

Relevance,
Renewal,
Retention

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(Immediate
Past
President,
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Society)

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Appreciation

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- Engage to Excel: an electric wake-up call.
- Post-secondary mathematics education is of paramount importance.
- Mathematical sciences community is greatly interested in improving outcomes.

Mathematician's perspective

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- Research **mathematics is thriving**; applications are rapidly expanding; over 60% retention of majors.
- Remediation, general requirements, STEM students, mathematics majors require **different approaches**.
- Essentially **every** mathematics department tries to **tailor its offerings** to meet requirements of its client departments.
- There are a great many **local efforts** to renew and improve the delivery of mathematics education.

Ingredients for improved mathematics education

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- **Curricular reform** leading to well-planned pathways.
- **Cooperation** with client departments.
- **Teaching methodologies** promoted on the basis of measured outcomes.
- **(Online) technology** adopted to **complement**, not replace personal education.

Plans and strategy

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- Develop a **framework** that can be adopted at local levels.
- **Archives and virtual meetings** to share new course content and teaching methodologies.
- **Intra-university cooperation**, including team teaching.
- **Carnegie Corp of NY**, **AAU**, other foundations, **NSF** efforts to lead

Discussion topics

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- Impact of **online technology** on disadvantaged students.
- Awkward communication with **education community**.
- U.S. competitiveness demands **more knowledgeable** (not just more) STEM students.
- Motivation through **applications** requires awareness of students' interests.

Help is needed

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- PCAST and others can help to maintain the **high visibility** of these challenges.
- Academic leaders can facilitate **exchanges** between the mathematical sciences and other disciplines.
- Government agencies can provide **financial resources** for teaching innovation.
- Business leaders can join academics in emphasizing the importance of **mathematical skills**.

Thanks!

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THANK YOU for your interest and concern.