		Study	LOE	Quality	Group	Participants	Type of AED	Skill tested	Evidence
Instructor Professional Background	Layperson vs healthcare providers instructors	Castren 2004 ¹⁸	2	Fair	L	38 laypersons	AED Trainer Laerdal Medical, USA	Retention at 2-3 weeks	Supportive of layperson can be instructors No difference in OSCE test scores
	Drs vs nurses Instructors	Xanthos 2009 ¹⁹	2	Fair	Н	108 nurses	Zoll AED plus-Trainer Ladakis Medical Supplies, Greece	Retention at 1 month	Supportive of nurse instructor No difference in written test scores Better OSCE performance
Self directed learning	Computer based learning	Reder 2006 ²²	1	Good	L	784 students initially 686 students at 2 months	Lifepak CR-T, Medtronic PhysioControl, USA	Initial performance Retention at 2 months	Supportive >80% scores for AED use Hands on training improves pad placement
		Jerin 1998 ²³	2	Fair	Н	105 emergency medical technicians (EMTs)	Not specified	Initial performance Retention at 3, 6, 9, 12 months	Supportive No difference in performance or speed
		Moule 2008 ²¹	2	Fair	Н	83 mental health staff	Not specified	Initial performance	Supportive No difference in performance and time to first shock Pad placement poor in both groups
		<i>De Vries</i> 2007 ²⁰	4	Fair	L	16 laypersons	Lifepak CR Plus Medtronic PhysioControl, USA	Retention at 8 weeks	Supportive All participants performed well in AED use.
	Video learning	<i>Roppolo</i> 2007 ²⁴	1	Good	L	270 airline staff	Not specified	Initial performance Retention at 6 months	Supportive Video group had higher proportion of calling 911 and adequate ventilation immediate testing No difference at 6 months
		Meischke 2001 ²⁵	1	Good	L	210 senior citizens initial test 177 at 6 months	Not specified	Initial performance Retention at 6 months	Opposing Video group worse at 'shake/shout' (p<0.05), slower to defibrillate (mean difference of 18 secs; authors concluded <1min as non- significant)
		Mancini 2009 ²⁶	1	Good	L	Layperson	Not specified	Initial performance	Opposing Video group was significantly worse in clearing victim to analyse and shock. Deficiencies were found on DVD and improved upon but trial was not repeated
		<i>De Vries</i> 2010 ²⁷	1	Good	L	396 laypersons	Phillips AED Trainer	Initial performance and retention at 2	Opposing Cardiff test for AED was used. All 3

								months	DVD groups performed worse than instructor led group. Performance was better on retest at 2 months. Pad placement was poor.
	Poster instruction	<i>De Vries</i> 2008 ²²	1	Fair	Н	30 nurses	Lifepak 500 trainer Medtronic PhysioControl USA	Retention at 16 days	Supportive No difference in retention at 16 days
Minimal /No training	No training	Mattei 2002 ³⁵	2	Fair	Н	30 nurses, physiotherapists	Heartstream ForeRunner (Agilent) AED	Initial performance	Neutral No training group can deliver shock safely But most participants failed to position the pads correctly (53%) or follow correct safety procedures (67%) Brief training improves speed, pad placement and safety
		Gundry 1999 ³²	4	Fair	L	15 6 th grade students, 22 EMTs	Hewlett-Packard Heartstream ForeRunner AED	Initial performance	Supportive Mean time to deliver shock was 90 secs in children, 67 secs for EMTs; authors conclude as 'moderate difference'
	Minimal training	Beckers 2005 ³³	2	Fair	L	236 1 st year medical students	Medtronic Physio- Control LifePak™ CR-T AED trainer, Germany	Initial performance Retention at 1 week	Supportive 15 min lecture, no practice 94.1% participants can deliver shock safely without instructions. Brief training improves speed, pad placement, safety
		Beckers 2007 ³⁴	2	Fair	L	59 1 st year medical students	Medtronic Physio- Control LifePak™ CR-T AED trainer, Germany	Initial performance Retention at 1 week, 6 months	Supportive 15 min lecture Performance with no training was adequate at 6 months Brief training improves speed, pad placement, safety
		<i>Mitchell</i> 2008 ³¹	2	Fair	L	43 laypersons	Not specified	Retention at 2 weeks	Supportive Comparing reading article on AED, reading AED instructions, training video, all groups were able to deliver shock in less than 150 sec Additional brief training improved speed
		<i>Kelley 2006</i> ²⁹	4	Fair	L	33 8 th grade students	Zoll AED PLus	Initial performance Retention at 4 weeks	Supportive 1 hr lecture with manikin practice:

								Performance adequate at initial and
								4 weeks
	Andresen	1	Good	L	1095 laypersons	Lifepak 500T,	Initial performance	Supportive
	2004 ³⁰					Medtronic Physio-	Retention at 6, 12	2 hr vs 4 hr vs 7 hr theory &
						Control	months	practice:
								No difference in shock delivery
								within 90 sec (immediate, 6 month,
								12 months)