

USC IME Abstract Preparation Outline

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Section - suggested word count	Elements	Suggestions
The Idea – approximately 25 words 150 characters including spaces	Who: The target learners,	Specify the specialty or health profession and level of learner, if that is important. Example: “Third year family medicine residents”
	What: What you want these learners to be able to do at the end of your intervention or training (outcome objective)	Make sure it is stated as a learner outcome (not a teacher behavior) - “(residents) will incorporate motivational interviewing techniques into their care of chronic disease patients” not “(faculty) will deliver a motivational interviewing curriculum)”
	How: Your method (interactive teaching technique or quality improvement action).	Select the most interactive technique available to you - note for yourself what learning principles will be in play - in the example below - simulation can include practice with feedback, exercises should also, build on prior knowledge, help learners structure knowledge and build motivation (valuing and confidence) in a supportive environment.
	Example: An integrated cultural medicine curriculum designed to help FM residents improve their culturally responsive knowledge, attitudes and patient care skills	
Rationale/Need approximately 225 words 3-4 sentences - 1500 characters including spaces	1) State how your idea addresses a national need (with citation);	State the degree to which your target problem is generalizable – provide evidence, preferably from published sources, that this problem is experienced by the public (patient problem) or other programs, other specialties, other health professions (learner problem)
	2) State the gap in learner performance (or patient outcomes) between current and ideal	Clearly describe the real need – gap between current outcomes and desired outcomes – with data from a needs assessment if you have it.
	3) Described the need perceived by patients, faculty and/or learners	List the key issues of stakeholders (perceived need – ideas of stakeholders about the problem – may be need related to patient outcomes, learner outcomes, or process related to care or teaching
	4) Include a sentence that provides a rationale for your proposed intervention (or teaching method)	Your sentence may include one or more to these three things: 1) how it addresses the identified patient or learner need; how it fits with past studies of interventions that addressed your identified problem, and/or 3) how it incorporates learning principles or best practices.
	Example: In the context of US health disparities and patient diversity, residents and faculty in our family medicine residency program desire improved training in culturally responsive healthcare (CRHC). Nationally there is need for more training in CRHC and leaders have called for research about effective teaching methods in this curricular area (1). Multimodal methods show promise (2). With these realities in mind, we plan to implement a new CHRC curriculum in July 2014 as part of our HRSA grant to promote Patient Centered Medical Home training. We will structure the curriculum based on the principle that learners benefit from multiple opportunities for practice and feedback over time. (3) Furthermore, the new ACGME “milestones” for family medicine will be integrated into the evaluation methods.	
Methods - approximately 225 words 1500 characters	Description of learners (how many, what level, what field)	This is a one-sentence description of your target audience.
	Describe the when (how many hours, how many sessions, across	This may be a simple statement of the amount of time allotted for your intervention and where it will take place- e.g. 3 months within the outpatient clinic, or one year in multiple sites within

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including spaces	how much time) and where (classroom, etc.)	our training program, or 10 one-hour sessions within the core curriculum, one per month.
	Describe your “cool” interactive method or methods	Since you have very limited words it helps to number your steps or components. List your methods so that the steps of implementation are clear, and the reader can see that you are using “best” teaching practices.
	<p>Example: The intervention will focus on the 21 family medicine residents in our program and take place over one year. The intervention will include the following: 1) Weekly didactic teaching: Current teaching sessions will be enhanced with relevant culturally responsive health care (CRHC) content. Our goal is incorporation into 50% of core curriculum sessions. Guidelines, references and questions to consider when preparing presentations will help faculty with the integration process. 2) Direct observation: Our three behaviorally oriented faculty members will provide video review and shadow precepting during resident continuity clinic and add cultural competence SOAP grid questions (related to elements of health disparities, avoiding medical errors and patient-centered care) in these direct observation sessions and into the written feedback reports. This process provides practice with targeted feedback. 3) Continuity clinic precepting: All faculty members will include questions relevant to CRHC in precepting encounters in residency continuity clinics. To support faculty in this task we will provide a training session related to the Cultural Competence SOAP Grid, and offer practice using two questions of each faculty member’s choosing. 4) A new annual cultural medicine reflection seminar will facilitate resident written self-reflection about a specific patient experience. Residents will share in small groups about their written reflection and personal plan of action. They will receive written feedback from faculty that will invite residents to continue discussion with peers and faculty.</p>	
<p>Plan for Program (project) Evaluation or research design - approximately 125 words 1000 characters including spaces</p> <p>Four Possible components of the project evaluation</p>	1 Accountability – did you do what was promised	These are typically counting variables- numbers of sessions or programs given; numbers of attendees at various programs; total attendees (patterns); unique attendees (data about); numbers of learner projects completed or charts reviewed or patient interviewed, etc.
	2 Reaction – did the stakeholders like it?	This is typically done with standard patient satisfaction or session evaluation forms but can use a specially created form.
	3 Learning – what did the target group learn?	These data would typically be gathered through use of an audience response system for groups or through online or paper quizzes/questionnaires for individual assessment for knowledge or attitudes; for skills direct observation or observation with video is typically used.
	4 Behavior – what are the members of the target group doing differently due to the intervention?	Typically we use a commitment to act with follow-up to examine changes in behavior. These can be done on paper or online or through interviews.
	<p>Example: Weekly didactic presentations will be evaluated through review of resident responses to a question about what residents learned about CRHC. Presence of comments/recommendations about CRHC will be reviewed in written feedback from direct observation of sessions. A resident survey two months after implementation will assess perceptions about the usefulness of faculty use of CRHC questions in precepting. Annual written reflections about patient cases with cultural issues will be monitored for depth of reflection and for content. Overall improvement in knowledge, attitudes and skills will be measured by CRHC relevant ACGME milestones, as well as by pre and post testing of residents with the Intercultural Development Inventory.</p>	
Impact - 25	Describe in one sentence the	Think about how others might use your results to enhance their practice

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words 350 characters including spaces	impact that you hope your study/innovation will have on the education or patient care in your specialty or beyond.	
	Example: Implementation of these changes will highlight both barriers and successes that can inform the efforts of other institutions to improve culturally responsive health care education.	

Reminder of Key Learning Principles (for selecting and discussing interventions)

	Principles for Learning	Description	Suggestions
1	Prior knowledge can help or hinder	Helps when – activated, sufficient, appropriate, accurate; Can hinder if – inactive, insufficient, inappropriate, inaccurate	Set explicit expectations for prior KSA (knowledge, skills, attitudes); work to make connections between “old” and “new” and reinforce
2	How learners organize knowledge influences how they learn and apply what they know	Experts have rich, meaningful knowledge structures; Novices have sparse, superficial knowledge structures	Provide explicit structures; use compare and contrast and sorting tasks to uncover and reinforce knowledge structures; mind maps and cognitive maps are good visual tools
3	Learners’ motivation determines, directs and sustains what they do to learn	Expectancy of success plus valuing of the relevance = motivation which leads to goal-directed behavior which leads to learning and performance. Requires a supportive environment. Learners need to move from outer-directed to inner-directed.	To build valuing or importance: Connect material to student interests; provide authentic real-world tasks, show relevance to current life; for higher level skills show relevance to future goals; also give options; allow time for reflection. To build self-efficacy: Appropriate level of challenge, early successes, clear expectations, manage learner expectations; build metacognitive skills
4	To develop mastery, learners must acquire component skills, practice integrating them, and know when to apply what they have learned	Being an expert can be a barrier to effective teaching (Four levels - Unconsciously incompetent; Consciously incompetent; Consciously competent; Unconsciously competent (forget the steps – forget to explain the steps, harder to deconstruct)	Might want to have those who are “competent” or “proficient” work with “novices” and have those who are “expert” guide those at the “competent” or “proficient” levels
5	Goal-directed practice coupled with targeted feedback enhances the quality of learning.	Unequal effects of practice: Early very slow growth in competence (risk of practicing mistakes or poor technique); as approach mid-level performance practice works very well to increase level of performance	Ideas for goal directed practice: Pre-assess to get level; be explicit about outcome objectives; set expectations about practice; use a scoring rubric; build in multiple opportunities to practice; Build scaffolding into assignments, give models of target performance; Show what do NOT want; Refine course goals if needed Feedback Ideas: Look for patterns of errors, Prioritize your feedback, Balance strengths & weaknesses (S/W) in feedback, Provide both individual and group feedback, Require students to state how have used feedback in subsequent work

	Principles for Learning	Description	Suggestions
6	The student's current level of development interacts with the social, emotional, and intellectual climate of the program to impact learning.	Dreyfus; but also stage of life development; Chickering (1969) – learners dealing with multiple dimensions: developing competence, managing emotions, developing autonomy, establishing identity, developing mature interpersonal relationships; developing purpose, developing integrity – these challenges can compete with coursework for learner attention	Diagnose the learner level and teach to that level – Novice, Advanced Beginner, Competent. The classroom learning-environment should be characterized by mutual trust and respect, mutual helpfulness, freedom of expression and acceptance of differences.
7	To become a self-directed learner, students must be able to monitor and adjust approaches to learning.	Learners must gain capacity in self-assessment, skills of meta-cognition (or metacognitive skills) and be able to use appropriate learning techniques	Having learners accept a share of the responsibility for planning and/or operating the learning experience can help build a sense of commitment toward the learning experience.
8	Learning is situated and formal classroom instruction should be integrated with experiential learning	Learning is contextual and is affected by the specific environment (situated). Environments should encourage collaborative (and multidisciplinary) action. Also for junior learners the formal classroom instruction should be integrated with clinical experiences.	The teacher is responsible to ensure that the clinical learning environment (and classroom as well) is safe and appropriate for the learners and that they have opportunities to “apply” what is learned in the classroom.
9	Learning is participatory	Learners gain most when they participate in constructing their own knowledge and when they can learn from each other as well as from the instructor. Too much information can cause a cognitive “overload” and detract from learning.	Remember that no “lecture” should last more than 15 minutes without an activity that encourages the learners to utilize the information, to interact with the concepts, to practice applying what they learned and/or to interact with each other to discuss values or appropriate actions.

Key References:

- Ambrose SA et al. How Learning Works: Seven Research-Based Principles for Smart Teaching The Jossey-Bass Higher and Adult Education Series, 2011.
- Chinai SA; Guth T; Lovell E; Epter M. Taking Advantage of the Teachable Moment: A Review of Learner-Centered Clinical Teaching Models. The Western Journal of Emergency Medicine. 19(1):28-34, 2018 Jan.
- Cooke M. Irby DM. O'Brien BC. Educating Physicians: A Call for Reform of Medical School and Residency. Jossey-Bass, 2010
- Cutting MF. Saks NS. Twelve tips for utilizing principles of learning to support medical education. Medical Teacher. 34:20-24, 2012.
- Fewster-Thuente L; Batteson TJ. Kolb's Experiential Learning Theory as a Theoretical Underpinning for Interprofessional Education. Journal of Allied Health. 47(1):3-8, 2018.
- Friedlander MJ et al. How can medical education learn from the neurobiology of learning? Academic Medicine. 86(4):415-420, 2011.
- Gaiser RR. The adult learner: is it necessary to understand for teaching in anesthesiology. International Anesthesiology Clinics. 48(3):1-12, 2010.
- Goldman S. Enhancing adult learning in clinical supervision. Academic Psychiatry, 2011; 35:302–306
- Horsburgh J; Ippolito K. A skill to be worked at: using social learning theory to explore the process of learning from role models in clinical settings. BMC Medical Education. 18(1):156, 2018 Jul 03
- Jensen AL. Principles of adult learning: the learning process. Revue Scientifique et Technique. 28(2):831-7, 2009 Aug.
- Kotsis SV. Chung KC. Application of the “See One, Do One, Teach One” concept in surgical training. Plastic and Reconstructive Surg. 131:1194, 2013.
- McGaghie WC; Harris IB. Learning Theory Foundations of Simulation-Based Mastery Learning. Simulation in Healthcare: The Journal of The Society for Medical Simulation. 13(3S Suppl 1):S15-S20, 2018 Jun.

McKimm J; Jones PK. Twelve tips for applying change models to curriculum design, development and delivery. Medical Teacher. 40(5):520-526, 2018 05.
Plack MM; Goldman EF; Scott AR; Pintz C; Herrmann D; Kline K; Thompson T; Brundage SB. Systems thinking and systems-based practice across the health professions: an inquiry into definitions, teaching practices, and assessment. Teaching & Learning in Medicine. 30(3):242-254, 2018 Jul-Sep.
Taylor DC. Hamdy H. Adult learning theories: implications for learning and teaching in medical education: AMEE Guide No. 83. Medical Teacher. 35(11):e1561-72, 2013 Nov.
Yardley S. Teunissen PW. Dornan T. Experiential learning: Transforming theory into practice. Medical Teacher. 34:161-164, 2012.
Zigmont JJ. Kappus LJ. Sudikoff SN. Theoretical foundations of learning through simulation. Seminars in Perinatology. 35(2):47-51, 2011 Apr.

Additional References:

Anderson PM; Vanderbilt AA. Bridging the gap between physician and medical student education: using the Train the Trainer model to improve cultural competence training in the clerkship years of medical school. Advances in Medical Education & Practice. 9:495-498, 2018.
Archer JC. State of the science in health professional education: effective feedback. Med Educ. 2010; 44: 101-108.
Barsoumian AE; Yun HC. Augmenting Fellow Education Through Spaced Multiple-Choice Questions. Military Medicine. 183(1-2):e122-e126, 2018 Jan 01.
Berkhout JJ; Helmich E; Teunissen PW; van der Vleuten CPM; Jaarsma ADC. Context Matters When Striving to Promote Active and Lifelong Learning in Medical Education. Medical Education. 52(1):34-44, 2018 Jan.
Bing-You R, Hayes V, Varakis K, Trowbridge R, Kemp H, McKelvy D. Feedback for Learners in Medical Education: What is Known? A Scoping Review. Acad Med 2017. Gisoni MA; Chou A; Joshi N; Sheehy MK; Zaver F; Chan TM; Riddell J; Sifford DP; Lin M. Curriculum Design and Implementation of the Emergency Medicine Chief Resident Incubator. Cureus. 10(2):e2223, 2018 Feb 24.
Joyce DL; Lahr BD; Maltais S; Said SM; Stulak JM; Nuttall GA; Joyce LD Integration of simulation components enhances team training in cardiac surgery. Journal of Thoracic & Cardiovascular Surgery. 155(6):2518-2524.e5, 2018 Jun.
Lee N; Appelbaum N; Amendola M; Dodson K; Kaplan B. Improving resident well-being and clinical learning environment through academic initiatives. Journal of Surgical Research. 215:6-11, 2017 Jul.
Leraas HJ; Cox ML; Bendersky VA; Sprinkle SS; Gilmore BF; Gunasingha RM; Tracy ET; Sudan R. Instituting a Surgical Skills Competition Increases Technical Performance of Surgical Clerkship Students Over Time. Journal of Surgical Education. 75(3):644-649, 2018 May - Jun.
Martin P; Copley J; Tyack Z. Twelve tips for effective clinical supervision based on a narrative literature review and expert opinion. Medical Teacher. 36(3):201-7, 2014 Mar.
O'Shaughnessy SM. Peer teaching as a means of enhancing communication skills in anaesthesia training: trainee perspectives. Irish Journal of Medical Science. 187(1):207-213, 2018 Feb.
Soeprono T; Markman J; Grodesky M; Cowley D. Practical Interventions to Enhance Resident Ownership of Patient Care. Academic Psychiatry. 42(2):222-227, 2018 Apr.
Tan K; Chong MC; Subramaniam P; Wong LP. The effectiveness of outcome-based education on the competencies of nursing students: A systematic review. Nurse Education Today. 64:180-189, 2018 May.
Theobald KA; Windsor CA; Forster EM. Engaging Students in a Community of Learning: Renegotiating the Learning Environment. Nurse Education in Practice. 29:137-142, 2018 Mar.
Wirth S, William Y, Paolini M et al. Improvement of Radiological Teaching - Effects of Focusing of Learning Targets and Increased Consideration of Learning Theory Knowledge. Fortschr Röntgenstr 2018; 190: 161 - 174.