

# Education Bulletin



May 2022

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We can undertake further evidence searches on your behalf if you would like additional information on any of the topics in the bulletin. Please contact [holly.cook3@nhs.net](mailto:holly.cook3@nhs.net) for more details.

Compiled by John Gale, JET Library (Mid Cheshire NHS Foundation Trust)

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## Dental Education

### When dental learning went online

**Source:** BMC Medical Education

**In a nutshell:** Sometimes it seems that there are more people researching the impact of online learning during the Pandemic than there were doing courses on Zoom. Latest out of the traps is a team of researchers led by Katrin Hertrampf, from the University Hospital of Schleswig-Holstein. They interviewed 39 dental students and 19 lecturers about their reactions to the move to online teaching. “Feelings ranged from an essentially positive attitude, through insecurity and uncertainty to a failure to fully appreciate the situation. The loss of social contact was lamented. Digitalisation was associated with technological challenges and additional work. However, it also fostered learning independent of time and place, and encouraged autonomy. Negative aspects of digitalisation included a lack of feedback and loss of interaction.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03335-5>

## General Healthcare Education

### Weighing, measuring, guessing – do people know how to measure improvement?

**Source:** BMC Medical Education

**In a nutshell:** Measuring improvement is something which depends heavily on context. In this study a team of researchers, led by Zuneera Khurshid, from University College Dublin, interviewed 15 quality-improvement trainees and six quality-improvement trainers about measurement in quality-improvement. Six themes emerged from the interviews with trainees which were:

- Impact of differences in job role and hierarchical levels
- Narrow conception of QI
- Knowledge disparity between trained and untrained staff
- Balancing the benefits and burdens of measurement
- Early adopters of QI driving change
- Supportive and engaged leadership

Themes emerging from the interviews with trainers were:

- Knowledge and understanding of measurement
- Application of PDSA [Plan, Do, Study, Act] approach to programme design
- Balancing consistency with adaptation to context

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03282-1#Sec26>

## Mobiles and inhalers – you really can mix them

**Source:** BMC Medical Education

**In a nutshell:** Reading [Mary Coombs'](#) obituary recently I was amazed to discover that one of the early computers – more or less the size of a bungalow, in Lyons' basement – had a grand total of 2K's worth of memory. Mobile phones have rather more at their disposal and are used for all sorts of things. In this study Ser Hon Puah, from Tan Tock Seng Hospital in Singapore, led a team of researchers investigating whether mobiles could be used to teach healthcare professionals the correct technique for using (and teaching other people to use) asthma inhalers. The researchers found that the 45 participants reported their mean self-rated knowledge was significantly higher using the app, compared to 45 other students who used the manufacturers' instruction guide. The app was well-received and scored an average of 4.42 out of 5 for quality.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03302-0>

## Getting more perspiration out of online learners

**Source:** Computers & Education

**In a nutshell:** In this study Qiuji Li, from the University of California in Irvine, led a team of researchers investigating the effects of giving students access to their own analytics – and those of their peers – from online learning systems. Would knowing how hard they were trying - and how they were trying compared to their contemporaries – change students' behaviour? The researchers found that giving students access to the analytics increased their propensity to attribute success to effort rather than ability, and increased the effort they were prepared to put in themselves. However, “there was no significant impact on their performance.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.compedu.2022.104517>

## Are robots any good at conversation?

**Source:** British Journal of Educational Technology

**In a nutshell:** People aren't always that good at conversation. Robots can now be programmed to talk to people, many, one imagines, rather more entertainingly than the “real,” thing. In this study Ha Nguyen, from the University of California in Irvine, studied the effects of two differently-programmed chatbots on schoolchildren's group work. Ha Nguyen found that the robot programmed to be less knowledgeable “prompted groups to show questioning and building on others' ideas, similar to how students may act as peer tutors to the agent.” Sequences with the “expert,” robot were more like the exchanges between students and teachers, with the groups responding to the robot's “nudges,” and then providing their own reasoning thereafter.

You can read the abstract of this article at

<https://doi.org/10.1111/bjet.13219>

## What makes for good DGBL?

Source: Computers & Education

In a nutshell: A team of researchers, led by Juliana Tay, from the National University of Singapore, examined the literature on Digital Game-Based Learning (DGBL). The researchers found 30 articles which met their quality criteria with three themes arising from them:

- Characteristics of learning-driven digital games, focusing on pedagogy
- Game design elements use to motivate and sustain players' engagement in learning
- Research findings which could influence the implementation of DGBL

The researchers recommended a purposeful selection of game design elements, sustainable feedback, and a supportive learning process.

You can read the abstract of this article at

<https://doi.org/10.1016/j.compedu.2022.104518>

## Medical Education

### Dead Poets Society or flogging a dead horse?

Source: BMC Medical Education

**In a nutshell:** Depending on one's experiences and degree of enthusiasm seminars can either conjure up images of inspiration or desperation. In this study a team of researchers, led by Wei-wei Chang, from Wannan Medical College, investigated the use of seminar-case learning for teaching statistics to preventive-medicine undergraduates. The researchers found that seminar-case learning improved certain aspects of the students' educational outcomes, increased satisfaction, and led to greater "self-report benefit."

You can read the whole of this article at

<https://bmcmmeduc.biomedcentral.com/articles/10.1186/s12909-022-03297-8>

### What would a good doctor do?

Source: BMC Medical Education

**In a nutshell:** In situational-judgement tests medical students, and potential medical students, are asked "what would you do?" for a range of hypothetical situations, my preferred option of whistling a happy tune and waiting for someone else to come along being, one presumes, one of the lower-scoring options. In this study Diantha Soemantri, from Universitas Indonesia in Jakarta, led a team of researchers investigating whether the situational-judgement test was valid in an Indonesian context. 954 students took part in the study which found that women consistently outperformed men, although there were no significant differences in terms of class or ethnicity. The researchers concluded that their results "replicate previous studies of the potential diversity benefits of using an SJT {Situational-

Judgement Test] as a tool for medical-student selection and [that SJT] has the potential to level the playing field regarding socio-economic status and ethnicity.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03247-4>

## A buddy scheme on the cancer ward

**Source:** BMC Medical Education

**In a nutshell:** In this study Candace Nayman, from the University of Ottawa, led a team of researchers interviewing 15 medical students who took part in a buddy scheme with patients on a paediatric cancer ward. The students were matched with their buddies based on their personality traits, interests, and primary language. Four themes emerged from the interviews which were:

- Providing support to buddies and their families is important
- Providing care to children with serious illness is emotionally difficult
- Developing deep connections with buddies and their families is rewarding
- Gaining empathy and personal fulfilment from buddies and their families is inevitable

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03306-w>

## Do labels change diagnoses?

**Source:** BMC Medical Education

**In a nutshell:** Paddington Bear arrived from deepest, darkest Peru with a label around his neck saying “Please look after this bear.” In much the same way patients often arrive at hospital with a diagnostic label from their GP suggesting what might be wrong with them. But do these labels affect how junior doctors diagnose them when they get there? In this study a team of researchers, led by J. Staal from Erasmus University Medical Centre in Rotterdam, studied 44 junior doctors as they diagnosed imaginary patients based on GP’s referral letters. Some of the letters contained a suggested diagnosis from the GP, whereas others merely listed symptoms. The researchers found that “a diagnostic suggestion in a GP’s referral letter did not influence subsequent diagnostic accuracy, confidence, or time to diagnose for medical interns. However, a correct or incorrect suggestion reduced the number of diagnoses considered.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03325-7>

## [Bedside teaching and team-based learning](#)

**Source:** [BMC Medical Education](#)

**In a nutshell:** Team-based learning has been used in classrooms for quite a while now but rather less so at the bedside; perhaps patients aren't too keen for a gaggle of junior doctors to set up shop at the foot or their bed with some marker pens and flipcharts. In this study Jie Gong, from Huazhong University of Science and Technology in Wuhan, led a team of researchers investigating the use of team-based learning in paediatric bedside teaching for medical students. 30 medical students took part in the study which found that students taking part in the team-based learning did better in computer-based case simulations, better in a mini-clinical evaluation exercise, had better medical-interviewing skills and had better overall clinical competence. The students who took part in the bedside team-based learning believed it could "promote active learning ability, improve counselling skills and strengthen teamwork."

[You can read the whole of this article at](#)

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03328-4>

## [Team-based learning – the more you do the better you get](#)

**Source:** [BMC Medical Education](#)

**In a nutshell:** In this study Gonzalo A. Carrasco, from Rowan University in New Jersey, led a team of researchers studying whether the same would hold true for team-based learning. They studied 226 students who had studied infectious diseases via team-based learning in their first year and who then studied women's health using the same methods in their second year. The researchers found that prior experience of team-based learning improved subsequent scores, especially in struggling students and that "prior team-based learning experience is also associated with consistent individual readiness assurance test performance between first- and second-year courses in high-performing students."

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03363-1>

## [Teaching the teachers to teach](#)

**Source:** [BMC Medical Education](#)

**In a nutshell:** As generations of university students will testify knowing a lot about something doesn't always mean you're any good at teaching it. In this study Xiaoliang Sun, from Tongji University School of Medicine in Shanghai, led a team of researchers aiming to improve the quality of clinical teachers' small lectures to junior doctors. The researchers used the ADDIE (analysis, design, development, implementation, and evaluation) model of training design to come up with a clinical teacher presentation training course, developed to "convey and train the five key behaviours in presentation." 99 clinical teachers took part in the research which found that the training increased the lecturers' "five key behaviours," increased their self-efficacy; and improved their overall performance. The lecturers' "training satisfaction," with the course was 100%.

[You can read the whole of this article at](#)

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03311-z>

## [Untangling the wiring that makes for happiness](#)

**Source:** BMC Medical Education

**In a nutshell:** In this study a team of researchers, led by Xuemin Zhang, from Inner Mongolia Normal University studied the links between medical students' confidence in their ability to regulate their emotions, ability to adapt to others' behaviour, and their self-acceptance; and their levels of depression, anxiety, and stress. The researchers found that confidence in managing one's emotions, interpersonal adaptability, and self-acceptance were all linked to one another and were also linked to reduced psychological distress. They concluded "interpersonal adaptation and self-acceptance have a significant mediating effect between regulatory emotional self-efficacy and psychological distress, and the chain mediating effect of interpersonal adaptation and self-acceptance is also significant."

[You can read the whole of this article at](#)

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03338-2>

## [How's your stitching? Don't worry I learned it online](#)

**Source:** BMC Medical Education

**In a nutshell:** In this study Ahmad Zaghal, from the American University of Beirut Medical Centre, led a team of researchers assessing the effectiveness of on-line learning at teaching students suturing. 118 students took part in the study. They were divided into two groups. One group learnt suturing face-to-face and the other group learnt it via distance learning. The researchers found no significant difference in performance between the two groups, although 44.6% of the respondents in the distance-learning group provided negative comments related to the difficulties of remotely learning visual concepts and 28.5% said they preferred the face-to-face approach. Rumours that the NHS hospital building programme would be sub-contracted to a group of 14-year-olds who'd made a replica of Caernarvon Castle on Minecraft were greeted with "no comment," by the Government.

[You can read the whole of this article at](#)

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03353-3>

## [Nurse Education](#)

### [Should we be alarmed about alarms?](#)

**Source:** Journal of Nursing Management

**In a nutshell:** In this study Fidel López-Espuela, from the University of Extremadura in Spain, led a team of researchers interviewing 17 nurses about "alarm fatigue." Three themes emerged from the interviews which were:

- General perceptions about alarms
  - Strategies to reduce false alarms
  - Training in the configuration of monitors
  - Customization of the alarms to fit the patient's condition
- Teamwork
  - Taking advantage of the development of technology
  - Key elements in the response to alarms
  - Information about a patient's condition
- Nurses' clinical experience
  - Type of critical-care unit
  - "Cry-wolf," phenomenon
  - Nurse:patient ratio

The researchers concluded "to reduce false alarms, nurses need further postgraduate training, training on monitors and customizing alarms to fit the patient's health status. The complex process of deciding to respond to an alarm includes environmental and professional variables and patient status."

[You can read the abstract of this article at](#)

<https://doi.org/10.1111/jonm.13614>

### [When the chatbot visited the A&E simulation](#)

**Source:** Journal of Nursing Management

**In a nutshell:** In this study Miguel Rodriguez-Arrastia, from Jaume I University in Spain, led a team of researchers investigating the use of chatbots by final-year nursing students in a simulated emergency situation. 114 students took part in the study from which two main themes emerged:

- Experiences in the use of a chatbot service for clinical decision-making
- Integrating conversational agents into the organizational safety culture

The researchers concluded that their study provided "preliminary support for the acceptability and feasibility of adopting SafeBot, a chatbot for clinical decision-making and patient safety."

[You can read the abstract of this article at](#)

<https://doi.org/10.1111/jonm.13630>

### [A degree from your bedroom gets closer and closer](#)

**Source:** Nurse Education Today

**In a nutshell:** In this study Rebecca Donkin, from the University of the Sunshine Coast in Australia, compared the effectiveness of an e-learning module to face-to-face learning at teaching pathophysiology to 217 second-year nursing students. 85 of the students took a haematology e-learning module designed to be "self-directed and

learner-centred, guided by constructivist learning theories,” whilst the other students did paper-based learning, facilitated by a tutor. The researchers found no significant difference in assessment scores between the two groups and concluded that “e-learning was comparable to face-to-face teaching in this study.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2022.105377>

## Pharmacy Education

### How give as you learn can motivate pharmacy students

**Source:** BMC Medical Education

**In a nutshell:** Those philanthropically-inclined can join a scheme in which every search they carry out on the internet generates a small amount of money for good causes. In this study a team of researchers, led by Rand Hussein, from the University of Waterloo in Ontario, applied similar logic to an online-learning package for pharmacy students. They divided 30 students up into two groups. For the first group of students a meal was donated to needy people every time they passed one of the online tests; the other students formed the control group. The participants liked the scheme and the group who generated meals by passing tests took significantly more of them.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03310-0>

### Die of cold

**Source:** BMC Medical Education

**In a nutshell:** In this study Ghada Bawazeer, from King Saud University in Saudi Arabia, studied the effectiveness of using crosswords to teach pharmacy students about anticoagulants (“Fighting with lack of energy for nameless hostelry thins the blood (8)†” etc). 267 students took part in the study. Most liked the puzzles, with women significantly more likely to like it than men. The most-preferred learning style was converger (35.6%), followed by assimilator (25.3%) but there was no link between students’ learning styles and their feelings towards the crossword puzzles.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03348-0>

†Warfarin

### Teaching pharmacists to tackle smoking

**Source:** BMC Medical Education

**In a nutshell:** In this study Maguy Saffouh El Hajj, from Qatar University studied the effectiveness of an intensive education programme on the treatment of “tobacco-use disorder,” on pharmacists’ “tobacco cessation skills and competencies.” 86 pharmacists took part in the study; 54 took the course and the rest formed a control group. When the pharmacists took an objective structured clinical examination (OSCE) on this topic the intensive tobacco education group achieved significantly higher total scores than the control group. The researchers concluded “an intensive tobacco cessation education programme can improve pharmacists’ tobacco-cessation skills and increase their tobacco-cessation counselling abilities.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03331-9>