



Education Bulletin – January 2023

Compiled by John Gale JET Library – Mid-Cheshire NHS Foundation Trust

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General Healthcare Education

Flipped classrooms, team-based learning, and online education

Source: BMC Medical Education

In a nutshell: For the academic educationalist combining flipped classrooms, team-based learning, and online education must feel like being the first person to put vanilla, chocolate, and strawberry ice cream together to make Neapolitan, or Jürgen Klopp selecting a frontline of Sadio Mane, Mo Salah, and Roberto Firmino. In this study Yonghui Feng, from The First Hospital of China Medical University, led a team of researchers studying this particular pedagogical holy trinity. 62 third-year students of laboratory medicine took part in the study which found that a flipped-classroom/team-based learning group scored significantly higher on tests than a group taught with a traditional lecture-based approach. The flipped-classroom/team-based learning approach also helped to increase learning motivation, promote self-directed learning skills, extend more related knowledge, enhance problem-solving abilities, enhance clinical-reasoning abilities, and enhance communication skills. 48.38% of the students had a positive attitude to the newer system of teaching, 25.81% thought it "still needs continuous improvement," and 25.81% thought it was perfect and had "no further suggestions," for its improvement.

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03917-3

Can you belong from your bedroom?

Source: Sustainability

In a nutshell: In this study Gustavo Morán-Soto, from Instituto Tecnológico de Durango, in Mexico, led a team of researchers investigating STEM students' sense of belonging as they learnt online during the Pandemic. The researchers' findings stressed the poor sense of belonging students had after taking online classes "when they missed opportunities to develop meaningful relationships with their peers and professors due to the lack of good communication. Consequently, students had uncertainties about successful learning during the Pandemic." The researchers recommended "accessible office hours, study groups, and meetings with mentors and tutors."

You can read the whole of this article at https://www.mdpi.com/2071-1050/14/24/16627

Can you belong from your bedroom? Part 2

Source: Sustainability

In a nutshell: At a safe distance in time – and the whole thing having being more or less successful – it's easy to forget how terrifying the first few weeks at university can seem, with any time whatsoever spent on one's own being felt as the social equivalent of being the last pick for the football team. In this study a team of researchers, led by Jorge Maluenda-Albornoz, from San Sebastian University in

Chile, studied 700 first-year students. They found that there was a significant predictive relationship between social integration and engagement. More social integration created a greater sense of belonging, which in turn led to more engagement.

You can read the whole of this article at https://www.mdpi.com/2071-1050/15/1/597

Interprofessional Education

Are you a squire or a knight?

Source: BMC Medical Education

In a nutshell: My son and I (52 and seven, respectively) recently found ourselves – relegated to the role of squires – trailing after Lady Grace (six) as she led an expedition around our local patch of woodland. Demonstration, if any were needed, of our respective capacities, and appetite, for leadership. Modern management theories mean, however, we all have to become leaders whether we like it or not, and in this study Christie van Diggele, from the University of Sydney, led a team of researchers investigating attitudes to leadership among 1,674 students, from 11 disciplines, participating in the Health Collaboration Challenge. The researchers analysed 1,282 comments from the students. The most frequent ones referred to "delegating," (456) and "supporting," (402). This was followed by directing (244) and coaching (180). 43% of the comments were "unconstructive," and 298 "informed their peers of areas for self-improvement*; the most-frequent of these comments "were recommendations relating to "active team-member contribution," (111); communication (83), interprofessional practice (77), and disciplinary knowledge (27).

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03923-5

*In rather the same way Sir Alex Ferguson used to remind his players of "areas of self-improvement," when they were trailing two-nil at half-time one imagines.

Medical Education

When the medical students went to a game jam

Source: BMC Medical Education

In a nutshell: A game jam is the coming together to collaborate and create games and in this study Juan Pimentel, from McGill University in Montreal, led a team of researchers studying an eight-hour game jam involving medical students. 268 Colombian medical students, divided into 48 groups took part in the jam to create "a prototype of an educational game on cultural safety." The researchers concluded that

"medical students situated cultural safety within a continuum with culturally unsafe actions at one end and cultural safety at the other end. Although not familiar with game design, the students designed prototypes of basic educational games including game dynamics, game scenarios, learning objectives, and pedagogical strategies."

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03875-w

The ABC of X, CT and MRI

Source: BMC Medical Education

In a nutshell: In this study Emre Altinmakas, from Koç University School of Medicine in Turkey, studied the effectiveness of an online education programme for medical students designed to teach them the ABC of X-rays, CT scans and MRIs. Radiology professors developed a total of nine online sessions on imaging methods and each session was given – via Zoom – by radiologists from different U.S. universities. 506 medical students took part in the study which found that the courses led to a statistically-significant improvement in performance. 71% said that the course would be useful in their clinical practice and 69.7% said it had increased their understanding of radiology. The students' levels of confidence increased by 68% and 90% of them agreed that introductory principles and concepts should be presented in earlier years of medical education.

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03885-8

From cuffs to apps. Does it really matter anymore?

Source: BMC Medical Education

In a nutshell: Maths might have been an easier proposition for me to swallow in the mid-80s had we been allowed to take our new-fangled calculators into the exam with us, instead of relying on a dog-eared set of log tables and – for the more unscrupulous – some formulae written on one's cuffs. Attitudes to computerized aids have changed somewhat since the 1980s and in this study Shatha Al-Sharbatti, from Gulf Medical University, led a team of researchers investigating "the effect of access to electronic resources during examination on medical and dental students' scores in summative assessment." 390 students took part in the study which found that having access to electronic resources led to a significant improvement in their exam marks. However, access to the technology only improved the students' performance on questions that tested their memory; on the questions which required a bit more thought having access to electronic resources proved – reassuringly perhaps – no substitute for brain power.

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03904-8

The eOSCE. A bold step forward or one fewer reason to leave your bedroom?

Source: BMC Medical Education

In a nutshell: If patients are being seen remotely it stands to reason – or what passes for it nowadays – that medical students' clinical skills could be examined remotely too. In this study Donia Bouzid, from the Sorbonne, studied the effectiveness of online OSCEs, concluding that "remote evaluation is as reliable as live evaluation for eOSCEs."

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03919-1

Students in the Pandemic.

Source: BMC Medical Education

In a nutshell: Latest off the starting blocks were a team led by Reza Ghanei Gheshlagh, from Kurdistan University of Medical Sciences, who interviewed 31 students about their experiences of online learning during the Pandemic. Four distinct patterns of challenges emerged from interviews with the students which were:

- Inadequacy for practical learning
- Inadequacy of internet and website services
- Barriers relating to educational content, and interaction between teacher and student
- Lack of motivation

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03980-w

Can you learn brain surgery at a boot camp?

Source: BMC Medical Education

In a nutshell: A boot camp can now refer to any short period of intense tuition on a particular topic. In this study Saqib Kamran Bakhshi, from Aga Khan University in Pakistan, led a team of researchers studying the effectiveness of a simulation-based neurosurgery boot camp* for 22 people who practised 12 hands-on skills over the course of two days. Burr-holes and craniotomies were done on 3-D printed skulls. Lumbar-drain insertion was practised on a purpose-built mannequin and an inhouse simulation was used to teach laminectomy. The camp led to a significant improvement in the participants' skills and positive feedback ranged from 3.9-4.8 on a five-point scale. The overall cost per participant was £117 per person.

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03965-9

*Presumably sudden shocks caused by sergeant-major types yelling at you are not "just what the doctor called for," in this context.

Nurse Education

Let's have a hat room on Ward Four!

Source: Nurse Education Today

In a nutshell: *Grand Designs* is the go-to television programme in our house when we haven't got the wherewithal to cope with a documentary on the Mughal emperors, or the plot twists of *Line of Duty*. Our six-year-old daughter recently caught the bug and built a LegoTM house, complete with rooms for hats and binoculars, and its own pet department. This might lead you to question the value of youthful innovation but a team of researchers, led by Dandan Xiang, from Zhengzhou University in China, was more optimistic and in this study they examined the effects of clinical-practice environments on innovative behaviour in nursing students. 499 nursing students took part in the study which found that a positive clinical-practice environment was associated with more innovative behaviour, a relationship partially facilitated by "creative self-efficacy and motive to avoid failure."

You can read the abstract of this article at https://doi.org/10.1016/j.nedt.2022.105656

Can a game deliver the goods for midwives?

Source: Nurse Education in Practice

In a nutshell: In this study Valentina Actis Danna, from Liverpool School of Tropical Medicine, led a team of researchers investigating the effect of playing the *Dignity* board game on 122 nurse-midwives and 115 nursing students. The researchers found that playing the game led to "increased knowledge of respectful care principles ... qualitative findings indicate the game functioned as a refresher course and helped nurse-midwives to translate principles of respectful care into practice. It was also useful for self-reflection."

You can read the abstract of this article at https://doi.org/10.1016/j.nepr.2022.103519

Now my 18 months' hard labour ... seems fair enough

Source: Nurse Education in Practice

In a nutshell: Emotional labour occurs when somebody turns up at ten to five on a Friday afternoon expecting to embark on some complex bureaucratic procedure and one refrains from throwing a hole punch at them. It's a good skill to have in the workplace, particularly nursing, when sick people are prone to arrive at all sorts of inconvenient times. In this study Seda Değirmenci Öz, from Istanbul Aydin University, led a team of researchers who interviewed 20 nursing students about

emotional labour. Three themes emerged from the researchers' interviews with the nursing students which were:

- Surface acting
- Deep acting
- Genuine acting

The researchers concluded "emotional labour behaviour affects students' approach to patients and performance in clinical practice. Education has a supportive effect on the management of emotions and the guidance of the clinical environment and clinical services."

You can read the abstract of this article at https://doi.org/10.1016/j.nepr.2022.103503

Going hi-tech in the ICU

Source: BMC Medical Education

In a nutshell: In this study Sorayya Rezayi, from Tehran University of Medical Sciences, led a team of researchers reviewing the evidence on "using technology-based educational tools for training critical-care nurses and nursing students." The researchers found nine studies which met their quality criteria and found that "improvement in knowledge, skills, and self-confidence was noticed by applying technology-based educational tools."

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-022-03810-z