

## GLOSSARY OF KEY TERMS

- **Curriculum** is a complex dynamic system with interdependent components that are intentionally positioned relative to each other to facilitate student achievement of intended learning outcomes.
  - *Intended* curriculum is reflected through program catalog descriptions and, more specifically, articulated statements of intended program-level student learning outcomes.
  - *Designed* curriculum is reflected through degree plans and course sequences.
  - *Communicated* curriculum consists of course-level outcomes as well as specific teaching and learning activities listed in course syllabi.
  - *Enacted* curriculum refers to classroom pedagogies and the content, scope and depth of the material delivered by an instructor in the classroom.
  - *Assessed* curriculum consists of the type and content of specific assessment tasks assigned to students in a given course.
- **Curriculum Coherence** is a conclusion based on a systematic study, interpretation, reflection, and judgment of curricular dimensions such as outcomes integration and structural alignment.
  - *Outcomes Integration* – degree to which program outcomes are addressed in a course of study.
  - *Structural Alignment* – consistency between what faculty expect students to learn, what learning experiences faculty design, what goals faculty communicate to students, what faculty think they teach, and what faculty assess.
- **Curriculum Map** is a visual representation (snapshot) of the curriculum design, usually in the form of a matrix or template. The map charts program courses, syllabi, classroom activities, and assessments as they relate to the intended program learning outcomes.
- **Curriculum Mapping** refers to an analytical approach that allows faculty to specify key components of program curricula, arrange them in relation to each other in a visual format, and capture an overarching curricular structure that provides cognitive scaffolding for organizing teaching and learning processes.
- **Curriculum Matrix** is a two-dimensional data collection instrument used to organize the curriculum mapping process.
  - The matrix records the assignment of program outcomes (in columns) to courses (in rows) while identifying the level at which the outcomes are addressed (at the intersection of columns and rows).
- **Explicit statement** of intended outcome indicates that a program outcome is fully and directly expressed or referenced in a course syllabus.
- **Implicit statement** of intended outcome indicates that program outcome is indirectly expressed or referenced in a course syllabus.
- **Level of Instruction** refers to the level and complexity of the program outcome-related knowledge and skills that are expected to be taught and learned in a course. The four levels of content delivery are Introduced (I), Emphasized (E), Reinforced (R), and Applied (A). (See Rubric – Red Handout – for details.)
  - *Introduced* (I) -- 1. Students are not expected to be familiar with the program outcome-related content or skills at the collegiate level. 2. Instruction and learning activities focus on basic

- knowledge, skills, and/or competencies and entry-level complexity. 3. Only one or a few aspects of a complex program outcome are addressed in the given course.
- *Emphasized (E)* -- 1. Students are expected to possess a basic level of program outcome-related knowledge and familiarity with the content or skills at the collegiate level. 2. Instruction and learning activities concentrate on enhancing and strengthening knowledge, skills, and expanding complexity. 3. Several aspects of the program outcome are addressed in the given course, but these aspects are treated separately.
  - *Reinforced (R)* -- 1. Students are expected to possess an advanced level of the program outcome-related knowledge, skill, or competency at the collegiate level. 2. Instructional and learning activities focus on the use of the content or skills in multiple contexts and at multiple levels of complexity. 3. Given program outcome is addressed in all of its complexity across multiple contexts or is turned reflexively on oneself.
  - *Applied (A)* -- 1. Students are expected to possess an advanced level of program outcome-related knowledge, skill, or competency at the collegiate level. 2. Instructional and learning activities focus on the use of the content or skills in multiple contexts and at multiple levels of complexity. 3. Given program outcome is addressed in all of its complexity across multiple contexts or is turned reflexively on oneself.
- **Program** is a pre-determined, coherent, and integrated sequence/set of courses and co-curricular experiences intentionally designed for a defined group of students and leading to attainment of an academic degree.
  - **Program Learning Outcome** is an intended effect/impact of the educational program experiences on student learning and development that has been stated in terms of specific, observable, and measurable student performance. Program learning outcomes specify knowledge, skills, values, and attitudes students are expected to attain in a course of study.
  - **Quantitative Indicators**
    - *Outcome Communication* score -- Number of courses explicitly and implicitly reflecting the given program outcome on the syllabus
    - *Outcome Saturation* score -- Sum of I, E, R, A scores for the given program outcome
    - *Outcome Feedback Points* score -- Number of courses integrating assessment of the given program outcome
    - *Course Breadth* score -- Number of program outcomes addressed by each course
    - *Course Depth* score -- Sum of I, E, R, A scores for the given course
    - *Course Assessment* score -- Number of program outcomes feedback/assessment points in the given course
  - **Sequencing** refers to the extent to which courses are organized in a logical manner in relation to a program outcome or a set of program outcomes.
    - *Structure of course sequence* refers to the extent to which levels of content delivery (I, E, R, A – see definition of ‘level of content delivery’ above) are organized in a logical manner to address a particular outcome.

## BIBLIOGRAPHY

- Allen, M.J. (2004). Alignment. In: Allen, M.J., *Assessing academic programs in higher education*, pp. 39-53. Bolton, MA: Anker Publishing.
- Allen, M.J. (2006). Alignment of general education programs. In: Allen, M.J., *Assessing general education programs*, pp. 91-120. Bolton, MA: Anker Publishing
- Ambrose, S.A., Bridges, M.W., DiPietro, M., Lovett, M.C., & Norman, M.K. (2010). *How learning works: 7 research-based principles for smart teaching*. San Francisco: Jossey-Bass.
- Anderson, L.W. (2002). Curricular alignment: A re-examination. *Theory into Practice*, 41 (4), 255-264.
- Anderson, L.W. (Ed.), Krathwohl, D.R. (Ed.), Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- Association to Advance Collegiate Schools of Business International (AACSB) (2007) *AACSB assurance of learning standards: An interpretation*. Available: <http://www.aacsb.edu/accreditation/papers/AOLPaper-final-11-20-07.pdf>
- Barnett, R., & Coate, K. (2005). *Engaging the curriculum in higher education*. New York: Open University Press/SRHE.
- Bath, D., Smith, C., Stein, S. and Swann, R. (2004) Beyond mapping and embedding graduate attributes: Bringing together quality assurance and action learning to create a validated and living curriculum, *Higher Education Research & Development*, 23 (3), 313-338.
- Biggs, J.B. (1996) Enhancing teaching through constructive alignment, *Higher Education*, 32, 347-364.
- Biggs, J.B., & Tang, C. (2007) *Teaching for quality learning at university: What the student does*, 3<sup>rd</sup> edition. New York: McGraw Hill, SRHE & Open University Press .
- Blumberg, P. (2009). Maximizing learning through course alignment and experience with different types of knowledge. *Innovative Higher Education*, 34, 93-103.
- Brabrand, C., & Dahl, B. (2009) Using the SOLO taxonomy to analyze competence progression of university science curricula, *Higher Education*, 58, 531-549.
- Bresciani, M.J. (2006). *Outcomes-based academic and co-curricular program review: A compilation of institutional good practices*. Sterling, VA: Stylus.
- Cuevas, N.M., Matveev, A.G., & Feit, M.D. (2009). Curriculum mapping: An approach to study the coherence of program curricula. *Department Chair*, 20 (1), 23-26.
- Daigle, R.J., Longenecker, H.E., Landry, J.P., & Pardue, J.H. (2004). Using the IS 2002 Model Curriculum for Mapping an IS Curriculum. *Information Systems Education Journal*, 2, 1, 3-6.
- Diamond, R.M. (2008). *Designing and assessing courses and curricula: A practical guide*, 3<sup>rd</sup> edition. San Francisco: Jossey-Bass.
- Driscoll, A., & Wood, S. (2007). Alignment: Making explicit connections between teaching decisions and learning outcomes. In: Driscoll, A., & Wood, S., *Developing outcomes-based assessment for learner-centered education: A faculty introduction*, pp. 156-175. Sterling, VA: Stylus.
- Doyle, T. (2008) *Helping students learn in a learner-centered environment: A guide to facilitating learning in higher education*. Sterling, VA: Stylus.
- English, F. (1980). Curriculum mapping. *Educational Leadership*, 37 (7), 558-559.
- Ewell, P.T. (2009). *Assessment, accountability, and improvement: Revisiting the tension*. Occasional Paper 1. Champaign, IL: National Institute for Learning Outcomes Assessment.
- Ewell, P.T. (1997) Identifying indicators of curricular quality. In: Gaff, J.G., Ratcliff, J.L., and Associates (Eds.) *Handbook of the undergraduate curriculum: A comprehensive guide to purposes, structures, practices, and changes*, pp. 608-627. San Francisco: Jossey-Bass.
- Grundy, S. (1987) *Curriculum: Product or Praxis?* Lewes: Falmer Press.
- Harden, R.M. (2001). AMEE Guide No. 21: Curriculum mapping: A tool for transparent and authentic teaching and learning. *Medical Teacher*, 23 (2), 123-137.
- Hatfield, S. (2009). Assessing your program-level assessment plan. *IDEA paper no. 45*. Available: [http://www.theideacenter.org/sites/default/files/IDEA\\_Paper\\_45.pdf](http://www.theideacenter.org/sites/default/files/IDEA_Paper_45.pdf)
- Hausman, J.J. (1974). Mapping as an approach to curriculum planning. *Curriculum Theory Network*, 4 (2/3), 192-198.
- Huba, M.E., & Freed, J.E. (2000). *Learner-centered assessment on college campuses: Shifting the focus from teaching to learning*. Needham Heights, MA: Allyn & Bacon.
- Jackson, N. (2000). Program specification and its role in promoting an outcomes model of learning. *Active Learning in Higher Education*, 1 (2), 132-151.
- Johnson, D.K., & Ratcliff, J.L. (2004) Creating coherence: The unfinished agenda, *New Directions for Higher Education*, 125, pp. 85-95. San Francisco: Jossey-Bass.
- Kean, R.C., Mitchell, N.D., & Wilson, D.E. (2008, Fall). Toward intentionality and transparency: Analysis and reflection on the process of general education reform. *Peer Review*, 4-8.

- Keeling, R.P., Wall, A.F., Underhile, R., & Dungy, G.J. (2008). *Assessment reconsidered: Institutional effectiveness for student success*. Washington, DC: ICSSIA, NASPA, Keeling & Associates.
- Kelley, K.A., McAuley, J.W., Wallace, L.J., & Frank, S.G. (2008). Curricular mapping: Process and product. *American Journal of Pharmaceutical Education*, 72 (5), 1-7.
- Knefelkamp, L.L. (1999). Introduction. In: Perry, W.G., *Forms of ethical and intellectual development in the college years: A scheme*, pp. xi-xxxviii. San Francisco: Jossey-Bass.
- Kopera-Frye, K., Mahaffy, J. and Svare, G.M. (2008) The map to curriculum alignment and improvement. In: Wright, A., Murray, S., & Wilson, M. (Eds.) *CELT: Collected essays on learning and teaching*, volume 1, pp. 8-14. Windsor, ON: Society for Teaching and Learning in Higher Education.
- Levi, J., Burton, G., Mickler, S., & Vigorito, M. (1999). A curriculum matrix for psychology program review. *Teaching of Psychology*, 26 (4), 291-294.
- Lowe, K. and Marshall, L. (2004) Plotting renewal: pushing curriculum boundaries using a web based graduate attribute mapping tool. *Proceedings of the 21st ASCILITE Conference*, Perth, Western Australia, December 5-8. [Online] Retrieved on September 15, 2009 from <http://www.ascilite.org.au/conferences/perth04/procs/pdf/lowe-k.pdf>.
- Maki, P.L. (2004). Beginning with dialogue about teaching and learning. In: Maki, P.L., *Assessing for Learning: Building A Sustainable Commitment Across the Institution*, pp. 31-57. Sterling, VA: Stylus/AAHE.
- Maki, P.L. (2004). Maps and inventories: Anchoring efforts to track student learning. *About Campus*, 9 (4), 2-9.
- Sherborne, T. (2008). Mapping the curriculum: How concept maps can improve the effectiveness of course development. In: Okada, A., Shum, S.B., & Sherborne, T. (Eds.), *Knowledge cartography: Software tools and mapping techniques*, pp. 183-198. London: Springer-Verlag.
- Palomba, C.A., & Banta, T.W. (1999). Examining curricula. In: Palomba, C.A., & Banta, T.W., *Assessment essentials: Planning, implementing, and improving assessment in higher education*, pp. 271-280. San Francisco: Jossey-Bass.
- Plaza, C.M., Draugalis, J.R., Slack, M.K., Skrepnek, G.H., & Sauer, K.A. (2007). Curriculum mapping in program assessment and evaluation. *American Journal of Pharmaceutical Education*, 71 (2), 1-8.
- Porter, A.C. (2002) Measuring the content of instruction: Uses in research and practice, *Educational Researcher*, 31 (7), 3-14.
- Ratcliff, J.L. (1997). Quality and coherence in general education. In: Gaff, J.G., Ratcliff, J.L., & Associates, *Handbook of the undergraduate curriculum: A comprehensive guide to purposes, structures, practices, and changes*, pp. 141-169. San Francisco: Jossey-Bass.
- Robley, W., Whittle, S., & Murdoch-Eaton, D. (2005) Mapping generic skills curricula: A recommended methodology, *Journal of Further and Higher Education*, 29, 221-231.
- Romkey, L., & Bradbury, L. (2007). *Student curriculum mapping: A more authentic way of examining and evaluating curriculum*. Paper presented at the 2007 American Society for Engineering Education Conference. [On-Line]. Retrieved on September 15, 2009 from: [http://www.icee.usm.edu/ICEE/conferences/asee2007/papers/2268\\_STUDENT\\_CURRICULUM\\_MAPPING\\_A\\_MORE\\_AUTHE.pdf](http://www.icee.usm.edu/ICEE/conferences/asee2007/papers/2268_STUDENT_CURRICULUM_MAPPING_A_MORE_AUTHE.pdf)
- SACS (Southern Association of Colleges and Schools) (2008). *Principles of accreditation: Foundations for quality enhancement*, 3<sup>rd</sup> edition. Decatur, GA: SACS-COC.
- SACS (Southern Association of Colleges and Schools) (2005). *Resource manual for the Principles of accreditation: Foundations for quality enhancement*. Decatur, GA: SACS-COC.
- Schneider, C.G. (2008). Give students a compass: Can general education rise to the challenge? *Liberal Education*, 94 (3), 1-2.
- Stark, J.S., Briggs, C.L., & Rowland-Poplowski, J. (2002). Curriculum leadership roles of chairpersons in continuously planning departments. *Research in Higher Education*, 43 (3), 329-356.
- Stiehl, R., & Lewchuk, L. (2005). *The mapping primer: Tools for reconstructing the college curriculum*. Corvallis, OR: The Learning Organization.
- Sumsion, J., & Goodfellow, J. (2004). Identifying generic skills through curriculum mapping: A critical evaluation. *Higher Education Research & Development*, 23 (3), 329-346.
- Sutherland, S., & Katz, S. (2005). Concept mapping methodology: A catalyst for organizational learning. *Evaluation and Program Planning*, 28, 257-269.
- Svinicki, M.D. (2004). *Learning and motivation in the postsecondary classroom*. San Francisco: Anker Publishing/Jossey-Bass.
- Tariq, V.N., Scott, E.M., Cochrane, A.C., Lee, M., & Ryles, L. (2004). Auditing and mapping key skills within university curricula. *Quality Assurance in Education*, 12 (2), 70-81.
- Uchiyama, K.P., & Radin, J.L. (2009). Curriculum mapping in higher education: A vehicle for collaboration. *Innovative Higher Education*, 33, 271-280.
- Wergin, J.E. (2005, May/June). Higher education: Waking up to the importance of accreditation. *Change*, 35-41.
- Willett, T.G. (2008). Current status of curriculum mapping in Canada and the UK. *Medical Education*, 42, 786-793.
- Willimon, W.H., & Naylor, T.H. (1995). *The abandoned generation: Rethinking higher education*. Grand Rapids, MI: Eerdmans.
- Winn, W. (1991). Learning from maps and diagrams. *Educational Psychology Review*, 3, 211-247.

