

Standard 4.1 – Impact on Learning

The EPP evaluated the impact on student learning data (Standard 4.1) on PK-12 learners in local school districts. The results from five WLU program completers indicated in the table demonstrate a positive impact on PK-12 learners via a pre- and post-test format related to classroom instruction. The action-based research included multiple grades and ability levels. The impact of instruction on high school level special education students in U.S. History showed a 14% positive impact. The 4th grade physical education impact on learning was 16% on dribbling psychomotor learning. The impact on middle school mathematics students was 81%. The greatest impacts on learning were demonstrated with 3rd grade students who benefited from area lessons, resulting in a 210% impact, and with 1st grade students ELA sentence writing with a 498% positive impact. Due to COVID-19, alternative, non-traditional instructional methods were utilized in most cases (e.g., virtual instruction combined with face-to-face instruction).

Impact on student learning (Action Research 2020-2021)

	Participants	Grade Level	Pre-test	Post-test	Impact on learning	Summary
Physical Education: Psychomotor manipulative skill instruction	9	4	25.44	29.44	16%	16% improvement from two days of ball-handling techniques taught and practiced with both hands, varying level of difficulty. Verbal cues and feedback.
Mathematics: Real numbers, rational numbers, powers, exponents	15	8	7.3	13.2	81%	81% improvement from 4 weeks utilizing a combination of instructional techniques including face-to-face teacher-centered, direct instruction, cooperative learning, and virtual learning using Chromebooks and virtual lessons.
English Language Arts (ELA): Writing sentences	13	1	0.54	3.23	498%	498% improvement over a four-month period from daily practice with ELA worksheets and spelling words. Sentences were assessed on proper capitalization, punctuation, spelling, spacing, and complete thoughts.
Mathematics: Measurement, Area of shapes using square units	21	3	2.9	9.0	210%	201% improvement over a one-month period, utilizing hands-on instruction, manipulatives, pattern blocks,

						supplemental activities, and a variety of slideshows.
Social Studies: U.S. History HS Special Education	5	10-12	79%	90%	14%	14% improvement over a three-week period for 5 self-contained special education students, grades 10-12, learning about the U.S. Constitution, Declaration of Independence, American Revolution, Bill of Rights – teaching in the classroom and virtually, simultaneously.