Summary of Three Emerging Models for Developmental Mathematics May 2013 Jack Rotman

The focus in developmental mathematics has been on remediation of school mathematics deficiencies, combined with a target of preparing students for college mathematics – especially pre-calculus. Three emerging models seek to make basic changes in developmental mathematics.

	AMATYC New Life	**Carnegie Pathways**	**Dana Center Mathways**
Source	AMATYC Developmental Mathematics Committee	Carnegie Foundation for the Advancement of Teaching	Dana Center at the University of Texas – Austin
url	https://sites.google.com/site/amatycdmc/ http://dm-live.wikispaces.com	http://www.carnegiefoundation.org/developmental-math	http://www.utdanacenter.org/higher-education/new-mathways-project/
Courses	Mathematical Literacy for College Students (MLCS); Algebraic Literacy (AL)	Quantway I and II Statway I and II	Foundations of Mathematical Reasoning; Quantitative Reasoning; Statistical Reasoning; STEM Prep courses (2)
Math content description	Mathematical literacy (MLCS) builds on basic numeracy and blends quantitative literacy, proportional reasoning, algebraic reasoning, and functions & models; less procedural focus, more on application. Algebraic Literacy course presents algebraic topics in multiple representations, with some procedural focus; includes some geometry, trigonometry, and statistics.	Mathematical literacy, starting from basic numeracy. Blends quantitative literacy, proportional reasoning, algebraic reasoning, and functions & models; less procedural focus, more on application. In Quantway, math lit is first course. In Statway, math lit is imbedded within both courses along with statistical content.	Under development [Foundations of Mathematical Reasoning (FMR) is expected to be approximately the same; a derivative of Quantway. Follow-up courses being developed to meet needs.] FMR will include corequisite student success course.
College commitment	Flexible (ranging from just course approvals to additional support, up to replacing traditional developmental courses. Faculty driven.	Multi-year commitment for several faculty and other staff; college joins a network; implementations are somewhat standardized around common curricular materials and teaching methods.	Under development ; state-focused (Texas initially) [anticipated to include meaningful college commitment to support changes]
Target courses [prepares for]	Flexible; can include introductory statistics, quantitative reasoning, transitions, etc after mathematical literacy. AL (Algebraic Lit) course prepares students for college algebra or pre-calculus. In replacement system, MLCS replaces beginning algebra (and possibly pre-algebra); AL replaces intermediate algebra	Tracking: Students in Quantway I take Quantway II; Students in Statway I take Statway II	Preliminary scheme: Foundations of Mathematical Reasoning (FMR) prepares for 3 courses – Quantitative Reasoning (college), Statistics (intro college), and STEM prep path.
Curricular materials	Flexible; MLCS commercial materials under development (published in 2013 and 2014). Faculty also custom publish and/or write materials	Standardized Quantway and Statway materials, shared across all institutions. Currently, no textbook cost for students.	Under development [Anticipated to be include commercial-quality materials at a low cost to student]
Placement	Into Math Lit: 'ready for beginning algebra' Into Algebraic Literacy: Had Math Lit or ready for intermediate algebra	Into Quantway I or Statway I: 'ready for beginning algebra' Into Quantway II or Statway II: no process established	Under development [Anticipated to parallel New Life process]