Summary of Three Emerging Models for Developmental Mathematics October 2014 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) 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.	Foundations of Mathematical Reasoning (FMR) is a quantitative reasoning-based course that includes numeracy; proportional reasoning; algebraic competence, reasoning, and modeling; probabilistic reasoning to assess risk, and quantitative reasoning in personal finance and in civic life. FMR will include a 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.	NMP is part of a 10-year partnership with the Texas Association of Community Colleges. All TX colleges have committed to implementing the 4 principles of the NMP (aligned content, acceleration, student learning strategies, and evidence-based practice). Institutions may choose to use NMP curricular materials.
Target courses [prepares for]	Flexible. After MLCS can include introductory statistics, quantitative reasoning, etc. 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	Foundations of Mathematical Reasoning (FMR) prepares for 3 college-level courses – Quantitative Reasoning, Statistics, and STEM prep pathway.
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.	Institutions may choose to use or incorporate NMP curricular materials, currently in paper format with low-cost online homework platform. Interactive classroom demonstration tools anticipated.
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	Into FMR: 'ready for beginning algebra'. Into Statistical Reasoning or Quantitative Reasoning: had FMR or are deemed college ready