Schwerpunktreihe / Special Section „Peer Assisted Learning“

Bericht aus der Praxis/Practice Report: How to establish PAL successfully in Medical Education. Ten tips for successful courses in a Peer-Assisted Learning (PAL) -Format in undergraduate Medical Education (UGME)

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ZUSAMMENFASSUNG

Zielsetzung: Dieser Erfahrungsbericht zielt darauf ab, nützliche Vorschläge und Herausforderungsweisen zur Implementation innovativer Kursangebote im Peer-Teaching Format in der Medizinausbildung bereitzustellen.

Inhalt: Es werden zehn Tipps zur Bedarfsanalyse, Identifikation von übergeordneten- und Lernzielen für das interne Marketing, zur Auswahl geeigneter Unterrichtsformate, Ressourcenbeschaffung, Personenauswahl der Ausbilder, Qualifizierung studentischer Tutoren, zum Spaßfaktor, Etablieren eines strukturierten und longitudinalen Curriculums, zu Prüfungsmethoden und Motivation sowie zur Gewinnung von Rückmeldungen und zum gezielten Einsatz der Evaluationsergebnisse präsentiert.

Diskussion: Diese 10 Tipps werden auf die Ergebnisse der Lehr- und Lernforschung bezogen und durch konkrete Beispiele illustriert, die auf einem umfangreichen Qualifizierungsprojekt in den bildgebenden Verfahren mit studentischen Tutoren beruhen, auch wenn diese Tipps gut auf andere Unterrichtsinhalte übertragen werden können.


Introduction

Student-driven initiatives to implement innovative courses in UGME, based upon peer-assisted learning (PAL) with student-tutors often fail due to different reasons: Sometimes, there is a lack of professional coaching to qualify the tutors sufficiently, sometimes initial enthusiastic leadership and self-identification with the
goals cannot be transferred to coming generations of future tutors, or sometimes the interest and support by medical faculty or educational institutions does not provide enough protected time, space or personal resources.

**Purpose**

This article aims to provide useful and reasonable suggestions for all medical colleagues or future student tutors who plan to implement or improve existent courses in a PAL-format at their home institution. The following 10 tips are grounded both upon the evidence of educational/pedagogical literature, as well as on our 25 years-lasting experience in running diagnostic imaging PAL-courses in small groups on basic and advanced abdominal ultrasound (US), color-duplex sonography (CDS) as well as systematic reading of conventional chest-X-rays (CXR) and computed tomography (CT) image series. We hope that the readers will be able to avoid pitfalls and numerous mistakes we had to step through during the first years of our program. This program has developed step-by-step over 25 years to be now a comprehensive qualification track in diagnostic imaging on a high sophisticated level, providing slots to qualify more than 500 medical students and 300 residents per year in these competencies, which proved to be of high clinical relevance in numerous disciplines [1]. In contrast to other countries in Europe, sonographic core competencies are mandatory in Germany to be mastered by residents of various subdisciplines of internal medicine, surgery and other specialties prior to pass the boards, but the following 10 tips can easily be transferred to other teaching topics as well.

**Tip 1**

**Needs Assessment**

According to steps no.1 and 2 of David Kern’s “six step approach” [2], to identify the specific needs of your student target group – instead of focusing only on a special interest in somebody else’s (or your own) research field: Which specific competencies do they need to master common clinical challenges in their near future, like in clinical electives or their final year of UGME? Please also consider the actual background of your students at the given stage of their educational career – in contrast to the background, they actually should have, based upon prior learning experiences: How long ago have they been exposed to the relevant background – will they benefit from a brief “refresher”? Sometimes, you will be confronted with non-expected observations and findings.

For example, in our program we expected the more advanced medical students to benefit more from US- and CDS-courses, because these students should have a higher sense of urgency (facing the necessity to have to apply these diagnostic techniques frequently in the near future) and a broader knowledge of various diseases, compared to less experienced, younger medical students. To our surprise, we found a higher learning motivation and a higher level of post-course sonographic knowledge and hands-on competencies among younger students, who took the courses at an earlier stage of their career, closer to the course of gross anatomy. This finding was significant and constantly reaffirmed by the final averaged scores in validated, OSCE-based measurements [3].

**Tip 2**

**Clarify goals and objectives early in your internal marketing communication**

In order to be able to convince highly experienced clinicians to become student peer tutors, respectively – it is advisable to explicitly communicate clear and attractive competencies [2: step 3], in combination with exemplary scenarios to elaborate their interdisciplinary relevance for the individuals involved: Your clinical examples should be realistic, the shown problem or decision dilemma should be described according to the KISS-principle (“keep it short and simple”), so that you can achieve a high level of potential self-identification in the addressed target group among your colleagues and among potential peer tutors.

In our program, we communicate from the very beginning a clear description of the “cost/benefit-ratio”, e.g. how much time future tutors will have to invest in their own qualification period, which specific core competencies they will be trained in (fostered by individual video-based feedback to improve), how they will get paid, and from which common clinical scenarios they will benefit from, for example in terms of adequate clinical decision making or to speed up the time span to narrow differential diagnoses or to find the final diagnosis.

**Tip 3**

**Create an attractive, varied mix of different teaching formats**

Many medical students dislike long didactic lectures which force them into the role of passive consumers. Depending on different preferred learning styles, you can achieve a higher level of average pre-course preparation by offering a variety of learning formats [4], for example an inverted classroom approach with e-learning primers, online-accessible live-demonstration or short (!) priming lectures, so that the theoretical background can be acquired with flexible timing prior to the small group hands-on parts of your educational course.

You might also consider providing quiz cases for self-testing - or you can also incorporate other quiz cases, which appeal to your course participants’ “detective’s ambition” to solve complex problems, based upon your previous learning topics [5].

By having transferred these ideas to our program in diagnostic imaging, we have achieved a significant increase of our course participant’s engagement with our course topics: We offer free-accessible, online-based lectures with convenient skip-labels and full-screen switches [6], just like in you-tube video portal. Thus, our students can easily skip and jump to desired aspects which they would like to repeat, in order to refresh or improve their knowledge prior to the mid- or final OSCE-based examinations, without having to watch the entire lecture again. We also provide a corresponding teaching manual with numerous short video clips of only 2-4 minutes duration, which show diagnostic algorithms step-by-step with specific tricks, for example how to handle the transducer from the examiners’ point of view [7].

**Tip 4**

**Raise sufficient funds and resources**

Many medical educational institutions provide e-learning services, graphic and media personnel to support their teachers in the production of additional e-learning tools or to help with high-fidelity live-demonstrations in the lecture hall, spiced-up with sending devices for interactive quiz sessions. Try to get in touch with these people and do not hesitate to seek their advice and to accept their support.

Whenever you apply for resources coming from your dean’s tax, your fund for innovative teaching projects or external funds by the state or government, be well prepared to have a convincing argumentation ready on, why your project is key/essential/core to
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