



Contents lists available at ScienceDirect

Z. Evid. Fortbild. Qual. Gesundh. wesen (ZEFQ)

journal homepage: <http://www.elsevier.com/locate/zefq>

Schwerpunktreihe / Special Section „Peer Assisted Learning“

A large-scale peer teaching programme – acceptance and benefit



Ein groß angelegtes Peer-Teaching-Programm – Akzeptanz und Nutzen

Elisabeth Schuetz^{1,*}, Barbara Obirei¹, Daniela Salat¹, Julia Scholz², Dagmar Hann¹, Kathrin Dethleffsen¹¹ LMU Co.Med, Ludwig-Maximilians-Universität, Munich, Germany² Bayerische Landestierärztekammer, Munich, Germany

ARTICLE INFO

Article History:

Received: 5 January 2017

Received in revised form: 8 April 2017

Accepted: 9 May 2017

Available online: 7 June 2017

Keywords:

peer-assisted learning
peer teaching
medical education
student teacher
tutor training
assessment

ABSTRACT

Introduction: The involvement of students in the embodiment of university teaching through peer-assisted learning formats is commonly applied. Publications on this topic exclusively focus on strictly defined situations within the curriculum and selected target groups. This study, in contrast, presents and evaluates a large-scale structured and quality-assured peer teaching programme, which offers diverse and targeted courses throughout the preclinical part of the medical curriculum.

Methods: The large-scale peer teaching programme consists of subject specific and interdisciplinary tutorials that address all scientific, physiological and anatomic subjects of the preclinical curriculum as well as tutorials with contents exceeding the formal curriculum. In the study year 2013/14 a total of 1,420 lessons were offered as part of the programme. Paper-based evaluations were conducted over the full range of courses. Acceptance and benefit of this peer teaching programme were evaluated in a retrospective study covering the period 2012 to 2014. Usage of tutorials by students who commenced their studies in 2012/13 (n=959) was analysed from 2012 till 2014.

Based on the results of 13 first assessments in the preclinical subjects anatomy, biochemistry and physiology, the students were assigned to one of five groups. These groups were compared according to participation in the tutorials. To investigate the benefit of tutorials of the peer teaching programme, the results of biochemistry re-assessments of participants and non-participants of tutorials in the years 2012 till 2014 (n= 188, 172 and 204, respectively) were compared using Kolmogorov-Smirnov- and Chi-square tests as well as the effect size Cohen's *d*.

Results: Almost 70% of the students attended the voluntary additional programme during their preclinical studies. The students participating in the tutorials had achieved different levels of proficiency in first assessments. The acceptance of different kinds of tutorials appears to correlate with their performance in first assessments. 94% of the students participating in tutorials offered in the study year 2013/14 rated the tutorials as “excellent” or “good”. An objective benefit has been shown by a significant increase in re-assessment scores with an effect size between the medium and large magnitudes for participants of tutorials compared to non-participants in the years 2012, 2013 and 2014. In addition, significantly higher pass rates of re-assessments could be observed.

Conclusion: Acceptance, utilisation and benefit of the assessed peer teaching programme are high. Beyond the support of students, a contribution to the individualisation of studies and teaching is made. Further studies are necessary to investigate possible influences of large-scale peer teaching programmes, for example on the reduction of study length and drop-off rates, as well as additional effects on academic achievements.

* Corresponding author: Elisabeth Schuetz, LMU Co.Med, Ludwig-Maximilians-Universität, Pettenkofer Str. 12; 80336 Munich, Munich, Germany.
E-mail: elisabeth.schuetz@med.uni-muenchen.de (E. Schuetz).

ARTIKEL INFO

Artikel-Historie:

Eingegangen: 5. Januar 2017
 Revision eingegangen: 8. April 2017
 Akzeptiert: 9. Mai 2017
 Online gestellt: 7. Juni 2017

Schlüsselwörter:

Peer-assisted Learning
 Peer Teaching
 medizinische Ausbildung
 studentische Lehrende
 Tutorenschulung
 Prüfung

ZUSAMMENFASSUNG

Einleitung: Die Einbindung von Studierenden in die Gestaltung universitärer Lehre in Form des Peer-assisted Learning ist weit verbreitet. Publikationen hierzu fokussieren auf eng umgrenzte Situationen innerhalb des Curriculums und ausgewählte Zielgruppen. Im Gegensatz dazu wird hier ein groß angelegtes strukturiertes und qualitätsgesichertes Peer-Teaching-Programm vorgestellt und evaluiert, das im gesamten vorklinischen Abschnitt des medizinischen Curriculums vielfältige und adressatenspezifische Veranstaltungen anbietet.

Methoden: Das groß angelegte Peer-Teaching-Programm umfasst fächerspezifische und fächerübergreifende Tutorien für alle naturwissenschaftlichen, physiologischen und anatomischen Fächer des vorklinischen Studienabschnitts ebenso wie Tutorien, deren Inhalte über das formale Curriculum hinausgehen. Im Studienjahr 2013/14 wurden insgesamt 1420 Unterrichtsstunden angeboten, die papierbasiert evaluiert wurden. Die Akzeptanz und der Nutzen dieses Programms wurden über den Zeitraum von 2012 bis 2014 in einer retrospektiven Studie untersucht. Dafür wurden Studierende, die das Studium der Medizin im Wintersemester 2012/13 begonnen haben (n = 959), entsprechend ihrer Resultate in 13 Erstprüfungen der Fächer Anatomie, Physiologie und Biochemie einer von fünf Gruppen zugeordnet. Die verschiedenen Gruppen wurden einander hinsichtlich ihrer Teilnahme am Peer-Teaching-Programm gegenübergestellt. Zur Erhebung des Nutzens von Tutorien wurden die Ergebnisse der Biochemie-Wiederholungsklausuren von Teilnehmern und Nichtteilnehmern der Biochemie-Tutorien in den Jahren 2012 bis 2014 (n = 188, 172 bzw. 204) mittels Kolmogorov-Smirnov- und Chi-Quadrat-Test sowie der Effektstärke Cohen's d verglichen.

Ergebnisse: Fast 70 % der 959 Studierenden nutzten das freiwillige Zusatzprogramm im vorklinischen Studienabschnitt. Studierende unterschiedlicher Leistungsstärke in Bezug auf das Abschneiden in den untersuchten Erstprüfungen nahmen an den Angeboten teil. Hierbei scheint ein Zusammenhang zwischen der Nutzung verschiedener Arten von Tutorien und dem Erfolg in Erstprüfungen zu bestehen. 94% der Tutorienteilnehmer („tutees“), die an den Angeboten im Studienjahr 2013/14 teilnahmen, bewerteten die Tutorien mit „sehr gut“ oder „gut“. Ein Nutzen zeigte sich für Teilnehmer an Tutorien gegenüber Nichtteilnehmern in den drei untersuchten Jahren 2012, 2013 und 2014 in signifikant größeren Punktezugewinnen, deren Effektgrößen im mittleren bis hohen Bereich liegen, sowie in signifikant höheren Bestehensquoten in Wiederholungsklausuren der Biochemie.

Schlussfolgerung: Die Akzeptanz, die Nutzung und der Nutzen des untersuchten Peer-Teaching-Programms sind groß. Neben der Unterstützung der Studierenden leistet das Programm einen Beitrag zur Individualisierung der akademischen Ausbildung. Für die Einschätzung eines möglichen Einflusses von groß angelegten Peer-Teaching-Programmen, beispielsweise auf die Verkürzung der Studiendauer, Abbruchraten und zusätzliche Effekte auf die Studienleistungen, sind weitere Studien erforderlich.

Introduction

The concept of peer-assisted learning (PAL) probably exists ever since public schools were founded, although the “Freie Universität Berlin” introduced PAL as one of the first universities in the 1950s in academic education [1]. Toppings definition of PAL as “people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching” is broadly accepted [2]. Nowadays PAL is also used as a generic term for the involvement of students in teaching and study programmes [3] and here encompasses formats such as peer teaching, peer education, peer assessment, peer mentoring and peer leadership [4]. Peer teaching thereby defines a teaching format in which “one student teaches one or more fellow students” [5].

Since learning is understood as a cognitive process within a social surrounding [6], aspects of cognitive and social congruence between student teachers and tutees are discussed as factors of success for peer teaching [7–9]. Student teachers seem to estimate problems in the processing of new information better than university teachers [8]. Furthermore, they appear to present learning content at a cognitive level that is appropriate for a student participant [10,11]. Hierarchical differences between student teachers and tutees are also less pronounced. Thus, an informal learning atmosphere can be created in which questions may be asked that wouldn't normally be addressed in more formal teaching formats [12].

Nevertheless, the reasons for implementation of peer teaching are normally not based on the advantages described above, but rather depend on the limited number of available university lecturers [13–15], aim to support the formal curriculum [16,17], to fill gaps in the curriculum [18] or depend on the legal restrictions

for the assignment of teachers, which are based on the German capacity law in the preclinical part of the medical curriculum.

Besides of the therewith linked exoneration of the faculty, student-led courses help with the support or the expansion of the curriculum [19]. They enable the improvement of university education even with a great number of students, for example by tutorials in small groups [14,20], additional teaching of practical skills [21], through deepening or repeating classes [22] and with the aid of courses that exceed the contents of the curriculum [19]. Positive effects and the quality of peer teaching have been proven by versatile studies. These range from subjective evaluations of the tutees [21] to the analysis of assessment results [23] and to the comparison between faculty-based courses and peer teaching [24,25].

In publications on structured peer teaching, activities were described and examined that were developed for a precise situation within the curriculum. These include for instance tutorials that were established for a single subject [14], courses for the acquisition of practical skills [13] and activities preparing for a specific assessment [26]. Recently, a peer teaching-activity has been described that focuses on five subjects of the preclinical part of medical education (physiology, biochemistry, anatomy, data interpretation and pharmacology) with 20 tutorials aimed at addressing the “gaps” of the preclinical education [18].

In contrast, we present a large-scale peer teaching programme implemented by the LMU Co.Med (“Curriculumsoptimierung Medizin”) that not only ranges across almost all subjects of the preclinical part of the medical education but also includes courses addressing topic areas not present in the preclinical curriculum. Categories of tutorials and numbers of lessons will be described. The usage behaviour of a student cohort will be examined longitudinally over two years and the evaluation results of the full range of tutorials

Download English Version:

<https://daneshyari.com/en/article/5123496>

Download Persian Version:

<https://daneshyari.com/article/5123496>

[Daneshyari.com](https://daneshyari.com)