subject matter^{2,6,7,8}. The precise nature of benefit from peer teaching depends on the structure of the PALS and the activity that engages the peer educator⁷.



5 questions to answer before implementing PAL

1. Does PAL align with your intended learning outcomes?

The MOST important question is to consider whether PAL is consistent with your intended learning outcomes (ILOs). Think about whether PAL help you achieve what you are trying to achieve. If it will not, then there is little point in pursuing it further.

2. Is there any evidence to support the effectiveness of PAL in your context?

It is worth thinking about the evidence to support effective PAL in your context. We have seen some of the evidence that is available for using PAL in higher and professional education. It may be that evidence is lacking for your defined scenario. It may be necessary to extrapolate *concepts* from similar research data or literature and relate them to factors or problems *specific* to your situation. There are some situations however where PAL is best avoided.

Examples of situations where PAL will probably fail

- Where there is **low motivation** for self-directed learning.
- Where there is **poor interpersonal relationships** within learning groups.
- Where there is a marked **variation in the stage of learning** between learners.
- Where there are **limited resources** available to implement it.

3. Is PAL feasible in your teaching programme?

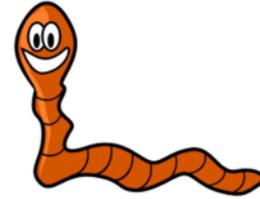
This may largely depend on the format and extent of the programme. Different educational schemes place different demands on both educators and learners. It is important to be realistic about whether PAL can be adequately committed to and practically delivered in the grander scheme of things.

4. Will PAL be socially acceptable?

How receptive will PAL be on your educational scheme? Will learners be open to it, and not feel that this is somehow inferior to 'the real deal'? Proposed peer educators will need acknowledgement that their time in such role is valuable to them, be it an academic, financial or personal return. PAL also needs to be acceptable at an institutional level and in keeping with global goals and objectives. It is important to look at the separate agendas of those involved and whether - and how - PAL might meet these.

5. Will PAL be enjoyed?

Is it something that both you and your learners would find enjoyable? Positive learning experiences register more meaningfully, whilst negative emotions may lower confidence, motivation and reflection^{10,11,12}. Current evidence suggests that PAL is enjoyed by peer learners and that it is also highly acceptable to peer educators¹³. These positive emotions can motivate peer groups towards the subject matter and towards further involvement in education. Structuring a PALS that everyone finds attractive then becomes the next challenge!



In summary:

5 questions before implementing PAL

1. Is PAL consistent with your ILOs?
2. Is there evidence for PAL in your proposed context?
3. Is the introduction of a PAL programme feasible?
4. Is it socially acceptable?
5. Is it likely to be enjoyable?

Okay, I'm ready. How do I structure a PAL session?

Planning is essential for PAL to work. Simply proposing it and then leaving it to peers to make happen is likely to result in failure. In fact, planning may be even *more* necessary in PAL than other teaching programmes, given the relative informality of the learning environment.



The ACME framework

The ACME framework (introduced in *Chapter 6: Teaching from Scratch*), is a framework for planning any teaching session. You can certainly use it to plan for PAL.

The ACME Framework for Planning any Teaching Session

1. **A** is for setting aims & Intended Learning Outcomes (ILOs)
2. **C** is for defining content
3. **M** is for exploring methodologies
4. **E** is for the ending
(The ending involves: summarising, evaluation, assessment & future learning)

In this framework, you start off by setting your aims and Intending Learning Outcomes (i.e. what you expect you learners to be able to do). All subsequent arms are all aligned to these aims and ILOs (A) so that it goes something like this...

- Define the aims and ILOs (A)
- Use (A) to define the content (C)
- Use (A) to define the methodology (M)
- Use (A) to define (E)

This means that the teaching session itself continues to be geared towards achieving the aims and ILOs, which is ultimately what is important. Let's talk about each of these in more detail, before considering other factors in in planning.

Aims

Define the aims: 'Who is to teach what to whom and **for what purpose?**'

Be clear and write them down.

- Are the aims realistic? Simple, transparent and achievable aims helps both learners and educators engage with the programme.
- Are the benefits meant to be academic, technical, social or emotional? This will help determine the context and structure the content.
- Are the benefits meant to be for the tutors, the tutees or both? As well as context and content, this will help formulate a programme's logistics and evaluations.

Content

Structure the content: 'Who is to teach **what** to whom and for what purpose?'"

A key decision that needs to be made is how much control to have over the content of the teaching. One option is for the professional teacher to give complete responsibility to the peers. This may help develop tutor initiative, confidence and avoid mechanical, rigid approaches to learning. Another is to have clearly prescribed steps and activities that peer educators should follow. This allows for greater standardisation of the programme and can benefit from the expertise of the professional teacher.

Learners can take comfort from structured learning tasks; when there is uncertainty as to the learning activity, learners loses momentum and focus¹⁴. There is evidence that structured PAL is more effective in improving academic outcome than unstructured methods¹⁵. However, the additional materials and resources associated with a highly structured programme can be costly and time-consuming. In reality, most PALS sit somewhere between the two. Just like the ACME model, the determining factors come back to what the aims of the programme are.

Methodology

Bloom¹⁶ emphasises that learning needs to be relevant and feel meaningful for the learners. Therefore, it needs to be based upon identified needs of tutees, that they too can identify. Once this is done, the educational methodology (i.e. the activity) should:

- Be systematically organised and sequentially 'built-up' towards the desired outcome
- Be interactive and full of participation
- Include clear models of behaviour, plus opportunity for practise and reinforcement.

The method (or educational activity/process) that you actually choose for PALS depends on the ILOs *and* the context. PAL can work in many contexts: different activities can be chosen depending on what you are trying to achieve, and who makes up both the learner group and the educator group. Here are three examples:

1. First-year medical student giving a small group presentation on the vascular supply of the upper arm.
2. Foundation Year 1 doctor critiquing clinical examinations of final-year students.
3. GP ST3 facilitating small group discussion on medical ethics for their GP VTS group.

In each of these scenarios, a **different** activity correlates with **different** learning outcomes in **different** contexts. Learners have different needs at different times for different things and it is important to choose appropriate learning activities. Who chooses the activity and to what extent is determined by the structure given to the programme. Let's look more at this:

Peer educators must feel comfortable with the content and methodology. PAL is after all not about expert teaching but the activity needs to be something that the peer educators themselves are fluent with. For example, it would be inappropriate to have the first-year student above teaching clinical examination skills, when this is beyond even their own level. The appropriate level is best determined through discussion and negotiation between peer groups¹⁵. This in turn will deliver accurate learning for the tutees and meaningful development in the tutors.

As part of the method, it is important that you monitor PALS. Real-time monitoring ensures that the programme is following its intended path and allows rapid response to peer tutors in need of support, or other emergent problems. It will also help evaluate the programme at the end and give feedback from direct observations.

The Ending

Evaluation: Evaluation is an essential part of any educational programme – to determine how effective it has been and highlight areas that require additional resources. Before the programme is even undertaken, it is worth thinking about *how* you plan to evaluate: the evaluation desired may actually influence what format PALS takes. Evaluation can be limited to general observations and individual perceptions. But for it to be reliable and valid, it needs to be more comprehensive. The box below gives some examples.

Methods of evaluating PAL¹⁵

These can be used alone or collectively to form a more global appraisal.

- i) Normative testing against learners in a 'traditional' teaching programme
- ii) Criterion-referenced testing of specific skills, potentially pre and post PAL
- iii) Assessing social gains - including interpersonal relationships, behaviours and communication skills.
- iv) Collating subjective opinion, potentially from both learners and educators
- v) Other - including attendance, self-directed learning and performance in other assessments
- vi) Follow-up – including on future grades, career choice and seeking further PAL experiences.



Feedback to participants: Again, it is necessary to be clear on whose role it is to collate and provide feedback to others. Otherwise it may be patchy or incomplete...plus it will invariably fall to you! Think about how data should be presented, to whom and by whom. Feedback can be given individually or collectively, but it is important to approach this with sensitivity - particularly if there is room for improvement. It is also important to ensure that peers have occasion to debrief, discuss and reflect upon that feedback, particularly as they may have invested heavily in the programme. Feedback may produce some positive and negative surprises; give enough time to digest the feedback and reflect on your own views so that you too can complete your own learning experiential learning cycle.

Four other practical considerations for PALS

- i. Matching participants
- ii. The Materials
- iii. The Logistics
- iv. Training and Support

i) Matching Participants

'Who is to teach what to whom and for what purpose?'



Identify and organise the target groups of both peer learners and peer educators. The means of recruitment, the numbers involved and the personal characteristics of the two groups all have the potential to influence the calibre and nature of PALS. The way you recruit and match participants depends on what you are trying to teach (the content) as well as the way you are trying to teach it (the methodology). However, it also depends on your particular context. For instance, you may consider PAL because:

- a) You want to teach third year medical students about acid-base balance – therefore you recruit peer educators on the basis of who wants to deliver the *content*.
- b) You want to improve participation in case-based discursive learning – therefore you recruit on the basis of who wants to lead and be involved in the *process*.
- c) You have 10 first years and 6 second years to teach concurrently because your colleague has called in sick today – therefore you use PAL and recruit peer educators in order to help out with this particular situation or *context*.

The literature is divided on whether peer educators should be self-selected or not. The benefit of staff selection of educators is the likely inclusion of students who have demonstrated capacity for advanced communication skills, leadership skills or strong academic talent. This however risks establishing an 'elite corps' of students as peer educators. These may not represent or be appropriate for the learning population. The

benefit of self-selection is that it involves peer educators who identify with this role from the outset and are motivated to embrace it¹⁷.

Whichever way you select peer educators, please bear in mind:

1. *Their ability*

How able are recruited peer educators in delivering what the learning groups need? Peer educators who are at the same stage as the other learners might be ideal for things like observing and critiquing communication skills. At other times, more advanced peers may be more desirable e.g. final year students teaching first years about clinical examination skills. There are pros and cons to both 'age-peer' and 'cross-age' peer educator methods. As example, a lack of role-modelling can happen for the former and difficulties in matching up timetables for the latter.

2. *The numbers*

Look at how many learners are involved, and how many peer educators you will therefore need. Most successful PALS are done in a one-to-one scenario or in small groups of around 6-8. Please read *Chapter 13: Teaching and Facilitating Small Groups* for more information.

3. *Peer relationships*

Look at the relationship between peer learners and peer educators. There has to be trust and respect and the role of the peer educator should be clearly established from the beginning. Any ambiguity of roles or design provide a potent excuse for failing to contribute^{3,14}, which has a knock-on effect on the efficacy of the programme.

4. *Having contingency plans*

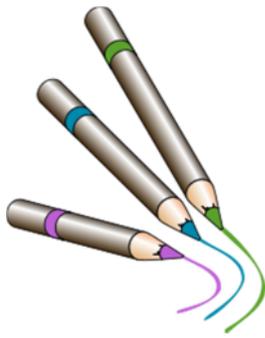
For instance, it may be necessary to have 'stand-by' tutors in case of absenteeism¹⁵. How many 'stand-by' tutors might be necessary? If this more than just you, how might you recruit them?

5. *Your role*

If you are not there as a peer educator or facilitator, what is your role? What is the relationship between the peer educators and you? Who is doing what? In PALS, it is usual for the 'professional teacher' to pass responsibility for the tactics to peer educators, whilst remaining responsible for the strategy¹⁸. The amount of structure or freedom that peer educators have for their tactics can happily vary, depending upon the sophistication of the programme and the qualities of the peer groups.

Thus there is no hard and fast rule about how involved or didactic the professional teacher needs to be in PAL. It is crucial however that roles are clearly thought through and communicated, in order to ensure close coupling between the left and right hand.

ii) Materials



One of the benefits of PAL is that more time is spent actively engaged in learning activity. But this can mean the need for more learning materials!

Depending on what the PAL activity is, learning materials can range from flip-charts, pens and hand-outs, to online learning programmes, computer-based simulation and potentially real patients.

Materials may be expensive to buy, or need necessary arrangements for access, both of which can impact on the logistics of the programme.

Who should choose them? The following table looks at the relative benefits of the different parties organising the learning material:

	Professional Teacher	Peer Educator and Peer Learner
Pros	<ul style="list-style-type: none"> Have better access to learning resources. Have a good understanding of appropriate resources. Can standardise activity. Can lead to measurable learning outcomes. 	<ul style="list-style-type: none"> May be more in tune with learners' needs. More palatable. Are more likely to promote engagement with material. Gives choice and self-direct their own learning. Gives them responsibility. Helps them understand education.
Cons	<ul style="list-style-type: none"> Can be effortful and time consuming. May not captivate learners. Remains responsible if the programme is unsuccessful! 	<ul style="list-style-type: none"> Marked variability in standards: too easy, too hard. More risky. Less familiarity with their options.

iii) The Logistics

The success of PAL also requires attention to the practical workings of the programme. Planning and enthusiasm is vital, but it is the logistics that turns a theoretically successful PAL into reality. By logistics, we mean things like timing, length of sessions, duration of programme and place.

Timing

When would PAL take place? Would it replace current timetabled commitments, occur in their spare time, or a combination of the two?

If PAL is to take place during the standard timetable, it can benefit from the more certain presence of a professional teacher and access to learning resources. But trying to co-ordinate timetables for cross-age or group PAL can be unbelievably complex.



Alternatively, scheduling PAL during learners' 'personal study time' instead may help generate self-directed learning. But this kind of programme may come under threat from lack of learner interest, commitment and monitoring.

	Timetabled	Non-timetabled
Pros	Presence of staff for support and monitoring. Access to learning resources e.g. libraries or simulation centres. Gravitas to programme's worth.	Increased spontaneity. Promotes responsibility for learning.
Cons	Presence of senior staff may limit spontaneity. Will need to demonstrate its effectiveness before others 'high above' will consider it. Rigid timetables may limit engagement. Complex timetabling.	Additional time demand on professional teacher (if present). Harder to regulate. Potential lack of senior support. Lack of learner motivation.

Length of sessions

How long should each PAL session be? This of course depends on what the aims are, who the learners are and what the learning activity is. For authentic tasks, e.g. observed history taking, it seems intuitive that the time allocated mirrors real time, plus opportunity for feedback. In other scenarios, half hour contacts seem to be the most popular described in the literature¹⁵.

Duration of the programme

How many sessions will your programme have? And with what frequency? Topping¹⁵ proposes three sessions a week for a PAL project to have substantial impact on its learners. Whilst desirable, this may not be feasible and it is important to not despair if your PAL is looking slimmer than this. Every PAL session can be made valuable by making sure that you align your ILOs to the programme.

It is useful to establish the duration of the programme from the outset – it helps professional teachers and the peers be clear about what they are committing to and planning ahead. Multiple sessions can help peers to complete a learning cycle (see Kolb's learning cycle in *Chapter 10: Five Pearls of Educational Theory*), with opportunity to put that learnt back in to practice. Recurrent sessions may also help personal relationships within the learning groups, promoting confidence and active participation in learning activity.

Topping¹⁵ recommends spanning a programme over a minimum of six weeks, in order to be able to meaningfully evaluate learners' progress. At a practical level, it may be worth dividing the programme into a short initial period, before continuing for further sessions. This would allow for reflection and feedback from all stakeholders including learners, peer-educators, colleagues and your institution. This preliminary evaluation provides an invaluable opportunity to make changes or obtain resources in order to improve the programme thereafter.

Place

Finding appropriate space – moreover when you want it – can be really tricky. PAL lends itself to a relative informality so it is useful to try and find an environment that supports this.

However, it is important that 'informal' is not confused with 'distracting'. This is particularly true because the increased learner participation often seen in PAL can in itself be very noisy and distracting.

Consider:

- Will your PAL sessions take place in one room, or several?
- If several, have you planned for the presence of more than one professional teacher?
- If one room, will noise be a problem?
- If on the ward, where might you go then to debrief?

Attention to these basic but fiddly details will really help your ILOs translate into an excellent practical programme.

As many educators know, logistics will complicate themselves quite happily anyway. The most important point to take away from this section then is to keep logistics simple at the planning stage.

Tips for Starting Off... ^{15,18,19}

1. Start small.
2. Consider basic contact during timetabled classes, with the option for peers to negotiate further sessions in their own time.
3. Consider same age-matched PAL for a primary venture

iv) Training and Support

Staff Training

With any educational programme, teachers must be prepared for their role²⁰. For this they need structured training programmes²¹. It might seem obvious, but it is important that the professional staff involved in the programme are familiar with the style of learning necessary for PAL, as well as the specifics of an individual project.



Next, before you organise PALS, think about the role of the peer educator. Try undertaking a session where you teach your peers, and a session where they teach you. How did this feel? What worked, and what did not? Having to contend with the difficulties that might be faced by your PAL participants – both the educators and the learners – will not only train you, but also provide you with very valuable insight into the subtle needs of PAL.

Participant Training

Participant training is a key element of effective PALS. The literature suggests that peer educator training in particular is valuable^{20,21,22,23}. Trained peer educators are more likely to use more effective teaching strategies than untrained^{2,7}. These include strategies to actively engage learners and encourage independent problem-solving¹⁹.

Most peer educator training programmes follow an apprentice-style format involving initial learning through direct instruction, modelling on experienced practitioners and authenticated practice¹⁹. The precise *nature* of any training programme depends upon the peer educators' needs and design of the PAL scheme.

Peer educators should be trained in the following¹⁸ ...

- i) Subject matter: familiarity with the topic, ILOs and proposed learning structure
- ii) Starting a session: introductions, ground-rules, presentation of material
- iii) How to give praise, reinforce and encourage learning
- iv) Correction procedures; what to do when the answer is wrong
- v) What to do if it is going badly: dealing with poor participation and misbehaviour
- vi) How to adapt and vary material
- vii) Ending a session: reinforcement, summarising and points to be taken forward
- viii) Monitoring and evaluation; on self and on others

More about each of these in Chapter 13 Teaching and Facilitating Small Groups

Closing points

Peer assisted learning is an effective and fun approach to medical education. By now, you have worked through the key steps in undertaking peer assisted learning. Like all good teaching, it does require careful planning. But its flexible design allows you to make a great programme tailor-made to your context and intended learning outcomes. Through helping each other in a joint learning process, peer learners *and* educators can develop their own sense of learning...and start to share some of their enthusiasm for teaching!

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