1st author, year, and country of origin	Methods	Participants	Modality of use of ICT	Main results
Harerimana, 2016 **Rwanda**	Parallel mixed method of convergence	Nursing students (n=227), Nurse educators (n=44), ICT managers and Campus managers (n=17).	E-learning	− Students understand what they are learning more easily and feel more empowered in their learning. − ICT improves the classroom climate; students are more focused on their learning, they try harder to learn. − ICT greatly facilitates collaborative work among students − Students are more likely to remember what they have learned a lot. − Students have a positive perception of the results of e-learning. − E-learning promotes self-directed learning. − E-learning saves time in terms of travel and attending regular classes. − Students can receive messages from their peers and teachers without necessarily being in school. − Students can access resources without being limited by time and space.
Irinoye, 2016 **Nigeria**	Descriptive study of survey type	Nursing students (n=305)	Online distance learning	− Students reported having fair or poor skills in using ICT. − The majority of students sometimes surf the Internet. − Most reported not owning a personal desktop or laptop computer. More than half had no formal computer training. − The majority of respondents agreed/strongly agreed that face-to-face classes improve student understanding than the online virtual classroom.
Bello, 2017 **Egypt**	Descriptive cross-sectional study	Nursing students (n=504)	Blended e-learning	− The majority of students respectively a desktop or laptop computer and the Internet. − Few students had access to medical journals or online learning resources. − Just over half of students accessed the Internet 1-3 times per day. − About half of students spend an average of 1 to 3 hours on the Internet per day. − Slightly less than half of the students reported that they only used the computer/Internet once a week to search for scientific knowledge. − About half of the students reported having

				good computer skills.
Chao, 2017 **Taiwan**	Quasi-experimental study	Nursing students (n=100)	Blended e-learning	− The control group showed significant growth in four aspects of competence − The experimental group showed greater growth in two areas than the control group.
Willemse, 2017 **South Africa**	Contextual qualitative method	Undergraduate nursing students (n=101)	Blended e-learning with smartphone	− Student engagement has improved with mobile learning. − Students perceive the mobile learning experience as a modern, informative, and easily accessible method of communication that provided a "clear understanding of how to take an exam." − Mobile learning facilitates group work, and that group work facilitates and enhances their learning. − The online mobile learning initiative improved communication among group members, and students completed their tasks without face-to-face contact.
Avelino, 2018 **Brazil**	Mixed method	Nursing students (n=51)	Blended e-learning	− Participants rated their knowledge level as high after completing the course. − The majority of students would like to use online learning as a teaching and learning strategy in other courses and subjects. − Even at a distance, the forum resource allowed interaction between the students, allowing for collective construction of knowledge on the nursing process and the CPCI. − The distance modality is still a new experience for undergraduate students, which causes some apprehension at first contact.
Luo, 2018 **China**	Integrated explanatory sequential mixed method	Nursing students (n=9)	Asynchronous e-learning	− The assignments were helpful for student learning, and their research skills met the expected learning outcomes of the course. − After completing the assignments, participants felt more confident in using different forms of technology.
Ali, 2020 **Egypt**	Quasi-experimental study	Nursing students (n=224)	Synchronized and asynchronized distance learning	− Students rated themselves as incompetent or having poor skills in using the Internet. − More than half of the students found that the online learning interaction made them feel motivated, − More than two-thirds found that group participation in task completion is better than individualized tasks. − The effectiveness of the respective teacher-student relationship and rapport

				was reported by over three-quarters of the students. While more than half of the students reported that the system is contemporary, their responses regarding whether the online system can replace traditional face-to-face learning were distributed in approximately equal percentages on both sides of the scale.