Summary of Three Emerging Models for Developmental Mathematics September 2012 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; Transitions	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, starting from basic numeracy. Blends quantitative literacy, proportional reasoning, algebraic reasoning, and functions & models; less procedural focus, more on application. Transitions course presents algebraic topics in multiple representations, with some procedural focus.	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 is expected to be approximately the same; a derivative of Quantway. Follow-up courses being developed to meet needs.]
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 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. Transition course prepares students for college algebra or pre-calculus. In replacement system, mathematical literacy replaces beginning algebra (and possibly pre-algebra)	Tracking: Students in Quantway I take Quantway II; Students in Statway I take Statway II	Preliminary scheme: Foundations of Math Reasoning prepares for 3 courses – Quantitative Reasoning (college), Statistics (intro college), and STEM prep path.
Curricular materials	Flexible; commercial materials under development (published in ~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 Transitions: 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]