

UTHSCSA Innovative Teaching Grants Program
ITG Application

Title of ITG proposal: Development and Psychometric Evaluation of the Evidence-Based

Names and titles of project director and principle collaborators:

Project Director:

Name: Kathleen R. Stevens, RN, EdD, FAAN

Title: Professor and Director, Academic Center for Eviden

Department & Division: Family Nursing Care/ School of Nursing

E-Mail: stevensk@uthscsa.edu

Campus phone number: 567-3135

Collaborators

Name: Vicki L. Byers RN, Ph.D.

Title: Associate Professor/Clinical and Associate Director

Department & Division: Acute Nursing Care/ School of Nursing

E-Mail: byers@uthscsa.edu

Campus phone number: 7-0187

Name: Mary L. Heye, PhD

Title: Associate Professor

Department & Division: Acute Nursing Care/ School of Nursing

E-Mail: heye@uthscsa.edu

Campus phone number: 7-5831

Name: Judy Trotti, RN, MSN, ACNP

Title: Clinical Instructor

Department & Division: Acute Nursing Care/School of Nursing

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Campus phone number: 7-2371

ITG Proposal Synopsis

Project Title: Development and Psychometric Evaluation of the Evidence-Based Practice (

What is the educational problem or need that is addressed by this project? {50 words}

With evidence-based practice (EBP) being new in healthcare, there is an attendant need for valid and reliable methods with which to assess individual learner preparedness (readiness) to perform the knowledge and skills implied in the essential competencies to prepare future nurses to employ evidence-based quality improvement in nursing.

What do you propose to do? (briefly describe what you will develop – E.g., what is the product or outcome that will be produced?) {50 words}

Using the Essential Competencies for EBP in Nursing (Stevens, 2005) as a basis, we will develop and test the EBP Preparedness Scale to measure nursing student's preparedness for EBP. Undergraduate and masters students will complete the online survey. Scale reliability and validity will be estimated from these data.

What type(s) and numbers of students will directly benefit from this project?

Because the Scale will be tested in both generic undergraduate (n = 150) and masters (n=80) nursing students, it will have applicability to the 600+ students who are enrolled annually in our School of Nursing. The scale will have applicability to similar undergraduate and graduate nursing programs across the nation.

How will you evaluate the effectiveness of this project? {50 words}

1. The EBP Preparedness Scale identifies respondent's EBP knowledge and skill level distinguishing between beginner, intermediate, and advanced level.
2. The EBP Preparedness Scale's reliability, validity, and usability with generic undergraduate and graduate (Master's) students.
3. High correlations between respondent's scale score and self-classification of EBP knowledge and skill level.

Total amount of funding requested: \$ 6,751.31

Project Approval by Department Chair:

Name: Kay Avant, PhD, RN

Department: Family Nursing Care

Signature: _____ **Date:** _____

UTHSCSA Innovative Teaching Grants

ITG Proposal

Your application is expected to answer each of the six questions below. Please read the review criteria on page 6.

1. **Why should this project be implemented?** Discuss the problem, need or deficiency that will be addressed by this project and discuss why it is important to resolve this problem.
2. **What will be developed or implemented?** Describe the product or outcome.
3. **What objective(s) do you hope to achieve by implementing this project?**
4. **What tasks will be performed to complete the project and who will perform each of these tasks?** Describe the plan / methods for completing the work.
5. **How will you evaluate the effectiveness of this project?** Describe how you will evaluate whether or not the project objectives were achieved.
6. **What is your plan for continuation of the project after ITG funding support concludes?**

Other:

- Complete the project budget.
- Develop a logic model for your proposal (example of logic model provided).
- Attach a 2 page biographical sketch of the Project Director.
- Schedule a pre-submission consultation meeting with the ITG Coordinator.

UTHSCSA Innovative Teaching Grants Budget Request

Project Director: Kathleen R. Stevens, RN, EdD, FAAN

Title of Proposal: Development and Psychometric Evaluation of the Evidence-Based Practi

		Funds Requested
1. Consumable Supplies (Itemize below)	\$	500.00
2. Equipment (Itemize below)	\$	0.00
3. Hourly Rate Services (such as software programming) Must be calculated at an hourly rate.	\$	5,291.31
Example: 30 hrs programming @ \$30/hr = \$900		
4. Other expenses (Itemize precisely)	\$	960.00
TOTAL	\$	6,751.31

Itemize Expense Items

Consumable Supplies	Equipment	Hourly Rate Services	Other Expenses
Materials related to instrument design, testing, and advertising (special printer paper, printing, poster mounting on foam board); IRB flyers = \$500	None- All equipment is available at the SON/ACE office	Research Assistant @ \$15.66/hr x 191 hrs = \$2,993 Admin Assist I @ 14.10/hr x 102.5 hrs \$1,445 Statistical data processing and analysis @ \$45/hr x 15 hrs = \$675 Online Survey expert programming consultation \$60/hr x 3 hrs = \$180	Survey Monkey programming \$240/yr x 1.5 yrs = \$360 Travel to disseminate project findings at Southern Nursing Research Society = \$600

Travel and equipment: Budget requests to support travel for presentations at meetings related to an ITG project must be justified in the application. If the grant is funded, travel expenses may not exceed 10% of the total award. If the project budget includes funds for purchasing equipment, the applicant must document that such equipment is not available or accessible at The UTHSCSA.

<p>Define the target population:</p> <p>Who will your program serve?</p> <p><i>Be specific:</i> If age range, SES, geographic location are important, then specify them.</p>	<p>What are the theoretical assumptions you are making about how your program will work?</p> <p>What assumptions are you making regarding:</p> <ol style="list-style-type: none"> 1) participants? 2) environment? 3) staff? 	<p>Resources:</p> <p>What resources does the program have available to achieve the program objectives/goals?</p> <p>Constraints:</p> <p>What obstacles or challenges might there be? Example: Legal or regulatory constraints</p>	<p>These are the services/interventions that a program provides to fulfill its goals.</p> <p>Activities lead to outputs and are directly related to outcomes.</p>	<p>Outputs are the products of a program's activities such as the number of classes held, the number of home visits made, the number of people attending/completing classes, etc.</p>	<p>Outcomes are the benefits for participants during, or after their participation in your program. Outcomes may be related to, knowledge, skills, attitudes, values, behavior or status.</p> <p>There are usually <i>short-term, intermediate, and long-term</i> outcomes.</p>	<p>Outcome indicators</p> <p>Are the observable, measurable characteristics or changes that result represent the achievement of an outcome.</p>
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Program Logic Model

Development and Psychometric Evaluation of the Evidence-Based Practice (EBP) Preparedness Scale

Program Goal:

TARGET POPULATION	ASSUMPTIONS	INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES	OUTCOME INDICATORS
<p>1. Undergraduate students from the undergraduate research course (80 – 100 students/semester). Will administer EBP Preparedness Scale over two semesters.</p> <p>2. Graduate (Master's) students from Nursing Science II course (30-40 students over 2 semesters)</p> <p>3. Demographics Age Gender Ethnicity Semester in nursing program. Respondent's self-classification of EBP knowledge & skills.</p>	<p>1. EBP competencies must be integrated into nursing education in order to prepare the future nursing workforce for evidenced-based quality improvement patient-centered care.</p> <p>2. Student's will want to participate in the survey.</p> <p>3. The scale could be used to assess learning accomplishments and learning needs.</p>	<p>1. ACE Star Model (Stevens, 2004).</p> <p>2. Essential Competencies for Evidenced-based Practice in Nursing (Stevens, 2005).</p> <p>3. Computer software (Survey Monkey). ACE & ERD has license to Survey Monkey.</p> <p>4. Imputing EBP Preparedness Scale to software.</p> <p>5. Consultation with Aggie and Ida in ERD.</p> <p>6. Statistical consultation.</p> <p>7. Imputing data into SPSS.</p>	<p>1. Develop the EBP Preparedness Scale based on national consensus of the Essential Competencies for EBP in Nursing (Stevens, 2005).</p> <p>2. Administer the EBP Preparedness Scale to target population.</p> <p>3. Establish reliability, validity, and usability of the scale.</p> <p>4. Start to look for trends of EBP content in undergraduate & graduate nursing program.</p>	<p>1. Respondents could self-classify their EBP knowledge and skills as beginner, intermediate, or advanced.</p> <p>2. Have 100% completion rate of the scale.</p>	<p>1. Identify skill level of respondents (discriminate analysis)</p> <p>2. Compare respondent's self-classification with score on the scale.</p> <p>3. Determine relationships between selected demographics & scale score (correlations)</p>	<p>1. New EBP Preparedness Scale identify knowledge of EBP and skills level.</p> <p>2. Reliability, validity, and usability with undergraduate and graduate (Master's) nursing students.</p> <p>3. Respondent's self-classification of the level of EBP knowledge and skills.</p> <p>4. Begin to identify the inclusion, consistency, or exclusion of EBP content in the School of Nursing undergraduate and graduate (Master's) curricula.</p>

Review Criteria for ITG Proposals

ITG proposals will be evaluated in relation to the applicants' responses to the areas below. A pre-submission meeting with the ITG Coordinator is required.

1. Description and justification of the problem, need or deficiency

Why should this project be implemented? What is the problem, need or deficiency that will be addressed by this project? And why is it important to address this problem.

2. Uniqueness of the project

What will be developed or implemented and, importantly, why is this approach innovative and likely to enhance students' learning or the quality of their educational experience?

3. Potential for impact

What objective(s) do you hope to achieve by implementing this project?

4. Thoroughness of the work plan.

What tasks will be performed, how it will be done, and who will do the work?

5. Appropriateness of the evaluation plan

Describe how you will evaluate whether or not the project objectives were achieved.

6. Plan for continuation

What is the plan for continuation of the project after ITG funding concludes?

7. Development of a Logic Model

The logic model is a tool that will provide assistance in the planning and implementation phase of the project.

8. Pre-submission meeting with the ITG Coordinator

The ITG Coordinator will certify that the meeting occurred.

ITG Application Template

Please complete each section of the application. Please type.

1. Why should this project be implemented? Discuss the problem, need or deficiency that will be addressed by this project and discuss why it is important to resolve this problem.

In the light of the rapid emergence of EBP as a new paradigm in healthcare quality improvement, preparation of the nursing workforce to engage in EBP is vital (ANA, 1994, AACN, 1995, AACN, 1996, O'Neil, 1998, IOM, 2001; Stevens, 2002; IOM, 2003; Stevens and Staley, in press). As a result, nursing education curricula (preparation of the future workforce) and current workforce competencies have been outpaced. If nursing is to play a full role in this movement, EBP competencies must be integrated into nursing education. National consensus on essential EBP has only recently established (Stevens, 2005). To date, no assessment scale has been developed using these preliminary studies as a basis. Using these nationally endorsed competencies as a basis for scale development to assess EBP preparedness has the potential for producing a highly useful instrument.

A valid and reliable scale would have multiple uses in both education and practice. The scale could be used to assess and address learning accomplishment and learning needs. With a well-developed EBP Preparedness Scale, competencies could be accurately assessed in order to develop and channel resources to fill the need in competencies development. Another use in nursing academia is to see where the deficiencies of EBP knowledge and skill lie and start to make curricula revisions.

This first stage of instrument development will address the student learner as the target population. The instrument would be useful in a number of ways. With such a scale, students could self-assess current learning needs and progress, as in pre- and post-testing. In addition, the scale could provide a basis for evaluating learning during structured courses. The measure could also be used by faculty as they assess various aspects of the nursing curricula and education programs for ideal inclusion of competencies.

Beyond initial work accomplished in this project, successive stages of instrument development will adapt the scale for use by current workforce members (faculty and clinicians) for self-assessment and subsequent selection of self-improvement professional development activities. Of high use would be yet another adaptation of the scale for use by clinical agencies as they assess the clinical organization's and microsystem's readiness for employing EBP.

2. What outcome(s) do you hope to achieve by implementing this project?

There are several objectives to accomplish by implementing this project.

- (1) To develop the EBP Preparedness Scale to based on the Essential Competencies for Evidence-Based Practice in Nursing (Stevens, 2005), to measure EBP knowledge and skills related to the target population. Scores related to this objective will give data related to undergraduate and graduate students' current knowledge of EBP.
- (2) To establish validity, reliability, and usability of the EBP Preparedness Scale.
- (3) Identify the EBP knowledge and skill level (beginner, intermediate, advanced) of the respondent's.
- (4) Compare the respondent's self-classification of EBP knowledge and skills with the scale score.
- (5) Determine relationships between selected demographics and EBP Preparedness Scale (i.e., prior studies in EBP, level of academic progress, prior nursing experience).
- (6) Begin to identify gaps in the undergraduate and graduate nursing curricula related to EBP knowledge and skills.

3. What will be developed or implemented? Describe the products or outcomes. Examples: web-based curriculum, CD-ROM, teacher training programs.

We will develop and implement an instrument development study to develop and evaluate an online survey tool. Using the Essential Competencies for EBP in Nursing (Stevens, 2005) as a basis, we will develop and test the EBP Preparedness Scale to measure nursing student's preparedness for EBP. Undergraduate and masters students will complete the online survey and parallel instruments. Test-retest and internal consistency reliability estimates will be made. Concurrent validity will be estimated using the BARRIERS scale (Funk, et al, 1991); construct validity will be determined using factor analysis approaches. The resulting product will be an online survey scale, with known reliability and validity among undergraduate and masters nursing students.

The research team will consult instrument experts regarding the formatting of a Likert-type response scale. We will also discuss tests of validity and reliability issues related to scale development.

4. Methods: What tasks will be performed to complete the project and who will perform these tasks? Describe the plan / methods for completing the work.

Spring 2006

Task: Convene the research team to begin development of project.

(Stevens, Byers, Heye, and Trotti, Staley).

Method: Consult with a statistician about project

Consult with the instrument team regarding the developed scale.

(Stevens, Byers)

Summer 2006

Task: Develop the EBP Preparedness Scale (Stevens, Byers, Heye, and Trotti, Staley).

Method: Send proposal of study to IRB for expedited review.

(Stevens, Byers)

Fall 2006

Task: Program & input EBP Preparedness Scale to Survey Monkey software

(Stevens)

Method: Transfer Survey on Survey Money to nursing intranet server

(Stevens)

Consult undergraduate and graduate faculty in the two courses about students taking the survey (Stevens, Byers).

Spring 2007

Task: Administer EBP Preparedness Scale via nursing intranet to undergraduate students in the Nursing Research Course and the graduate students in the Master's Nursing Science II course

Summer 2007

Task: Establish validity, reliability, usability of EBP Preparedness Scale (Stevens, Byers, Heye, Trotti, Staley, statistician, data entry specialist).

Revise EBP Preparedness Scale as needed to administer second time to undergraduate and graduate students in Fall, 2007 (Stevens, Byers, Heye, Trotti, Staley)

5. How will you evaluate the effectiveness of this project? Describe how you will evaluate whether or not the project objectives were achieved.

(1) Achieve participation from undergraduate students in the undergraduate research course (80-100 students per semester) for two semesters. Achieve participation of 30-40 graduate students over two semesters taking the Nursing Research II course.

(2) Establish validity, reliability and usability of the EBP Preparedness Scale.

(3) The EBP Preparedness Scale discriminates skill level of respondents (discriminate analysis). Skill level is beginner, intermediate, or advance EBP knowledge.

(4) Correlations between scale score and age, gender, ethnicity, semester in nursing program, respondent's self-classification of EBP knowledge and skills.

(5) Respondent's can self-classify themselves as having a beginning, intermediate, or advance EBP knowledge and skills.

6. What is your plan for continuation of the project after ITG funding support concludes?

To seek external funding to expand the scale to other populations like respondent's in all semesters of undergraduate and the graduate program at UTHSCSA, School of Nursing, and other Schools of Nursing. Other populations include using the EBP Preparedness Scale for clinician self-assessment, clinical performance competencies/career ladder, microsystems, and organizational readiness for EBP.

The Summer Institute on EBP offers opportunity to test the scale with over 300 participants. The Summer Institute on EBP is in June 2006.

Another way to continue this project is to explore the suitability for future funding using the EBP Preparedness Scale for Nursing School assessment in order to generate revenue for continuation of expanding the use of the EBP Preparedness Scale.

We have targeted the Robert Wood Johnson Foundation Interdisciplinary Nursing Quality Research Initiative for funding of an extension of this work to practice settings. In addition, We will apply for a grant from the Agency for Healthcare Research and Quality to support this work and further expansion to development of online instruction for evidence-based quality improvement.

References

American Association of Colleges of Nursing (AACN). (1995). Essentials of Baccalaureate Education for Professional Nursing Practice. Available: <http://www.aacn.nche.edu/education/bacessn.htm>.

American Association of Colleges of Nursing (AACN). (1996). Essentials of Master's Education for Advanced Practice Nursing. Available: <http://www.aacn.nche.edu/Publications/mastessn.htm>.

American Nurses Association (ANA). (1994). ANA Position Statement: Education for Participation in Nursing Research. Accessed October 15, 2004. Available:

Project Director biosketch:

BIOGRAPHICAL SKETCH

NAME

Kathleen R. Stevens, RN, MS, EdD, FAAN

POSITION TITLE

Professor and Director, ACE

EDUCATION/TRAINING

Northwestern State, Natchitoches, LA
BS, 1969, Nursing

Texas Woman's University, Houston, TX
MS, 1972, Maternal Child Health

Univ of Houston/Baylor College, Houston, TX
Ed. D., 1982, Education Administration/Health Research Focus

University of Utah, Salt Lake City, UT
Post Doc, 1991, Nursing Informatics

A. Positions and Honors.

1970-71 Charge Nurse, Emergency Department, Bogalouosa Medical Center, Bogalouosa, LA
1973 Charge Nurse, Pediatrics, Memorial City General Hospital, Houston, TX
1973-81 Assistant Professor, The Univ. of Texas Health Science Center at Houston, School of Nursing, Houston, TX
1980-81 Research Assistant, University of Houston, College of Education, Dept. of Health Education, Houston, TX
1985-88 Adjunct Graduate Faculty, University of Houston, College of Education, Houston, TX
1986-89 Clinical Associate Professor, University of Texas Health Science Center at Houston, School of Nursing, Houston, TX
1981-89 Director of Nursing--Research, The University of Texas M.D. Anderson Cancer Center, Houston, TX
1989-Pres Professor, School of Nursing, Department of Family Nursing; Graduate Faculty, Graduate School of Biomedical Sciences, The University of Texas Health Science Center at San Antonio, TX
1999-Pres Founding Director, Academic Center for Evidence-Based Nursing, UTHSCSA, San Antonio, TX
2000-Pres Chair, Summer Institute Program Committee, UTHSCSA, San Antonio, TX
2004-Pres Secretary, National League for Nursing Board of Governors.
2004-Pres Member, Institute of Medicine Committee on Medication Errors, commissioned by US Congress.

Honors/Awards:

1988 Excellence in Nursing Research Award, Nursing Research Roundtable of Greater Houston, TX
1990 Outstanding Teacher Award, University of Texas Health Science Center at San Antonio, TX
1991 Nursing Research Excellence Award, Sigma Theta Tau, University of Texas Health Science Center at San Antonio, TX
1991 Post doctoral studies, Nursing Informatics University of Utah, Salt Lake City, Utah.
1995 Award for Distinguished International Service, Delta Alpha, Sigma Theta Tau International, San Antonio, TX
1996 Innovative Teaching Award. The University of Texas Health Science Center at San Antonio School of Nursing
1999 Fellow, American Academy of Nursing
2000 Distinguished Alumni, Texas Woman's University
2003 Advancing the Profession Award, Finalist, NurseWeek
2003 Excellence in Nursing Education Research Award, National League for Nursing
2003 National League for Nursing Award, Excellence in Nursing Education Research
2003 US Invitational Conference on Translation Research, University of Iowa, Iowa
2002 & 2003 International Invitational Meeting on Knowledge Utilization, 2002-Oxford, England; 2003-Quebec, Canada
2004 Rosemary Kerr McKeivitt Memorial Research Award, UTHSCSA School of Nursing
2004 Invitational Evidence-Based Practice Leadership Summit, University of Rochester, New York
2004 Texas Nurses Association "Nurse of the Year" Award

B. Selected Publications:

Stevens, KR & Staley, J. (in press). The Quality Chasm Reports, Evidence-Based Practice, and Nursing's Response to Improve Healthcare. Nursing Outlook.
Stevens, KR. (2005). Essential Competencies for Evidence-Based Practice in Nursing. San Antonio: Academic Center for Evidence-based Practice (ACE) of The University of Texas Health Science Center.
Stevens, KR. (2004). ACE Star Model of Knowledge Transformation: Utility in Practice and Education. Proceedings of the NIH State of the Science Conference.