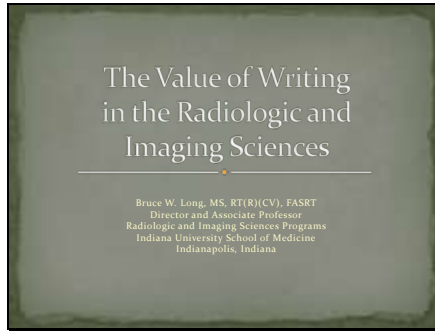
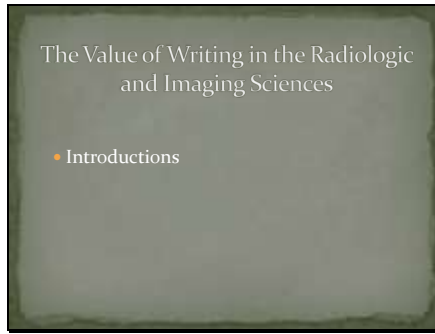


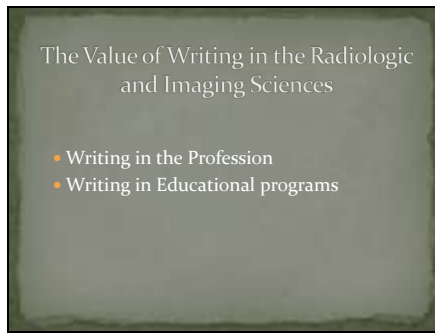
Slide 1



Slide 2



Slide 3



Slide 4

The Value of Writing in the Radiologic and Imaging Sciences

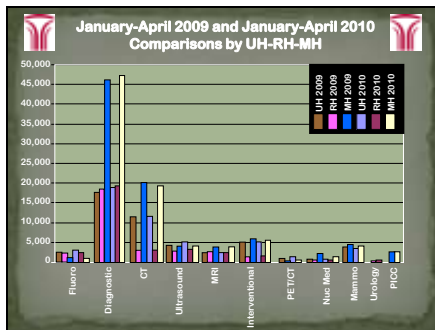
- Writing to Communicate Facts and Ideas
- Writing to Learn

Slide 5

The Value of Writing in the Radiologic and Imaging Sciences

- Writing in the Profession
 - High % of publications are by educators
 - In aggregate, more are education-related topics
 - We need to increase writing on technical topics
 - We are not contributing significantly to technical knowledge base
 - Barriers (expertise, practice environments, P&T requirements)
 - Collaborate with technical experts

Slide 6



Slide 7

Writing in Educational Programs

1. Associate degree/certificate programs
2. Bachelors degree programs
3. Graduate degree programs

Slide 8

Associate degree/Certificate Programs

- Writing to learn
 - Journaling*
 - Short writing projects*
 - Class preparation writing (WB, Pre-lab quizzes)
 - In-class writing (minute papers, etc)
- Writing to communicate facts and ideas
 - To the teacher – to demonstrate student learning
 - Essays (on exams or not)
 - "Short answer" writing on exams or pop-quizzes
 - Minute papers
 - To an audience
 - Term papers or position papers (time is a major issue)

Slide 9

Don't do this!


Плагиаг

Plagiarism

Slide 10

Preventing Plagiarism

- Dowd Article assignment
 - Dowd S, Schulz D. Responsible Dissemination of Scholarly Work in Radiology. Radiol Technol. 1996; 67(5): 407-414.
- Purdue Online Writing Laboratory (OWL) section on plagiarism



Avoiding Plagiarism
Brought to you by the Purdue University
Online Writing Lab at
<http://owl.english.purdue.edu>

Slide 11

Associate degree/Certificate Programs
Writing to Learn

- All the examples of writing activities I'm sharing today resulted from creation and ongoing evaluation of.....

Our Program Assessment Plan

Slide 12

Associate degree/Certificate Programs
Writing to Learn

- Journaling*
- Short writing projects
 - Papers or Presentations (PPT)
 - Exposure Factor Quiz(EFQ)*
 - Clinical Scenario Analysis(CSA)*
 - Reflection paper*
 - Case presentation
 - Pathology presentation
 - Procedure presentation
- Internet Site evaluation
- Annotated Bibliography (with dB literature search)

Slide 13

Journaling

- Clinic to classroom connections
- Exploration of perspective and bias
- Development of critical thinking skills
- Early attempts
- Current structure

Slide 14

Journaling – early attempts

Activity Instructions:

- Turn in a short paragraph for each day of clinic during first year clinical courses. Journal entries go in the notes section of the daily attendance entry in the database. Describe the day, a difficult exam, something new that was learned; a tip from a tech or thoughts and feelings for the day. Clinical journal entries will be evaluated at the end of the semester.

Missing clinical journal entries (first year only)	
0-2	0
3-4	-1.5
5-6	-2.5
Over 6	Failure of the course

Slide 15

Journaling

- Early results: blah, blah, blah

Today was nothing but drama. People were on vacation, called in sick, or got fired. This left the department understaffed. It caused people to become stressed and they started blaming people. One patient even left, because they made him wait so long. I believe that this is the hospital's fault. The department is understaffed and over worked.

Today I saw a proctogram for the first time. My experience really wasn't as bad as I had been warned. I think barium enemas are worse. At St Francis for the proctograms the Radiologist gives the contrast.

Slide 16

Journaling – current structure

Purpose: to help students

- express and interpret information gathered while in the clinical setting.
- demonstrate self-reflection on clinic accomplishments and share personal thoughts about clinical experiences.
- acknowledge and appreciate the variety of cultural diversity that exists in the hospital setting.
- identify and propose solutions for clinical situations they have witnessed or been involved in personally.
- activity is evaluated for writing style, proper grammar, and correct spelling.

Slide 17

Journaling – current structure

Grading Rubric

	Poor 1	Satisfactory 2	Good 3	Exceptional 4
Content	Did not include relevant thoughts journaling. Simply listed events performed for the day.	Described various topics journaling. Simply listed events performed for the day.	Described multiple situations in their clinical experience of the day. They could have made their entries better. Offered personal insights about the clinical experience and/or patients.	Discussed many aspects of their clinical experience of the day. Addressed a clinical problem setting on how to improve their clinic skills. Provided useful comments about potential interactions with staff, patients, or fellow students.
Experience and Accomplishments	Exceptional 4 The Journaling demonstrates an excellent impression and insight into what you learned personally. Shows the level of self-reflection effort.			
Examples of Personal Feelings	The Journal entry shows a great amount of personal thought. Demonstrates an outstanding ability to reflect on clinical learning experience and provide good narrative.			
Levels of Cultural Learning	Journaling reveals outstanding insight into levels of cultural awareness. Can think of ways to overcome any possible barriers such as language differences.			
Journal Writing Effort	Very good effort writing your journal entries. Demonstrates excellent personal perspective within daily comments.			
Writing Mechanics	No spelling and grammatical errors. Excellent writing style. No typos errors.			
Timeliness	Journaling submitted in database daily and by designated time.			

Slide 18

Journaling

- Current results: students are actively engaged in and reflecting on each clinical day

I was in Ortho this week. It was very steady, with a wide variety of patients. I did my first spinal exams – thoracic spine and lumbosacral – and lots of upper-extremity work. I also had many patients with **language-barriers**, including a middle-aged Asian man with elbow pain, a middle-aged Hispanic woman with spinal pain (ruling out early-onset osteoarthritis) and a couple of twenty-something Hispanic individuals with chest pain/illness. I was able to **see postmortem** to complete the exams. And I **found a new trick** for asking a woman if she's wearing a bra – I snugged my own bra strap. Not that I would need to do this with most patients, but nothing else worked for this woman and she broke out into a huge grin (and removed her bra) when she realized what I was asking. There was a shoulder **controversy today**, when an elderly, wheelchair-bound woman was unable to attain an axillary position for a shoulder and the **tech skipped it**. The doctor was very **upset** and a **policy shift** is being considered that if an exam can't be performed for whatever reason, or not performed to standard, it must be lightening-bolted in the computer. (I wasn't present for the elderly woman's exam, but I heard about it.) It'll be interesting to see **how this will affect the workflow**, especially on clinic days, as this could potentially add several minutes to each exam. The techs were up in arms; hopefully a **compromise** can be reached that pleases the doctors and does not create a great deal more work for the techs.

Slide 19

Short Writing Projects

- Exposure Factor Quiz(EFQ)
- Clinical Scenario Analysis(CSA)
- Reflection paper
- Internet Site evaluations
- Annotated Bibliography (with dB literature search)

Slide 20

Short Writing Projects

Technique Chart Exercise and
Exposure Factor Quiz (EFQ)

Purpose:

- to help students recognize appropriate exposure factors for various radiographic examinations.
- In addition, second year students will be required to demonstrate knowledge of how to make adjustments based on a variety of conditions and pathologies.

Slide 21

Short Writing Projects

Technique Chart Exercise

- Students start with a blank technique chart for their hospital rotation.
- During the semester, students fill in the technique chart using techniques from actual exams performed
- Near semester end, students meet with CI and, by consensus, create one master technique chart.

➢ Students demonstrate knowledge of standard exposure factors, but not how to make adjustments

Slide 22

Short Writing Projects
Exposure Factor Quiz (EFQ)

- Format of four fictional scenarios.
- Each scenario will have several questions.
- Critical thinking skills, exposure factor manipulation, trauma assessment, and general CT knowledge will be required to solve each of the questions successfully.
- Math calculations may be necessary so a calculator would be beneficial at quiz time.

Slide 23

Short Writing Projects
Exposure Factor Quiz (EFQ)

SCENARIO	QUESTIONS
<p>A 70-year-old emaciated female presents to the ED. She is brought to the VA, is unresponsive, and demonstrates left-sided hemiparesis. It is evident that she fell and she has an abrasion on her forehead. Her right leg is turned outward. The physician has ordered a CT scan, chest, and pelvis. Her weight is 110 lbs (50 kg) and she has a medical history of hip fracture and osteoarthritis. Her mother suffers from HTN and osteoporosis. Given her condition, she is immediately transferred to ICU Neuro Intensive Care.</p>	<ol style="list-style-type: none">1. What is your interpretation of the above story?2. What two assumptions might you be able to make about this patient condition? (Hint: osteoporosis & leg turned out)3. Give a specific reason why the physician would order each of these exams?<ol style="list-style-type: none">1. Spine -2. CXR -3. Pelvis -4. head CT -4. What type of changes (ie: increase or decrease) in technique would you expect to have to make on these exams, given patient's body habitus, condition, and age? Explain why.5. State the average technique for a pelvis at your facility and adjust the technique for this patient. You should have 2 techniques written down.

Slide 24

Short Writing Projects
Exposure Factor Quiz (EFQ)

SCENARIO	QUESTIONS
<p>A 4-year-old male with Spina Bifida (S1) comes to Riley Hospital with severe SOB and is cyanotic. The new first year resident, Dr. Hensley, has ordered a portable chest x-ray. Due to his CP, his lungs are more than likely hyperinflated. When you arrive in the patient's hallway, the physician asks that you keep the patient upright for the image because he seems to be comfortable in this position.</p>	<ol style="list-style-type: none">1. Given the patient's condition, how have you modified the technique for the portable chest? Explain why or why not.2. State the average technique for a portable chest done at Riley and adjust the technique for this patient. You should have 2 techniques written down.3. What do you think of the physician wanting the image upright? Given your knowledge on upright vs. supine images, what information might be useful to share with the doctor prior to taking the image?4. What do the words cyanotic and SOB mean?

Slide 25

Short Writing Projects
Clinical Scenario Analysis (CSA)

The process of critical thinking begins with the ability of students to remember and understand, but it is truly realized when the student demonstrates the ability to apply, analyze, evaluate, and create knowledge, procedures, processes, or products to discern bias, challenge assumptions, identify consequences, arrive at reasoned conclusions, generate and explore new questions, solve challenging and complex problems, and make informed decisions.

Slide 26

Short Writing Projects
Clinical Scenario Analysis (CSA)

Purpose of CSA: to give students in the second year of the program a variety of opportunities to

- engage in a process of disciplined thinking that informs beliefs and actions.
- apply the process of disciplined thinking by remaining open-minded, reconsidering previous beliefs and actions, and adjusting his or her thinking, beliefs and actions based on new information.

Slide 27

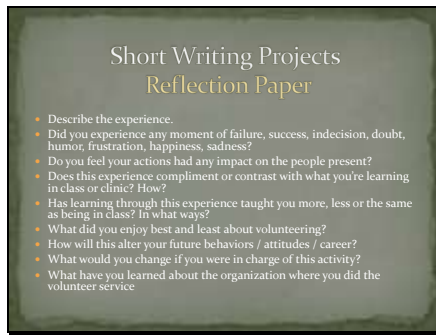
Short Writing Projects
Clinical Scenario Analysis (CSA)

- Choose a clinical scenario from 3 different practice areas for each clinical course (e.g. ortho, fluoro, surgery)
- Use grading rubric as a guide
- Complete each analysis by the end of the appropriate rotation
- 10% of clinical grade

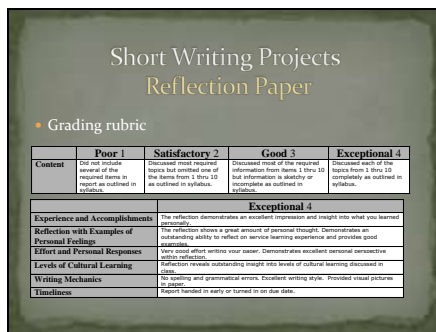
Slide 34



Slide 35



Slide 36



Slide 37

Writing in Bachelors Degree programs

- Here's what we do ☺
- Research and Dissemination
- Oral and visual

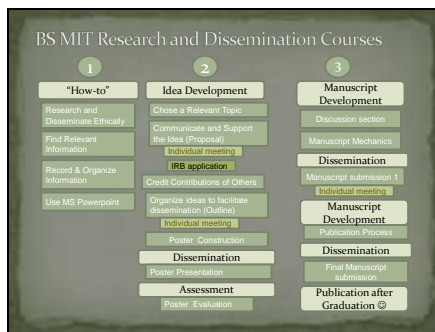
Slide 38

IU MIT program - Research and Dissemination courses

Significant Facts

- (1992)1995-2010
- ~250 students
- 14 peer-reviewed publications (Radiol Technol, JDMS)
- Manuscripts submitted after graduation
- Linda Cox and I mentor and co-author with each graduate technologist (collaborative process)
- Did not co-author 3 of the manuscripts (1992-1995)
- 3 manuscripts took 2 years to get published

Slide 39



Slide 40

Short Writing Projects
Internet Site Evaluation

- Students in each major are to visit the following organization's websites:

Radiography	Radiation Therapy	Nuclear Medicine Technology
ASRT (asrt.org)	ASRT (asrt.org)	ASRT (asrt.org)
ISRT (isrt.org)	ISRT (isrt.org)	ISRT (isrt.org)
ARRT (arrt.org)	ARRT (arrt.org)	NMTCB (nmtcb.org)
JRCERT (jrcert.org)	JRCERT (jrcert.org)	JRCNMT (jrcnmt.org)
ADIRS (adirs.org)	ASTRO (astro.org)	SNM-TS (snm.org & tsnm.org)

Slide 41

Short Writing Projects
Internet Site Evaluation

Each student will write a report on each website (as a MS Word document) by gathering the following information:

- Full name of organization
- Purpose
- Type of organization (accrediting, certifying, professional society)
- Membership (who does the organization serve?)
- Year founded*
- approximate number of members*
- benefits of membership
- important initiatives they are working on (limit to top 5, if there are many)

* some websites may not have this

Slide 42

Short Writing Projects
Literature Search and Review Writing

- Each student will prepare a literature search and written review (3 articles) on an assigned subject related to imaging of a disease. All articles must relate to how the disease is imaged. No "overview of a disease" articles are acceptable.
- *Purpose* : There is an abundance of information and research generated about different modalities and related topics. It is not possible to cover everything important in this procedures course. **Once you understand how to do a literature search you will have the necessary skills to become better informed on any subject you seek to know more about.**

Slide 43

Short Writing Projects
Literature Search and Review Writing

Students are to perform a literature search on the assigned topic from the MEDLINE database. Students may access MEDLINE from the IUPUI website <http://www.iupui.edu/~libref> and then select 'Academics'. On the left hand side of the page, select 'Libraries'. Select 'Ruth Lilly Medical'. Under the words Medical Libraries, select 'Ovid'. If you are using a computer off campus you will be required to log in using your email id and password. Select 'Ovid MEDLINE 1950 to ...' (date changes weekly). Enter your topic and imaging (e.g. lung cancer and imaging).

Enter the following limits:

- Humans
- English Language
- Local Holdings
- Publication Year: 2008 to 2010
- Hit the 'Search' button.

Slide 44

Short Writing Projects
Literature Search and Review Writing

- From this literature search the student will:
- Pick three articles no older than 2008. The newer the article, the better.
- Letters, advertisements and/or editorials are not acceptable for this assignment.
- The articles must be at least 3 pages in length, not including references.
- Database literature search programs often have the articles available online: use online articles or you may go to the Ruth Lilly Medical Library and copy them.

Slide 45

Short Writing Projects
Literature Search and Review Writing

- **What to turn in**
- Cover page with name, course number and date with an imaging picture about your subject (make sure the image is GOOD, points taken off for blurry or pixilated images)
- Make sure to cite the image with the website address underneath the image
- PRINTOUT from literature search. Each student must turn in a print out of a MEDLINE computer search
- Three complete articles including all the reference pages. Points will be deducted if the entire article including all of the references are not copied and turned in.
- A brief review of each article (3) written *in the student's own words*.

Slide 46

Short Writing Projects
Literature Search and Review Writing

Example

Pat Cohen
Incidental Splenic Lesions
Journal of Family Practice

1) Bibliography
Pitt RK, Lee DF. Incidental Splenic Lesions. *Journal of Family Practice*. 54(6): 496-501, 2005.

2) Purpose of the Article
The purpose of this article was to show how sarcoidosis often is misdiagnosed and is diagnosed by exclusion.

3) Brief Description of Procedures and Findings/Results
The article describes a case report of a patient complaining of lower left quadrant pain, no other symptoms and a history of alcoholism. Alcoholism CT scan revealed a suspicious density within the spleen. A biopsy was done and non-infecting granulomas were discovered. Sarcoidosis was diagnosed after excluding other known causes of granulomatous disease.

4) Conclusions or Comments
Sarcoidosis is an idiopathic disease that can affect any organ system. It is because of this that sarcoidosis can be misdiagnosed. The symptoms can be treated with corticosteroids, and approximately 70% of patients have spontaneous remission.

5) Opinion of the Article
I thought this article was very easy to understand. It gave me a better understanding of how sarcoidosis is diagnosed, what is affected and how it is treated.

Slide 47

Short Writing Projects
Clinical Scenario Analysis (CSA)

Case Number: Port4
You are called on a portable chest x-ray to the MICU. Upon arriving, you realize your patient is 380 pounds and doesn't seem to be responsive. Of course, you'll have to place the IR behind the patient's back. Unfortunately, the nurses seem to have disappeared. The patient is coughing, sweating, and has a blanket covering him that smells like urine. It takes you about 10 minutes but you struggle to get the portable exam done by yourself. As you are leaving the patient's room, all the nurses come back in carrying their breakfast containers with them. The patient's nurse says "I hope you wore an isolation gown, gloves, and a mask because that patient was diagnosed with MRSA". How would you proceed?
