

# Interweaving Assessment into Students' Authentic Learning

Qingliang Lu

China University of Petroleum (East China), Qingdao 266580, Shandong, China

*“Develop a passion for learning. If you do, you will never cease to grow.”*  
–Anthony J. D’Angelo

OVER decades, standardized testing has been the primary form of assessment of student learning. Standardized tests have been used as measurements of students' knowledge retention, but with little capability of evaluating their capacities to apply knowledge in authentic contexts (Cai, 2000). With the advent of the information age, the limitations of conventional standardized tests have become increasingly pronounced. Assessment was one of the key concerns in the education reform in the 1990s. In the U.S., for example, *America 2000: An Education Strategy* emphasizes that measurements of student performance must be accurate, comparable, appropriate, and constructive; that placement decisions for young children should not be made on the basis of standardized tests; and that achievement tests must not simply measure minimum competencies, but also higher levels of reading, writing, speaking, reasoning, and problem-solving skills (Bush, 1991). *Goals 2000: Educate America Act* (1994) declares that its purpose is to provide a framework for meeting the National Education Goals by assisting in the development and certification of high-quality assessment measures that reflect the internationally competitive content and student performance standards, among other means.

As doubt about the legitimacy of standardized tests grew, educators set about exploring more scientific assessment methods that can effectively identify students' academic competence, measure educational outcomes, and provide evidence for instructional improvements (Li & Han, 1991). In this context, alternative assessment became popular in the teaching community. Alternative assessment is an umbrella term for a variety of alternatives to conventional tests, such as direct assessment, performance assessment, authentic assessment, portfolio assessment, dynamic assessment, etc. Despite the differences in name, alternative assessments share some common features: asking students to perform, create, produce, or do something; tapping higher-level thinking and problem-solving skills; using tasks that represent meaningful instructional activities; invoking real-world applica-

---

© 2024 Insights Publisher. All rights reserved.



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License

(<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed by the Insights Publisher.

tions. Another distinctive characteristic of these new assessments is their stress on the importance of examining the processes as well as the products of learning (Herman et al., 1992).

The rationale underlying alternative assessments is the cognitive learning theory and its constructivist approach to knowledge acquisition. Therefore, under alternative assessment, students are required to construct rather than merely select responses. As opposed to the conventional multiple-choice-dominated testing, alternative assessment may resort to a wide range of methods including teacher observation and recording, student completion of artifacts, group collaborative projects, experiments, presentations, oral speeches, and more. Assessment settings are expanded beyond classrooms to possibly cover homes and communities (Lei, 2011). Some of these assessment approaches may have historically been adopted by good teachers to monitor the progress of their students, but now they are extended beyond individual classrooms to pose a challenge to traditional ways of mass testing (Ewing, 1998).

Good instruction is inseparable from good assessment. By requiring students to perform meaningful tasks and focusing on continuous progress of individual student, the teacher can interweave assessment into the whole process of student learning. *Alternative Assessment and Evaluation in Science Education: Mind Maps and Concept Maps* in this issue is an examination of the effects of mind and concept mapping as alternative assessment methods in evaluating pre-service teachers' mastery of scientific concepts (Eryilmaz Muştu, 2024), with valuable insights into how to integrate alternative assessment tools into conceptual building in science education. It has significant implications for the further innovation of alternative assessments.

## References

- Bush, G. (1991). *America 2000: An Education Strategy*. US Government Printing Office. Available at: <https://files.eric.ed.gov/fulltext/ED327985.pdf>
- Cai, Y. (2000). Alternative Assessment in Contemporary American Education. *International and Comparative Education*, 2000(02):18-22. Available at: [https://kns.cnki.net/kcms2/article/abstract?v=K\\_cp52o2S784ZnOUIqsjEBijHVJwMl8u4VLH4nE6IFzYymmhNc86k-FiSfXX3omYygDsQjOsT5FYr6uPMpxV3DlnhSJTWgzvjsYQc30oOKcUGpHwKjkfzLYfpStat3&uniplatform=NZKPT&language=CHS](https://kns.cnki.net/kcms2/article/abstract?v=K_cp52o2S784ZnOUIqsjEBijHVJwMl8u4VLH4nE6IFzYymmhNc86k-FiSfXX3omYygDsQjOsT5FYr6uPMpxV3DlnhSJTWgzvjsYQc30oOKcUGpHwKjkfzLYfpStat3&uniplatform=NZKPT&language=CHS)
- Eryilmaz Muştu, Ö. (2024). Alternative assessment and evaluation in science education: Mind maps and concept maps. *Science Insights Education Frontiers*, 22(2):3583-3596. DOI: <https://doi.org/10.15354/sief.24.or587>
- Ewing, S. C. (1998). Alternative assessment: Popularity, pitfalls, and potential. *Assessment Update*, 10(1):1-2,11-12.
- Herman, J. L., Pamela, R. A., & Lynn, W. (1992). *A Practical Guide to Alternative Assessment*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Goals 2000: Educate America Act. (1994). Available at: <https://www.congress.gov/bill/103rd-congress/house-bill/1804>
- Lei, Y. (2011). Alternative assessments for academic achievement evaluation in the United States: Introduction and implications. *Chinese Journal of Special Education*, 2011(2):41-46. Available at: [https://kns.cnki.net/kcms2/article/abstract?v=K\\_cp52o2S7-BaiU5IsZLpP7uLiX-cCbANv6ftYL00-bz4GnoV3zlwfiQ600wpSQp\\_byIDOrvVf7iq4DI9gx7wxia9\\_ulcVWH8CDjR98PIQn7MLM1Fmx5-RYzRW\\_yv&uniplatform=NZKPT&language=CHS](https://kns.cnki.net/kcms2/article/abstract?v=K_cp52o2S7-BaiU5IsZLpP7uLiX-cCbANv6ftYL00-bz4GnoV3zlwfiQ600wpSQp_byIDOrvVf7iq4DI9gx7wxia9_ulcVWH8CDjR98PIQn7MLM1Fmx5-RYzRW_yv&uniplatform=NZKPT&language=CHS)

Li, Z. & Han, Q. (1991). Development and Reform of Global Primary Education. Beijing: People's Education Press.

**Correspondence to:**

*Qingliang Lu*  
*China University of Petroleum (East China)*  
*Qingdao 266580*  
*Shandong*  
*China*

*E-mail: [603187937@qq.com](mailto:603187937@qq.com)*

**Conflict of Interests:** *None*

**Doi:** *10.15354/sief.24.co305*