

# Peer Assisted Learning as a Formal Instructional Tool

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## ABSTRACT

**Objective:** To explore the utility of peer assisted learning (PAL) in medical schools as a formal instructional tool.

**Study Design:** Grounded theory approach.

**Place and Duration of Study:** King Edward Medical University, Lahore, from July 2011 to December 2011.

**Methodology:** A study was designed using semi-structured in-depth interviews to collect data from final year medical students (n=6), residents (n=4) and faculty members (n=3), selected on the basis of non-probability purposive sampling. The qualitative data thus generated was first translated in English and transcribed and organized into major categories by using a coding framework. Participants were interviewed two more times to further explore their perceptions and experiences related to emergent categories. An iterative process was employed using grounded theory analysis technique to eventually generate theory.

**Results:** PAL was perceived as rewarding in terms of fostering higher order thinking, effective teaching skills and in improving self efficacy among learners.

**Conclusion:** PAL can offer learning opportunity to medical students, residents and faculty members. It can improve depth of their knowledge and skills.

**Key Words:** *Peer assisted learning. Instructional tool. Learning.*

## INTRODUCTION

Anyone who has ever taught knows that the best way to learn something is to teach it to someone else. This fundamental principle underpins the concept of peer tutoring, where 'peers' are generally regarded as being individuals of the same or similar intellectual status and/or social standing.<sup>1</sup> Peer assisted learning or acquisition of knowledge and skills through active helping and supporting among status peer equals, is now being increasingly used in medical education.<sup>2</sup> Peer assisted learning is an efficient and effective way of preparing medical students for their future role as educators.<sup>3</sup> While initial studies reported that PAL was inferior to faculty assisted learning, more recent studies suggest that in some situations learning outcomes achieved may be comparable.<sup>4,5</sup>

A number of different peer teaching methods have been described.<sup>6</sup> While same-year peer teaching implies that students of a similar educational level form a learning group with the goal of coaching one another, cross-year peer teaching encompasses a certain hierarchy based on varying educational levels, meaning that a more advanced student teaches a lower level fellow student.<sup>7</sup> A typical specialty within the field of medicine in which peer teaching systems are implemented into medical education is anatomy, where both same-year and cross-

year peer teaching are effective.<sup>8,9</sup> Cross-year peer teaching is also effective in the areas of communication and nursing skills.<sup>10</sup> Informal PAL can be witnessed in medical colleges, however, evidence of formally organized PAL sessions is lacking. Hence, to explore the utility of this method of learning in our medical colleges may provide some strength in paving the way for inclusion of PAL in the curriculum.

## METHODOLOGY

A case study taking students, residents and faculty members, practicing PAL, of a single institution as a case, was designed using semi-structured in-depth interviews to collect data from final year medical students (n=6), residents (n=4) and faculty members (n=3), selected on the basis of non-probability purposive sampling at King Edward Medical University, Lahore, over a period of 6 months (July to December 2011) after taking their informed consent.

The qualitative data thus generated was first translated in English and transcribed and organized into major categories by using a coding framework. Participants were interviewed two more times to further explore their perceptions and experiences related to emergent categories from the first and second set of data regarding PAL, followed each time by merging similar patterns to saturate information in each category corresponding to researcher's interpretation of the meanings or patterns identified in the text and were peer reviewed to check for plausibility and conformability to ensure sturdiness. An iterative process employing the same steps to ensure clear, verifiable and credible results was employed using grounded theory analysis technique to draw conclusions for local context.

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The participants were inquired about their perceptions of PAL, possibilities to include PAL as a formal instructional tool in the curriculum and the best time for its introduction.

### RESULTS

A total of 13 interviews were carried out, that provided following information: PAL was rewarding in terms of fostering higher order thinking, effective teaching skills and improving self-efficacy among learners, hence better learning; however, capacity building for peer tutoring poses a credible challenge to its proper and timely implementation. This is further elaborated in two overarching opinions.

First participants perceived PAL as an effective instructional tool since they found it useful in developing better understanding of concepts, teaching skills and positive self image. Nevertheless, they considered main beneficiary of

PAL, the person who was actively involved in teaching. Second, it was proposed to let students experience PAL and realize its utility informally and to further collate local evidence followed by its introduction in a regular time table as a formal instructional tool if evidence supports it. The categories emerged from the transcribed interviews and field notes are shown in Table I.

### DISCUSSION

In 1970 Goldschmidt used PAL at McGill University for undergraduate classes when he used peer led student discussion groups and found improved quality of educational product.<sup>11</sup> Overall the participants perceived PAL as an effective instructional tool. The personal experiences shared by the participants were very favourable. They reported having used it informally in one way or another and getting satisfactory outcome. PAL was considered to be an effective mode of information transfer by the participants and it was their

**Table I:** Categories emerged from interviews.

Categories	Comments	Observations
Personal experiences regarding PAL	<ol style="list-style-type: none"> <li>1. We study together during ward tests, mostly clinical methods. First we go through the material in books, and then go to the wards where one of us performs and explains to others.</li> <li>2. When we prepare for our final viva we divide topics amongst ourselves and then everyone explains his/her topic to rest of the group.</li> <li>3. I have made many friends due to combined study sessions, where we teach each other. This experience has at least made me more sensitive to my friends' needs.</li> </ol>	All participants except one faculty member, reported to have experienced PAL in one form or another but always in an informal setting.
Value of PAL	<ol style="list-style-type: none"> <li>1. As both teacher and learner are class fellows, they have less inhibitions in challenging each other's concepts, which no one could dare do with their professors.</li> <li>2. The best way of learning is to teach others as you really have to prepare well in order to teach.</li> <li>3. How can students be their own teachers? If they are on their own they may not properly cover subject matter and can create misconceptions. A faculty member should always be there to oversee the learning process.</li> <li>4. I feel so good when my class fellows tell me that I am their role model since they find my teaching very good.</li> </ol>	Participants believed that PAL has a strong influence on students' motivation to learn and to inspire their peers. Whereas, friendly learning environment, conceptual clarity and motivation to learn for the sake of learning were considered some of its advantages. Nevertheless, proper content coverage and transfer of correct knowledge were considered important challenges.
Beneficiaries of PAL	<p>It depends on how much receptive you are. The one who teaches gains most because if you have to explain and justify some topic, you have to learn it properly first.</p>	All participants thought that PAL was an effective method of information transfer (MIT). According to them everybody is benefitted from it but the person who is actively involved in teaching is the one who gains maximum.
Appropriate time and strategy to introduce PAL	<ol style="list-style-type: none"> <li>1. It is of utmost importance in the first and second years as we have to study Anatomy. If we don't learn it well we can't do well later.</li> <li>2. It should be there right from the clinical years.</li> <li>4. It does take some time to develop rapport with class fellows so first year may not be a good time.</li> <li>5. Same year students can help each other in clinical methods etc. more efficiently.</li> <li>7. The traditional methods of learning like lectures etc. can not be replaced. The new methods can only be added to the older methods.</li> <li>8. Lectures should not be used at all.</li> <li>9. Lectures in basic sciences are useless, we don't gain anything. They should be replaced with Small Group Discussions.</li> <li>9. It should be introduced initially on a non-regular basis and when students and teachers get comfortable then it can be introduced in the curriculum. "If institution can arrange for training of students to properly teach, benefits of PAL can be maximized".</li> </ol>	All the participants felt that PAL could be used as a formal instructional tool and introduced in the curriculum but they differed about appropriate time and strategy. Some participants felt that it could be introduced right from the first year, others felt that it should be introduced later. For pre-clinical years, cross year PAL was considered more suitable and in clinical years, same year PAL was deemed more effective. However, it was realized that formal training is needed to effectively use PAL.

unanimous opinion that the person actively involved in teaching benefitted most from this activity. Research has proved that maximum retention rates after a learning activity are achieved by teaching others.<sup>12</sup> "To teach is to learn twice" is an aphorism which is quite apt in the context of PAL.<sup>13</sup>

In this study, PAL was found to have a strong motivation for students to learn and was a source of inspiration. Other advantages expressed by the participants were friendly learning environment and conceptual clarity. However, main challenges were proper content coverage and transfer of correct knowledge to avoid misconceptions. Published literature claims that PAL results in higher levels of cognitive reasoning and improved interpersonal skills.<sup>14</sup> It enhances self-worth and increases motivation for learning with better active learner engagement.<sup>15</sup> It improves group discipline and development of teaching skills.<sup>16</sup> When compared to traditional models of teaching, PAL can increase need for training and resources, particularly at the start and result in variable extent of curriculum coverage and raises concerns about governance, appropriateness and effectiveness.<sup>15,16</sup>

This study found that PAL could be situated in the curriculum as a formal mode of instruction after pilot testing but there were differing views about its place and setting in the instructional strategy. The success of any new teaching and learning initiative that relies heavily upon active student participation depends to a great extent on how that initiative is presented to the students. The common theme in PAL is that education is delivered and received by people of similar stage in their learning. Reciprocity is the key!<sup>18</sup> Participants of this study thought it was prudent to phase in PAL gradually.

There are other reasons to embrace peer tutoring/learning in medical education. Although learning from experts has been the traditional foundation of medical learning, some educationists questioned whether experts are always the best people to teach. As experts may be unconscious of the learning stages that novices and intermediate learners go through, and thus they may be less suited to teaching junior students.<sup>17</sup> It is easier for senior students to relate with their juniors experiencing initial difficulties and fears performing clinical examination on patients. Most importantly, they talk the same language as their junior counterparts, who are more comfortable asking any question, even if it appears a silly question from their peers. Likewise, peers are deemed more approachable than faculty staff by the trainees, and student trainers are often more familiar with their courses than some faculty staff and readily integrate new learning experiences into the curricular context.<sup>18</sup> It was gathered during the interviews that teaching each other gave all, who are involved in the process, not only a chance to learn but also to polish their teaching and communication skills.

According to them their peers were neither afraid to ask questions nor were hesitant to give honest feedback about their performance.

Literature indicates variety of examples as regards appropriate time for using PAL in medical education by establishing its educational impact in terms of meaningful learning on a continuum ranging from undergraduate level to postgraduate years. Evidence of its application even goes beyond formal learning years as it plays an important role in continuous professional development of practicing physician.<sup>19</sup> The participants believed that PAL retains its utility whatever the level and stage of learners, inferring that it is not only useful for undergraduates but is equally valuable for faculty members.

Published evidence illustrates that arrangement of formal training sessions for peer tutors prior to proper PAL sessions improves its effectiveness in delivery of content, its coverage and quality of instruction.<sup>2</sup> However, there was substantial unease at faculty's end in allocating definite academic hours to PAL sessions in curriculum in the local context. Some participants felt that without a faculty member overseeing the PAL session, students may resort to their own distracting ways of learning, which may not be very supportive. Published evidence suggests passing responsibility for the tactics to peer educators, whilst faculty remaining responsible for the strategy.<sup>20</sup>

## CONCLUSION

PAL can offer learning opportunity to medical students, residents and faculty members and also improve their knowledge and skills.

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