

Education Bulletin



February 2024

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

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General Healthcare Education

Transfer skills, not a virus

Source: Personnel Review

In a nutshell: In this study Ana Junça Silva, from the University of Lisbon, and Deolinda Pinto from IPT studied the knowledge transfer of Covid precautions during the Pandemic. They found that the “motivation to transfer,” had a significant indirect effect on the relationship between colleagues’ and supervisors’ support and employees’ performance. When self-efficacy (people’s confidence that they could comply with the new procedures) was higher the link between motivation to transfer and employees’ performance was stronger. “Thus, adaptability and support, both from colleagues and the supervisor, are determining factors for knowledge transfer and resultant performance in extreme contexts, such as the Covid-19 Pandemic.” The researchers also found that the most-significant predictors of transference were self-efficacy and the motivation to transfer the learned knowledge.

You can read the abstract of this article at

<https://doi.org/10.1108/PR-09-2022-0629>

Can you teach digital citizenship?

Source: Sustainability

In a nutshell: Knowing how to be good in the online world – digital citizenship – is the subject of this study by Erkan Bal and Umut Akcil, from Near East University in Nicosia. They studied the effectiveness of a digital-citizenship curriculum developed using online teaching for undergraduate students. 39 students took part in the programme and the researchers found that it improved the student’s digital citizenship and that the students’ opinion of it was positive.

You can read the whole of this article at

<https://www.mdpi.com/2071-1050/16/1/445>

Online learning – disciplined disciples or distracted dunces?

Source: BMC Medical Education

In a nutshell: In this study a team of researchers, led by Xiaoyue Xu, from Xu Zhou Medical University in China, they studied 1,298 health-professions students who – they found – demonstrated “intermediate,” self-directed learning ability. The stronger the students’ professional identity the greater was their capacity for self-directed learning, and “academic atmosphere,” also predicted self-directed learning too.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04876-z>

What makes for engaged online learning?

Source: Sustainability

In a nutshell: What helps to keep students focusing and engaged in online education? That was a topic a team of researchers, led by Olusiji Adebola Lasekan, from the Catholic University of Temuco in Chile, investigated in this study. 452 students took part in the study which found that the quality of course content was “a cognitive predictor of students’ engagement.” “Possession of a designated private-space boost,” and asking students to use their webcams was also “critical for students’ engagement.” “Teaching presence,” – promoting interactive classrooms and providing rapid feedback – was also an important factor affecting engagement.

You can read the whole of this article at

<https://www.mdpi.com/2071-1050/16/2/689>

Online learning. Is it all about attitude?

Source: International Journal of Educational Technology in Higher Education

In a nutshell: In this study Seyum Getenet, from the University of Southern Queensland, led a team of researchers investigating how students’ attitudes and self-efficacy affected their engagement with online learning. The researchers found that “positive student attitudes and digital literacy significantly contributed to self-efficacy, which, in turn, positively affected ... engagement.”

You can read the whole of this article at

<https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-023-00437-y>

Feeling belonging, and distance learning

Source: British Journal of Educational Technology

In a nutshell: In this study Suping Yi, from Nanjing Normal University in China, led a team of researchers investigating the links between postgraduate students’ sense of belonging and their engagement with distance-learning courses. 308 postgraduate students took part in the study which found that a sense of belonging positively and significantly influenced academic self-efficacy, academic hardiness, and emotional engagement. Academic self-efficacy and academic hardiness had a positive and statistically-significant impact on postgraduates’ cognitive, emotional, and behavioural engagement.

You can read the abstract of this article at

<https://doi.org/10.1111/bjet.13421>

God, friends, and mental health in disabled students

Source: Sustainability

In a nutshell: In this study a team of researchers, led by Ebrahim A. Al-Shaer, from King Faisal University in Saudi Arabia, looked into the links between “religiosity,” social connectedness, and mental health in a sample of 390 of

them. They found that stress, depression, and anxiety negatively and significantly affected the quality of life of students with disabilities. Social connectedness reduced the negative effects of stress but not depression and anxiety, whereas religiosity reduced anxiety, but not depression or stress.

You can read the whole of this article at

<https://www.mdpi.com/2071-1050/16/2/644>

What really happened when classes went online?

Source: International Journal of Educational Technology in Higher Education

In a nutshell: In this study a team, led by Claire V. Harper, from Edge Hill University, compared the results of biological-science students who were taught face-to-face with those who were taught using blended learning (a mixture of face-to-face and online). The researchers reviewed the results from seven different modules on the course. Four saw a decline in marks, two an improvement and one no change. And the researchers found that there was an increase in the number of students requiring reassessments. They concluded that “although there are positive benefits to incorporating an element of online learning for students, it is important to utilise this information in future module delivery planning to support the varying student cohorts of the future.”

You can read this article at

<https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-023-00435-0>

How a green campus makes happy students

Source: Sustainability

In a nutshell: Green spaces can have all sorts of benefits for people’s mental health and in this study Jun Zhang, from Northeast Forestry University in China, led a team of researchers studying the effects of green spaces on 550 students. They found there was a positive correlation between the sensory dimensions of the green spaces and the students “recovery experience,” in them. The students “perceptual recovery and ability to be alone emerged as mediating variables in this process.”

You can read the whole of this article at

<https://www.mdpi.com/2071-1050/16/2/707>

How the few get through the MOOC

Source: Sustainability

In a nutshell: In this study Deming Shu, from Soochow University in China, led a team of researchers investigating what strategies made for success in students struggling through a massive online open course (MOOC). They found that the “core learning strategies used by college students in MOOC learning could be categorized into cognitive, resource management, and metacognitive types. Five learning strategies were frequently used: elaboration; interactive and cooperation; help-seeking; effort management; and information-selection strategies. However,

association and questioning strategies were “infrequently employed... Therefore, educators must actively guide students to expand their innovative-thinking abilities by implementing these strategies.”

You can read the whole of this article at

<https://www.mdpi.com/2071-1050/16/2/716>

Role play and virtual reality? Run for the hills

Source: British Journal of Educational Technology

In a nutshell: In this study Chih-Hung Chen and Jia-Yu Su, from the National Taichung University of Education in Taiwan, studied the effectiveness of a role-playing game combined with virtual reality. They found that compared to the students who experienced virtual reality but not role play taking part in role play “significantly enhanced the students’ perceptions of immersion, self-efficacy, and extrinsic learning motivation.”

You can read the abstract of this article at

<https://doi.org/10.1111/bjet.13436>

Inter-professional Education

“So the decimal point was just a bit of coffee on your glasses?”

Source: BMC Medical Education

In a nutshell: In this study Lina Heier, from University Hospital Bonn, led a team of researchers developing and evaluating “a joint training concept for nursing trainees and medical students in Germany to improve medication-error communication.” 154 medical students, and 67 nursing students took part in the study which found the training led to significant improvements in “interprofessional error communication,” and “teamwork, roles, and responsibilities,” but not in “patient-centredness.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04997-5>

Medical Education

You’re never too young to start being burnt out

Source: BMC Medical Education

In a nutshell: In this study Mabel Prendergast, from Imperial College London, investigated burnout among medical students. The students took part in a “reflection-based intervention,” which was made up of two tutorials covering the presentation, drivers, impact, and management strategies for burnout. The students showed “symptoms and signs of burnout, including exhaustion, lack of motivation and changes in personality.” However, they found that

“the reflection-based intervention was effective at improving their perception of burnout and a convenient tool to use, which could be implemented more widely and continued longer-term throughout medical school.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04948-0>

How do students cope with pick-and-mix teaching?

Source: BMC Medical Education

In a nutshell: Educational techniques are unlikely to be used in isolation and are more often to be found combined with other methods of teaching. In this study Marcos Kubrusly, from Unichristus University Centre in Brazil, led a team of researchers testing how the combination of problem-based learning, traditional teaching, and practical activities affected 412 medical students. The researchers found that the students studying under these conditions had “strong levels of self-efficacy,” and that women, students who worked, and those who took part in extra-curricular activities had higher levels of self-efficacy.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-05016-3>

Does teamwork make the dream work in medical education?

Source: BMC Medical Education

In a nutshell: In this study Irene Sterpu, from the Karolinska Institutet in Stockholm, led a team of researchers reviewing the evidence on team-based learning for undergraduate medical students. The researchers found 49 studies which met their quality criteria and concluded that “despite some differences in their results, the studies found that implementing team-based learning is associated with increased knowledge acquisition, student engagement, and student satisfaction.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04975-x>

Can you teach teamwork using virtual reality?

Source: BMC Medical Education

In a nutshell: In this study Mehrnoosh Khoshnoodifar, from Beheshti University of Medical Sciences in Tehran, led a team of researchers investigating a new way of teaching students about caesarean surgery using virtual reality. The researchers identified six “micro-skills,” as training needs including: briefing, debriefing, cross-monitoring, the I’M SAFE checklist, call-out and check-back, and the two-challenge rule. The virtual-reality content “improved teamwork competencies in an interprofessional team performing caesarean section surgery.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04803-2>

Why have fun when you can be efficient?

Source: BMC Medical Education

In a nutshell: In this study a team of researchers, led by Shu Li from Peking University People's Hospital studied the effectiveness of a "small private online course," and case-based learning in continually-educating junior doctors on analgesia and sedation. 117 junior doctors took part in the study which found there was no significant difference in learning between an online approach and an offline one. 91.5% thought that online learning was a useful and accessible way to improve knowledge and skills; 95.7% thought they could interact well with group members; and 87.2% believed that they had a good degree of participation. All the teachers thought offline was more flexible in terms of teaching time and location.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04839-4>

Stress, seminars, and students

Source: BMC Medical Education

In a nutshell: In this study a team of researchers, led by Benedikt Till from the Medical University of Vienna, investigated the effectiveness of a seminar "Coping with Stress," aimed at first-year medical students. 137 students took part in the study and they were divided into three groups. One group went to seminars on site; one group attended online seminars; and the third group were controls. The students who took part in the on site seminar reported a reduction in some aspects of burnout; a decrease in stress; and an increase in knowledge about available "help resources." Those who took part in the online seminar showed an increase in knowledge, but their levels of stress and burnout were unaffected.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-05019-0>

How a racy life can damage your grades

Source: BMC Medical Education

In a nutshell: In this study a team of researchers, led by Anas Bitar, from Damascus University, attempted to find out. They found out that the consumption of such hard drugs as "tea," "instant coffee," and "weekly fast food," were all linked to lower average grades, as was "water pipe consumption." However "no significant association was observed between other dietary habits, cigarette smoking, and academic performance."

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04950-6>

Kippers gone down the wrong way? Let me print you a new windpipe

Source: BMC Medical Education

In a nutshell: In this study a team of researchers, led by Madison V. Epperson, from the University of Michigan, studied the effectiveness of “a deployable curriculum with 3D printed skills trainers for altered airway management.” 42 junior doctors, working in anaesthesia, took part in the study. They were guided through a 75-minute curriculum on altered airway anatomy, including discussions of cases, videos of surgery, and hands-on practice with 3D-printed tracheostomy and laryngectomy skills trainers. The researchers found that the training led to an improvement in the doctors’ confidence and technical knowledge. In an assessment of their skills, carrying out five tasks, all the doctors completed the tasks successfully “demonstrating objective skills-based competency.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-05013-6>

“How did that webcam get *there*?” “I was self-studying anatomy.”

Source: BMC Medical Education

In a nutshell In this study Anna Pettersson, from the Karolinska Institute in Sweden, led a team of researchers investigating how 127 medical students used digital resources in their anatomy “self studies.” Most of the students said that they spent more than 30 hours a week on self-study. Most used digital resources to prepare for exams, when they encountered difficulties, and after going through a section. They said they would use digital resources more if they were offered an introduction to them; if the resources were more accessible; and if they could interact with a tutor. The resources helped the students to understand anatomy, allowed them to make active choices, provided tools for repetition and memorization, accelerated and simplified their learning, and complemented other learning resources.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04987-7>

When film-making met physiology

Source: BMC Medical Education

In a nutshell: In this study Noha N. Lasheen, from Galala University in Egypt, led a team of researchers investigating the use of film-making to teach first-year medical students physiology. Over the course of the Pandemic – when learning went online – the students were randomly allocated into 18 groups. A topic from the physiology curriculum was chosen and the students “formulated a related case scenario,” then made a video about it. The researchers concluded that “the project helped students to improve their skills in problem-solving, teamwork, active learning, communication, planning, and time management. In addition, it also increased their confidence in their abilities to learn, face unexpected challenges, and achieve goals.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04924-8>

Can ChatGPT pass its public-health exams?

Source: BMC Medical Education

In a nutshell: Could ChatGPT pass a public-health exam? That was the question a team of researchers, led by Nathan P. Davies, from Nottingham University, attempted to answer in this study. ChatGPT was provided with a bank of 119 publicly-available questions from the Faculty of Public Health's diploma exam to practise on. In the exam it passed three out of the four papers, "surpassing the current pass rate." Examiners were able to identify ChatGPT's answers with 73.6% accuracy and human answers with 28.6% accuracy. "Chat GPT provided a mean of 3.6 unique insights per question and appeared to demonstrate a required level of learning on 71.4% of occasions."

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05042-9>

Nurse Education

It's a boy! Can I interest you in a spot of duty free?

Source: Nurse Education Today

In a nutshell: In this study Zehra Baykal Akmeşe, from Ege University in Turkey, led a team of researchers studying the effectiveness of a course designed to teach midwives communication and entrepreneurship skills. 117 first-year midwifery students took part in the course which, the researchers concluded, "improved the students' entrepreneurship and communication skills."

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2023.106070>

How to prevent a (professional) identity crisis

Source: Nurse Education Today

In a nutshell: In this study Shuanglan Lin, from Chongqing Medical University, led a team of researchers investigating "the formation of professional identity," in 93 nursing students. Interviews with the nurses revealed a dynamic process when it came to the formation of professional identity, a process made up of *Outsider of Nursing* [sic]; *Entering the Nursing Courses* [sic]; *Building Nursing Competence* and *Thinking and Acting Like a Nurse*. Six barriers to doing this were: *Conflict between Ideals and Reality*; *Sociocultural Stereotypes About Nursing*; *The Negative Impact of Covid-19*; *Pre-Internship Concerns*; *Struggling to Meet Expectations* and *Potential Danger and Discrimination in Healthcare Settings*. Enablers of developing a professional identity were: *Self-Motivation and Inner Belief Towards the Nursing Profession*; *The Power of Role Models*; *The Improvement of Nursing Capacity*; *Well Integration* [sic] *Into the Healthcare Professional Teams*; *Understanding of the Clinical Environment*, and *Recognition and Encouragement from Others*.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2023.106087>

Coping with death and caring for the dying

Source: Nurse Education Today

In a nutshell: In this study Xiaona He, from Xinjiang Medical University in China, led a team of researchers studying 204 nursing students. The researchers assessed the students' "hospice competence," and their ability to cope with death. They found that the students' overall hospice competency was low-to-moderate and that there was a positive correlation between the students' ability to cope with death and their "hospice competencies."

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2023.106080>

Adding virtual to the simulation games

Source: BMC Medical Education

In a nutshell: In this study a team of researchers, led by Jian Yang from Wuhan University, studied the effectiveness of adding a virtual simulation to face-to-face training in teaching 122 third-year nursing students about working in an ICU. The students who took part in the virtual simulation on top of face-to-face training showed "significant improvement in clinical-judgement ability scores." The researchers concluded "this integrated non-immersive virtual simulation and high-fidelity face-to-face simulation program may benefit nursing students and newly graduated nurses in the ICU more than face-to-face simulation only."

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-023-04988-6>

Can you do a virtual placement?

Source: Nurse Education in Practice

In a nutshell: In this study a team of researchers, led by Kate Morgan from HRCG Care Group in Runcorn, attempted to find out. They developed a virtual practice placement attended by 184 students. The placement "required considerable resources to run," but was rated highly by the students. Four main themes emerged from questionnaires filled out by the students which were:

- Increased understanding of community healthcare and holistic approaches to care
- Developing interpersonal skills
- A positive effect on future career opportunities
- The value of realistic case studies

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.103884>

Simulation and desperation

Source: Nurse Education in Practice

In a nutshell: Of all the jobs nurses do talking to parents about the treatment of dying children must be one of the toughest. It's hard to see how this can ever be fully prepared for, but in this study a team of researchers led by Hsiao-Wei Chen from Taipei City Hospital attempted to see if "scenario-based simulation," would help. 79 perinatal nurses took part in the study. Half took a palliative communication course specifically designed for nurses in perinatal units whilst the other half went to traditional lectures. The nurses who took part in the simulation showed significant improvements in confidence, competence, and performance compared to the group who had traditional lectures and the nurses who took part in the simulations gave their learning higher satisfaction ratings.

You can read the abstract of this course at

<https://doi.org/10.1016/j.nepr.2024.103885>

Emotional regulation and empathy

Source: Nurse Education in Practice

In a nutshell: In this study Meng Na Li, from Xinxiang Medical University in China, led a team of researchers investigating the links between emotional regulation and empathy in a sample of 761 nursing students. The researchers found a significant positive correlation between emotion regulation, empathic ability and "self-harmony." There were also significant positive correlations between emotion regulation, empathic ability, and emotional intelligence. Self-harmony and emotional intelligence partially mediated the relationship between emotion regulation and empathic ability.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.103882>

What do students make of virtual reality?

Source: Nurse Education in Practice

In a nutshell: What do today's nursing students make of virtual reality? That was the question a team of researchers, led by Gonul Bodur, from Istanbul University, attempted to find out in this study. The researchers found that the students "generally held positive views towards virtual-reality technologies and exhibited a high level of self-directed learning skills," with men scoring higher than women.

You can read the abstract of this article at

https://www.sciencedirect.com/science/article/pii/S1471595324000106?dgcid=rss_sd_all

Dealing deftly with delirium

Source: Nurse Education in Practice

In a nutshell: In this study, a team of researchers, led by Yunchuan Zhao from Boise State University in Idaho, reviewed the evidence on interventions designed to teach nurses how to manage delirium. The researchers found 17 articles that met their quality criteria which covered a variety of interventions such as workshops, simulations, group discussions, online modules, and one-to-one coaching. The interventions focused on defining delirium, risk-factors, assessment and management and enhanced nurses' perceptions of delirium, boosting their confidence and knowledge. The interventions also led to increased compliance with delirium assessment and management protocols, "which ultimately resulted in improved documentation accuracy and patient outcomes."

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.103887>

Board games and ECMO

Source: Nurse Education in Practice

In a nutshell: In this study a team of researchers, led by Hsin-Yi Wang from Mackay Memorial Hospital in Taiwan, investigated the use of board games to teach intensive-care unit nurses about extra-corporeal membrane oxygenation (ECMO). 73 nurses took part in the study. 37 of them used board games to learn about ECMO, and 36 "completed the training through a traditional teaching approach." The researchers found that the group who used the board games "demonstrated significantly higher scores in ECMO care knowledge, clinical reasoning and learning engagement than the control group." This was an improvement that was still there three weeks after the intervention had finished.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.103895>

Smartphone addiction and nursing students

Source: Nurse Education in Practice

In a nutshell: In this article Bo Zhou from Huangshan Vocational College of Health in China, led a team of researchers analysing the research on smartphone addiction in nursing students. The researchers found 39 articles which met their quality criteria from 15 different countries. Rates of smartphone addiction ranged from 19% to 72%, and averaged 40-50%. Physiological harms included: sleep disruption and vision concerns. Psychological problems included addiction – correlated with increased anxiety and depression – a decline in self-esteem; and learning and attention problems. Social harms included "challenges in interpersonal relationships," and a decline in social abilities. Risk factors for smartphone addiction included "interpersonal relationship anxiety," perceived academic pressure, and stress.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.103874>