White Paper: University of North Texas Information Fluency Initiative

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Current Context

The University of North Texas (UNT) mission states, “UNT is a major public research university deeply committed to advancing educational excellence and preparing students to become thoughtful, engaged citizens of the world” (University of North Texas, 2012). Critical thinking skills, technical competency, and information literacy must be fostered throughout the campus culture to graduate students well prepared for lifelong learning which is a critical factor in being a thoughtful, engaged citizen of the world.

The University Libraries are the heart of learning and research at the University of North Texas. Libraries’ faculty and staff offer outstanding core library services, provide leading-edge technology and support, and enhance the campus community with special events throughout the year. The libraries are a driver in providing open access to information and knowledge, showcasing the scholarly and artistic works of UNT’s faculty and staff, and helping UNT’s students succeed.

Deficiencies in the critical thinking skills of UNT students have been noted in recent National Survey of Student Engagement (NSSE) studies of UNT students, especially in areas related to information literacy (Simon, 2013). The library has long played an important role in addressing information literacy on the campus. In collaboration with faculty from virtually all disciplines, the UNT Libraries conducts hundreds of bibliographic instruction and information literacy sessions each year (University of North Texas, Institutional Research and Effectiveness, 2014-2015). In support of UNT’s avowed goal of providing the best quality education for students in Texas, the UNT Libraries will seek to foster not simply information literacy, but information fluency (defined) in UNT students.

Libraries contribute to student learning and success in a variety of ways. There are connections between aspects of the library such as instruction, reference, space and facilities and collections, and academic success factors such as student retention, persistence, GPA, engagement, graduation, and career preparedness (Association of College and Research Libraries (ACRL), 2015). Assessment in Action: Academic Libraries and Student Success (AiA) is a three-year project sponsored by the Association of College and Research Libraries (ACRL) where over 70 higher education institutions from across North America recently completed team-based assessment projects which resulted in the following important relationships between the library and student learning and success:

1. Library instruction builds students’ confidence with the research process.
2. Library instruction contributes to retention and persistence, particularly for students in first-year experience courses and programs.
3. Students who receive library instruction as part of their courses achieve higher grades and demonstrate better information literacy competencies than students who do not receive course-related library instruction.

4. A library’s research and study space fosters social and academic community among students.

5. Library instructional games engage students, enhance information literacy skills, and increase positive attitudes toward the library and its staff.

6. The library’s use of social media promotes awareness of the library and builds academic community among students.

7. Multiple library instruction sessions or activities in connection with a course are more effective than one-shot instruction sessions.

8. Collaborative instructional activities and services between the library and other campus units (e.g., writing center, study skills and tutoring services) promote student learning and success (Association of College and Research Libraries (ACRL), 2015).

In 2007 and 2008, the Association of American Colleges and Universities (AAC&U) published two reports to address the future of 21st century higher education, *College Learning for the New Global Century* (2007) and *High-Impact Educational Practices* (2008). The first commonly referred to as the LEAP or Liberal Education and America’s Promise Report. The LEAP Report identified several “essential learning outcomes” needed by 21st century graduates in order to be successful:

- Knowledge of human culture and the physical and natural world
- Intellectual and practical skills
- Personal and social responsibility
- Integrative learning (Association of American Colleges and Universities, 2007)

The second report identified ten high-impact educational practices that support the essential learning outcomes:

- First-year seminars and experiences
- Common intellectual experiences
- Learning communities
- Writing-Intensive courses
- Collaborative assignments and projects
- Undergraduate research
- Diversity/global learning
- Service learning
- Internships
- Capstone Courses (Kuh, 2008)
Proposal: Information Fluency Initiative

Definition
Although there are various definitions of information fluency (IF) including the 21st Century Information Fluency’s Digital Information Fluency (DIF), the Information Fluency Triad, Six Essential Elements of IF (Appendix A) (Rettig, 2002), as one of the five 21st Century Fluencies for the Digital Age (Crockett, Lee., Jukes, Ian., Churches, Andrew., 2011), and the International Society for Technology in Education’s (ISTE) Research and Information Fluency portion of their Student Standards, two elements seem common: 1) Information fluency intensifies information literacy, and 2) information fluency applies and adapts the general skills of information literacy to a given field.

For the purpose of UNT’s Information Fluency Initiative, the definition adopted by the Associated Colleges of the South fits best.

*Information Fluency can be envisioned as the optimal outcome when critical thinking skills are combined with information literacy and relevant computer skills* (Associated Colleges of the South, 2002)

The optimal IF outcome occurs when critical thinking skills are combined with information literacy and relevant technology skills. Information fluency integrates the abilities to:

- Collect the information necessary to consider a problem or issue
- Employ critical thinking skills in the evaluation and analysis of the information and its sources
- Formulate logical conclusions and present those conclusions in an appropriate and effective way (Associated Colleges of the South, 2006).
Information Literacy at UNT Libraries

Although the Association of College and Research Libraries (ACRL) filed the Framework for Information Literacy for Higher Education (Appendix B) in 2015, ACRL’s Information Literacy Competency Standards for Higher Education (Appendix C) have been the guiding standards since 2000. Though Information Literacy is one factor of Information Fluency, it is a major component in which the Libraries play a major role. Information literacy should be infused across areas including but not limited to the *online* virtual environment, physical *library*, and in face to face (*F2F*) instruction.

Online

Tutorials, videos, learning modules, widgets, apps or any type of library learning mechanism taking place on our webpages, LibGuides, and in Blackboard Learn, the university learning management system.

Should be:

- guided by input from faculty, administration, CLEAR, and other university components as well as the [Information Fluency Steering Committee](#) and library staff,
- modular, scalable, and reusable,
- sustainable and easily maintained,
- able to collect data for analysis and assessment purposes.

Library

Consider outreach, embedded, orientations, workshops, speakers, committees, meetings, etc…

Should:

- align with University, Library, Division, and Departmental goals,
• promote internal and external collaboration,
• be flexible and provide autonomy.

Face to Face (F2F)
Think of traditional library bibliographic instruction taught to a specific class.

Should:
• align with course assignments,
• utilize a course or subject guide (LibGuides) with teaching. Helpful to teach from during instruction, for flipped class methods, or post instruction follow-up,
• identify and use concepts from the ACRL Framework for Information Literacy for Higher Education (Appendix B),
• use the Knowledge Practices & Dispositions from the Framework.

Critical Thinking at UNT
Through the University Core Curriculum, students gain an enthusiasm for learning and an intellectual capacity that they will use throughout their lives. These "core objectives" are Critical Thinking, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. As one of the Core Objectives, Critical Thinking Skills, includes creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

Critical Thinking as a Core Objective is included in all 42 hours of the University Core Curriculum:
• Communication (English Composition and Rhetoric), 6 hours
• Mathematics, 3 hours
• Life and physical sciences, 6 hours
• American History, 6 hours
• Government/Political Science, 6 hours
• Creative Arts, 3 hours
• Language, Philosophy and Culture, 3 hours
• Social and Behavioral Sciences, 3 hours
• Discovery, 3 hours
• Capstone, 3 hours (University of North Texas, 2015)

Computer Literacy at UNT
It may be assumed that UNT students come in with a certain amount of computer literacy or that it is gained through the University Core Curriculum. Though computer literacy was part of the University 2013-2014 Core Curriculum there is no longer mention of student computer literacy or competencies outside of computer related major areas of study such as Computer Engineering and Computer Science.
Implementation

UNT Libraries Strategic Priority
According to the *UNT Libraries Strategic Plan Priorities FY 2014-2017: Key prospective Goal Areas for the UNT Libraries* (Halbert & Hartman, 2015),

“A comprehensive initiative will be established as a way of focusing and orchestrating many distinct library activities that are directed to the ultimate aim of improving the capacity of UNT students for critical thinking and the ability to use information effectively. A key aim of this initiative will be to strengthen core library services to enhance high-impact practices. Building upon our core services, the UNT Libraries will collaborate with campus student services to promote a student-centered library and increase creative learning opportunities outside the classroom. The UNT Libraries will also work with faculty to create innovative services, which enhance student learning and integrate the Libraries as an active partner in the classroom. The Information Fluency Initiative will be closely coordinated with the new assessment program in the UNT Libraries in order to establish clear metrics for monitoring the progress of the initiative in improving student information fluency. The initiative will also coordinate with other relevant campus groups related to student learning success, including groups both inside and outside of Academic Affairs, as well as the campus QEP project. This initiative will coordinate a large number of related activities in the library, including bibliographic instruction program, the new GIS program, digital scholarship efforts, and other related undertakings. The Information Fluency Initiative will have a steering committee with representatives from the library leadership and several other Academic Affairs units, as well as a regularly assessed set of agreed-upon metrics to gauge progress and guide actions.”

Guidelines for Best Practices
Though designed for Information Literacy programs, ACRL’s *Characteristics of Programs of Information Literacy that Illustrate Best Practices* work equally well as guidelines and considerations to assist in preparing and developing the Information Fluency Initiative (*Appendix D*). Common considerations for program best practices include:

- Mission statement
- Goals and Objectives
- Planning
- Administration and Intuitional Support
- Articulation (program sequence) with the Curriculum
- Collaboration
- Pedagogy
• Staffing
• Outreach
• Assessment/Evaluation

Steering Committee
Coordinate with other relevant campus groups related to student learning success. Faculty, librarian, staff, and student representation, participation, and collaboration is crucial for the achievement of student information fluency.

Integrate Information Fluency into Undergraduate Classes
Information Fluency works best if tied to course assignments. Librarians currently partner with faculty to provide library instruction in face to face sessions, online via GoToMeeting, and by creating customized course guides on the web. Look to areas of current success for where to begin.

Online Tutorials
Investigate tools for teaching information literacy online. “During the Spring 2015 session, students taking online courses accounted for 12.4% of the total enrollment for the university” (University of North Texas Center for Learning Enhancement, Assessment, and Redesign (CLEAR), 2015). Going where users are to provide instruction and assistance to students at their point of need is essential.

Collaborate with Campus – QEP
UNT has chosen Soar Beyond the Classroom as the university's QEP. ‘Soar Beyond the Classroom’ seeks to leverage high-impact practices in conjunction with fostering critical thinking and communication skills. UNT’s QEP seeks to benefit students by “increasing motivation for learning; improving persistence to graduation; and building skills employers seek while making learning real and fun” (University of North Texas Soar Beyond the Classroom QEP Committee, 2015).

Training for Librarians, Faculty, Staff and University Community
To foster a culture of information fluency, key partners and stakeholders may need further training.
The IF Steering Committee can provide a full set of recommendations, but training opportunities could include:
• Workshops for Librarians at Liaison meetings or Dean’s Coffees
• Faculty training workshops
• Offer Faculty stipends (University of Scranton, The Harry & Jeanette Weinberg Memorial Library, 2015)
• Potential faculty training partnerships with CLEAR
• Campus-wide events with keynote speakers such as ACRL Framework taskforce members
Collaborate with Campus Community
Seek collaborations with the campus community by looking for groups, areas, and units focused on research and communication. Natural partnerships that come to mind are the Writing Labs, the Learning Center, or UNT Housing’s REAL Communities (Residents Engaged in Academic Living).

Work with Student Groups
Seek input from UNT Student groups including the current UNT Libraries Student Library Advisory Boards. Both the Undergraduate Student Library Advisory Board (USLAB) and Graduate Student Library Advisory Board (GSLB) are natural forums to solicit input from students on the Information Fluency Initiative.

Assess and Improve
Working closely in consultation with the UNT Director of Library Research and Assessment and utilizing a typical assessment cycle of Plan, Implement, Assess, Report/Revise/Repeat; the Information Fluency Initiative will be closely coordinated with the new assessment program at the UNT Libraries in order to establish clear metrics for monitoring the progress of the initiative in improving student information fluency.
**Benefits**
The University of North Texas will see the benefits from developing an information fluency initiative.

- Information fluency is essential to being educated in the information age
- SACS accreditation requires evidence of:
  - “training in the use of technology.” Comprehensive Standard 3.4.12 - Technology Use
  - “regular and timely instruction in the use of the library and other learning/information resources.” Comprehensive Standard 3.8.2 - Instruction of library use (Southern Association of Colleges and Schools Commission on Colleges, 2012)
- Library instruction positively impacts student retention, persistence, GPA, engagement, graduation, and career preparedness.
  - “Three or four library workshops offered within a program are more likely to result in a positive association with GPA” (Wong & Cmor, 2010).
  - “By demonstrating the variety of ways that libraries contribute to student learning and success, academic librarians are establishing connections between such academic success outcomes as student retention, persistence, GPA, engagement, graduation, career preparedness, and different aspects of the library (e.g., instruction, reference, space and facilities, and collections).” (Association of College and Research Libraries (ACRL), 2015)

**Challenges and Considerations**
- Developing a common terminology for faculty, librarians, and administrators to use to describe information fluency and information literacy.
- Developing information fluency leadership, buy-in, and participation throughout the University.
- Locating information fluency assessments that are easy to use, scalable, reliable, sustainable, and credible.
- Working within the University of North Texas and UNT Libraries’ budgetary reality.
- The consideration of where and how the “computer literacy” component of Information Fluency Initiative will be covered.
Time Line

Year One – FY 17
(Immediate Objectives)
- Establish Information Fluency Steering Committee.
- Look for areas of opportunity to enhance high-impact practices and student learning.
- Investigate online tools for teaching information literacy
- Map the Curriculum
- Pilot information fluency integration into Freshmen Composition courses (ENG 1310/1311 and ENG 1320/1321).
- Assessment

Year Two – FY 18
- Follow recommendations of the Information Fluency Steering Committee
- Information Fluency workshops for librarians and library staff
- Integrate information fluency into core four curriculum courses
- Based on investigation of tools, introduce and launch Online Information Fluency (Literacy) Tutorials.
- Assessment

Year Three – FY 19
- Continue following recommendations of the Information Fluency Steering Committee
- Campus-wide Information Fluency workshops for faculty, staff and University community
- Integrate information fluency into ten core curriculum courses
- Continue assessment and use data as a guide for future objectives.
Immediate Objectives

1. **Establish Information Fluency Steering Committee**
   Form a steering committee with representatives (approved by Dean of Libraries) from the library leadership and other Academic Affairs units.

2. **Look for areas of opportunity to enhance high-impact practices and student learning**
   A key aim of the comprehensive Information Fluency Initiative will be to strengthen core library services to enhance high-impact practices. Thus, an immediate objective is to identify areas of opportunity in core library services and unique collections where information fluency can enhance high-impact practices and student learning. It will also be important to identify areas of opportunity in groups on campus where information fluency can enhance high-impact practices and student learning.

3. **Investigate tools for teaching information literacy**
   Investigate various tools and methods for the delivery of online information literacy and provide a plan that outlines procedures and timelines for creating online workshops.

4. **Map the Curriculum**
   Subject Librarians and other staff members will select undergraduate programs to investigate in a curriculum mapping pilot project (to map the curriculum to find natural opportunities to collaborate with faculty on and assess information literacy).

5. **Integrate information fluency into courses**
   Work with faculty to integrate information fluency into their classes through the co-creation of assignments and being aware of instructional opportunities. Target specific groups of faculty and classes that would benefit from information fluency. Examples of an already successful relationship with faculty and their classes to potentially target, include the First-Year Composition courses at UNT (ENG 1310/1311 and ENG 1320/1321).

6. **Assessment**
   Working closely in consultation with the UNT Director of Library Research and Assessment and utilizing a typical assessment cycle of Plan, Implement, Assess, Report/Revise/Repeat; the Information Fluency Initiative will be closely coordinated with the new assessment program at the UNT Libraries in order to establish clear metrics for monitoring the progress of the initiative in improving student information fluency.
Appendix A:
Six Essential Elements of Information Fluency

Information Fluency Model: A Progressive Set of Skills and Concepts

IF is critical thinking continuously applied to information, its evaluation, use, and presentation

Selection of appropriate technologies and uses them effectively:
- WWW, library catalog, databases, books, journals, citation software, statistical software, word processor, database software, presentation software, video editing tools, HTML editor

Level 1: Defines and articulates need for information. Identifies potential types and formats of information.

Level 2: Considers costs and benefits of strategies. Re-evaluates nature and extent of need. Selects most appropriate methods, sources, or systems.

Level 3: Implements search strategies and refines search strategies. Extracts, records, and manages information and its sources.

Level 4: Evaluates information and its sources by applying recognized criteria. Summarizes main ideas to be extracted.

Level 5: Synthesizes main ideas, constructs new concepts. Compares new and prior knowledge. Assesses new knowledge against existing knowledge.

Level 6: Develops a plan for presenting a synthesis of existing knowledge or new knowledge. Uses appropriate technologies to communicate that to a defined audience. Understands ethical issues and intellectual property law. Acknowledges sources used.

(Rettig, 2002)
Appendix B:  
Association of College and Research Libraries (ACRL)  
Framework for Information Literacy for Higher Education

The new ACRL Framework is organized into six frames, each consisting of a concept central to information literacy, a set of knowledge practices, and a set of dispositions. The six concepts that anchor the frames are presented alphabetically:

1. Authority Is Constructed and Contextual  
2. Information Creation as a Process  
3. Information Has Value  
4. Research as Inquiry  
5. Scholarship as Conversation  
6. Searching as Strategic Exploration

Appendix C:
Association of College and Research Libraries (ACRL)
Information Literacy Competency Standards for Higher Education

1. The information literate student determines the nature and extent of the information needed.

2. The information literate student accesses needed information effectively and efficiently.

3. The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

4. The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

Appendix D: Characteristics of Programs of Information Literacy that Illustrate Best Practices


Preamble
Academic libraries work together with other members of their institutional communities to participate in, support, and achieve the educational mission of their institutions by teaching the core competencies of information literacy—the abilities involved in identifying an information need, accessing needed information, evaluating, managing, and applying information, and understanding the legal, social, and ethical aspects of information use. The systematic delivery of instructional programs and services should be planned in concert with overall strategic library planning, including the library’s budgeting process. Such planning may also involve strategizing with other campus units to deliver collaboratively designed programming.

To best assist academic and research librarians in preparing and developing effective instructional programs, the following guidelines are recommended.

Category 1: Mission
A mission statement for an information literacy program:
- Includes a definition of information literacy;
- Is consistent with the “ACRL Information Literacy Competency Standards for Higher Education”;
- Aligns with the library’s mission statement to correspond with the larger mission statement of the institution;
- Adheres to the format of campus strategic documents;
- Incorporates the institutional stakeholders, clearly reflecting their contributions and the expected benefits;
- Appears in appropriate institutional documents; and
- Promotes relevant lifelong learning and professional development.

Category 2: Goals and Objectives
Goals and objectives for an information literacy program:
- Are consistent with the mission, goals, and objectives of the library and the institution;
- Establish measurable outcomes for evaluation of the program;
- Accommodate input from institutional stakeholders;
- Clearly present the integration of information literacy across the curriculum for students’ academic pursuits and effective lifelong learning, see Category 5: Articulation;
- Accommodate sequential growth of students’ skills and understanding throughout their education, see Category 5: Articulation; and
- Take into account all learners served by or connected to the institution, regardless of delivery systems or location.
Category 3: Planning
Planning for an information literacy program:

- Articulates and develops mechanisms to implement and/or adapt components of the best practices listed in this document (as needed):
  - mission
  - goals and objectives
  - administration and institutional support
  - articulation (program sequence) with the curriculum
  - collaboration
  - pedagogy
  - staffing
  - outreach
  - assessment/evaluation.

- Addresses current opportunities and challenges.

- Is tied to library, institutional, and information technology planning and budgeting cycles.

- Incorporates findings from environmental scans.

- Accommodates the level of the program, department, and institution.

- Addresses and prioritizes human, technological and financial resources (both current and projected), taking into account administrative and institutional support.

- Encourages librarian, faculty, and administrator collaboration at the outset.

- Enables librarians to take on leadership roles that will extend beyond the planning stages.

- Includes a program for training and development, see Category 8: Staffing.

- Provides a timeline for systematic revision.

Category 4: Administrative and Institutional Support
Administration within an institution:

- Assigns information literacy leadership and responsibilities to appropriate librarians, faculty, and staff.

- Incorporates information literacy in the institution’s mission, strategic plan, policies, and procedures.

- Provides funding to establish and ensure ongoing support for:
  - teaching facilities
  - current and appropriate technologies
  - appropriate staffing levels
  - professional development opportunities.

- Recognizes and encourages collaboration, see Category 6: Collaboration.

- Communicates support for the program.

- Rewards individual and institutional achievement and participation in the information literacy program.
Category 5: Articulation (program sequence) within the Curriculum
Articulation with the curriculum for an information literacy program:
- Identifies the scope (i.e., depth and complexity) of competencies to be acquired on a disciplinary level as well as at the course level.
- Sequences and integrates competencies throughout a student’s academic career, progressing in sophistication.
- Emphasizes learner-centered learning, see Category 7: Pedagogy.
- Is formalized and widely disseminated.
- Uses local governance structures to advocate for and ensure institution-wide integration into academic or vocational programs.
- Specifies programs and courses charged with implementing competencies.

Category 6: Collaboration
Collaboration in an information literacy program among disciplinary faculty, librarians, other instructors (e.g., teaching assistants), administrators, and other program staff:
- Fosters communication among disciplinary faculty, librarians, other instructors (e.g., teaching assistants), administrators, and other staff within the institution.
- Focuses on enhancing student learning and skill development for lifelong learning.
- Communicates effectively with faculty, librarians, other instructors, administrators, and additional staff members to gain support for the program within the academic community.
- Aligns information literacy with disciplinary content.
- Works within the context of the course content, and other learning experiences, to achieve information literacy outcomes.
- Takes place at different stages: planning, delivery, assessment of student learning, and evaluation and refinement of the program.

Category 7: Pedagogy
Pedagogy for an information literacy program:
- Supports diverse approaches to teaching and learning.
- Is suitable to the type of instruction (e.g., one-shot, dedicated course).
- Takes into account diverse teaching and learning styles.
- Incorporates and uses relevant and appropriate information technology and other media resources to support pedagogy.
- Advances learning through collaborative and experiential-learning activities.
- Promotes critical thinking, reflection, and recursive learning.
- Builds on learners’ existing knowledge, course assignments, and career goals.
- Contextualizes information literacy within ongoing coursework appropriate to the academic program and course level.
- Prepares students for independent lifelong learning.
Category 8: Staffing
Staff for an information literacy program:
- Includes librarians, library staff, administrators, program coordinators, instructional technologists, as well as disciplinary faculty, graphic designers, teaching/learning specialists, and other program staff as needed.
- Endeavors to work collaboratively with others and support each other’s learning development.
- Are knowledgeable in instruction/teaching, curriculum development, and assessment of student learning.
- Garner expertise in developing, coordinating, implementing, evaluating, and revising information literacy programs.
- Exemplify and advocate for information literacy and lifelong learning.
- Engage in professional development and training.
- Are adequate in number to support the program’s mission and workload.
- Receive regular evaluations about the quality of their contributions to the program and areas for improvement.

Category 9: Outreach
Outreach activities for an information literacy program:
- Clearly define and describe the program and its value to targeted audiences, including those within and beyond the specific institution.
- Market the program through the creation and distribution of publicity materials.
- Identify and reach out to relevant stakeholders and support groups both within and outside of the institution.
- Use a variety of communication methods, including formal and informal networks and media channels.
- Provide, in collaboration with other campus professional development staff, workshops and programs that relate to information literacy.
- Contribute to information literacy’s advancement by sharing information, methods, and plans with peers and stakeholders both within and outside of the institution.

Category 10: Assessment/Evaluation
Assessment/evaluation of information literacy includes program performance and student outcomes.

Program evaluation:
- Develops a process for program planning, evaluation, and revision.
- Measures the progress of meeting the program’s goals and objectives, see Category 2: Goals and Objectives.
- Integrates with course and curriculum assessment, institutional evaluations and regional/professional accreditation initiatives.
- Uses appropriate assessment/evaluation method for relevant purposes, for example formative and summative and/or short-term and longitudinal.

Student outcomes:
- Acknowledge differences in learning and teaching styles in the outcome measures.
• Employ a variety of pre- and post-instruction outcome measures; for example: needs assessment, pre-tests, post-tests, portfolio assessment, oral defense, quizzes, essays, direct observation, anecdotal, peer and self review, and experience.
• Focus on learner performance, knowledge acquisition, and attitude appraisal.
• Assess the learners’ process and product.
• Include learner-, peer-, and self-evaluation.
References


