The I-MAC Teaching Model for Beginning Family Science Instructors

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ABSTRACT

A model for effective teaching is presented to guide new instructors in family science courses. The I-MAC Teaching Model includes: (1) Introduction, (2) Mini-lecture, (3) Application, and (4) Conclusion. Examples of the authors' application of the model, the model's flexibility, and student evaluation of its effectiveness are described.

"Ideal teachers are those who use themselves as bridges over which they invite their students to cross; then having facilitated their crossing, joyfully collapse, encouraging them to create bridges of their own."

--Nikos Kazantzakis

The skill of teaching has, at times, been underappreciated in academia. It is common for graduate students and new faculty to be given course assignments with little guidance on how to teach course material to promote optimal learning. Many make the unfortunate assumption that if a person has expertise in a particular area that such knowledge will be adequately taught to an audience of students. As we enter our fourth and sixth years, respectively, as professors, we have come to appreciate the art and skill of teaching undergraduate and graduate courses.

The purpose of this paper is to share a model of teaching, the I-MAC model, to assist new family science instructors. This model has helped us organize our classes to increase the likelihood that our students will learn the course material and remain engaged with the information being presented. It has been especially applicable to family science courses because of its emphasis on cooperative learning. Students arrive in family science courses with

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The initial seeds were planted early during my experiences as an undergraduate and graduate student. I paid close attention to the techniques of the most effective professors. Further, I observed engaging public speakers from many fields, including politics, psychology, and business. I integrated these techniques with my own teaching style and gradually developed and refined a teaching approach that we now call the I-MAC model.
The primary steps of the model are: (1) Introduction, (2) Mini-lecture, (3) Application, and (4) Conclusion. The model helped me (TE) in several ways. First, it helped me organize my notes for lecture. Rather than writing one big lecture, I planned each class section at a time. Second, it helped me plan the amount of time I would devote to various topics and activities. Third, I was able to feel more comfortable in the classroom because I had a structured plan that would include variety. Finally, it forced me to creatively design activities to involve the students and apply the concepts presented in class. This was crucial for family science students who treasured the opportunity to listen and learn from each other. Further, they valued the balance of didactic material (i.e., theory) with real world application.

The I-MAC teaching model is a practical, user-friendly model that we believe provides a helpful structure for new family science instructors that is rare in the family science and teaching literature. Additionally, we feel a benefit of the I-MAC model is that it will help instructors, particularly new ones, better focus their time and efforts and thus achieve maximum time efficiency. It is important to note, however, that achieving the goal of effective teaching does require a significant time investment on behalf of the instructor. The effort one puts forth to connect with students in the classroom is a fruitful exercise.

Each component will be described below with examples from sample family science classes. The approximate time one might spend on each component is included. The first number is for a 50-minute class; the second number is for a 75-minute class. These times will vary depending on the class topic and class process.

THE I-MAC TEACHING MODEL

INTRODUCTION (5 MINUTES/5 MINUTES)

The beginning of each class sets the emotional tone with students. Just as an author intends to grab the attention of the reader early in a book, the instructor needs to find something to engage the students. One can engage students by using a number of different techniques. Due to the personal nature of many family science topics, engaging students can be quite easy, particularly when they are labeled as experts in the area due to their personal experience with the topics presented. Examples of some of these techniques are listed below.

The Daily News. Bring in news articles or something found in the school newspaper that addresses the topic of the day. Because students are often familiar with current events, news captures their attention. This can often provide an excellent segue into the lecture. For example, in a recent class on sexual orientation, the issue of stereotypes was introduced by discussing the controversy raised by Jerry Fallwell, who warned parents that Tinky Winky, a character from the popular children's television show "Teletubbies," is a gay role model for children. Reporting recent family helpful way to introduce a topic.

Remove The Mask. Tell the class a personal story that relates to the topic of the day. Students like to hear about human beings who have lived outside the classroom. For example, "miscommunicated" with your spouse or child towards enhancing the students' attention. With topics related to gender, I often tell stories of how my wife and I real traditional gender roles. It would be unfortunate if the instructor uses limited self-disclosure to ignore the students.

The What if? Story. This technique enables the instructor to tell the class what it would be like if they were coping with infertility, for example, when presenting the topic of infertility, "Imagine what it would be like if you were in a life you have dreamed about having children, maybe be parents together, to have friends and family children, and then to find out through numerous tests are unable to have biological children. This exercise was developed by couples. Today, we are going to talk about the impact of infertility, as well as the emotional trauma that this task allows students to reflect on how this would affect someone they know who has gone through a similar experience.

The Power of Pondering. Similar to the technique of asking questions elicits a reaction from the students to personalize the topic. For example, if the class is discussing what it means to think premarital cohabitation increases or decreases marital satisfaction and success?" Such questions immediately. Further, and what is more important, these questions are also relevant to the lecture of the day.

And I Quote! Begin a class session with a quote that relates to the primary theme of the class period. Quotes about subject matter and provoke a student's interest. For example, in a class on premarital education could begin with the following John L. Beckley quote on the topic of premarital education: "Don't plan to fail, they fail to plan." The instructor could also use the relevance of such a quote to the topic of premarital education.

A method of locating interesting quotes is...

For example, in a recent issue of Newsweek Mag...
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Remove The Mask. Tell the class a personal story about yourself that relates to the topic of the day. Students like to be able to see their instructors as human beings who have lives outside the classroom. For example, if the class topic of the day is family communication, an incident about how you "miscommunicated" with your spouse or child can be an appropriate tool towards enhancing the students' attention. When I (TE) teach a class on gender, I often tell stories of how my wife and I unintentionally fall into traditional gender roles. It would be unfortunate to assume that this means the instructor should disclose the most intimate details of his or her life. Rather, the instructor uses limited self-disclosure to illustrate various concepts and further the education of students.

The What if? Story. This technique encourages students to imagine what it would be like if they were coping with a particular situation. For example, when presenting the topic of infertility, the following might be said: "Imagine what it would be like if you were in a situation where most of your life you have dreamed about having children, made plans with your spouse to be parents together, and to have family members who have had children, and then to find out through numerous invasive procedures that you are unable to have biological children. This experience happens to 1 in 6 couples. Today, we are going to talk about the incidence, causes, and treatment of infertility, as well as the emotional trauma that couples experience." Such a task allows students to reflect on how this would affect them or reminds them of someone they know who has gone through a similar experience.

The Power of Pondering. Similar to the previous example, the technique of asking questions elicits a reaction from students and allows them to personalize the topic. For example, if the class topic is cohabitation, one might ask the following questions: "Who knows someone who is presently cohabitating?"; "Why do you think couples decide to cohabitate?"; "Do you think premarital cohabitation increases or decreases the likelihood of marital satisfaction and success?". Such questions involve the students in class immediately. Further, and what is more important, students enjoy hearing the opinions of their peers. These questions are also a helpful way to transition to the lecture of the day.

And I Quote! Begin a class session with a quotation that introduces the primary theme of the class period. Quotations can introduce a particular subject matter and provoke a student's interest in a very succinct manner. Sophocles once wrote that "a short saying oft contains much wisdom." For example, a class on premarital education could begin with the instructor writing the following John L. Beckley quote on the chalkboard: "Most people don't plan to fail, they fail to plan." The instructor could then ask the class the relevance of such a quote to the topic of premarital education.

A method of locating interesting quotes is to peruse new magazines. For example, in a recent issue of Newsweek Magazine there was the following role model for children. Reporting recent family research in the news is also a helpful way to introduce a topic.
quote from a ruling by Italy’s Court of Cassation, the country’s highest criminal
appears court: “[It is] common knowledge that it’s nearly impossible to even
partially remove jeans from a person without their cooperation” (Newsweek,
February 22, 1999, p. 19). The court indicated that it is impossible to rape a
woman who is wearing jeans. Reading this quote at the beginning of a class on
sexual coercion and eliciting student reactions would immediately capture the
attention of students and encourage their participation.

The Research Lab. Including students in mock research is a
stimulating way to raise their awareness of research, gives them a preview of
the day’s topic, and allows them to reflect on the meaning of the topic on their
lives. At the beginning of a class on extramarital affairs, I (TE) began the class
by asking students to respond to a question from a study on jealousy (Buss,
Larsen, Westen, et al., 1992). The students answered the following question:
“Think of a committed romantic relationship that you have now, or that you
had in the past. Now imagine that your significant other becomes interested in
someone else. What would distress you more: (a) discovering that he or she
has formed a deep emotional attachment to the other, confiding in that person
and seeking comfort there rather than from you?; or (b) discovering that your
partner is enjoying daily passionate sex with the other person?” In this
example, the results of the in-class study were presented later in the class to
compare class results with results from actual research which stimulated
interesting discussion.

Meanings. When presenting on topics that have different meanings to
different people, it is sometimes helpful to begin a class by asking students to
write down their meaning of a certain topic. For example, when presenting the
topic of intimacy, which has many different definitions, one could ask each
student to write down their definition of intimacy. After the presentation of
didactic material, the instructor can ask the students to voluntarily read their
definitions. Similar to the previous example, this activity gets students
involved immediately, makes them wonder how the writing will be used later in
class, and validates their definition. Other words that are interesting for
students to define include marriage, love, and family.

The Rest of the Story. Start a class with a brief anecdote that relates
to the primary topic of the day. Similar to quotes and current events, news and
popular magazines are various mediums to obtain such stories. For instance, a
recent issue of Reader’s Digest discussed a story about the famous golfer,
Arnold Palmer, and his father. The story reported that as a high school student
participating in a golf match, young Arnold became so frustrated on one hole
that he threw his putter into the trees. Despite this behavior, he won the
tournament. Arnold’s elation vanished when his father was quiet during the
drive home. The only words that his dad said during the ride home were, “If
you ever throw a club again, you’ll never play in another golf tournament.” The
magazine article continued to state that after this event, Palmer, throughout his
legendary career, never threw another club. Telling this story at the beginning

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MINI-LECTURE (20 MINUTES/30 MINUTES)

According to McKeachie (1994), "the most common error [in organizing lectures] is probably that of trying to include too much" (p. 65). When lectures include too much and continue for too long, students get bored and their attention tends to drift (McKeachie, 1994). Research indicates that students recall 70% of material covered in the first ten minutes, and only 20% of the material covered in the last 10 minutes (Hartley & Davies, 1978). It is for this reason that we label our lecture a mini-lecture. Rather than overwhelm students with a barrage of information, we choose a small number of important concepts that we want our students to know well. The teaching philosophy of former UCLA basketball coach John Wooden has helped shape our perspective on the amount of information to present in a lecture. Wooden focused on the fundamentals, as evidenced in the following statement: "We don't have a playbook at UCLA. Years ago, I issued a rather expensive playbook but I convinced the players didn't pay much attention to it so it was abandoned. Now, when I give them a sheet or two of information once in a while, I think they pay more attention to it" (Wooden & Tobin, 1984, p. 108).

In the same manner, teachers may be more successful in the classroom if they focus on their students mastering the fundamentals of a particular topic as opposed to attempting to cover everything in the text. Students can turn to the textbook for detail from lectures. Unfortunately, some students expect instructors to focus on the details from class reading based on their previous experiences in university courses. We tell students during the first course meeting that our classes will not cover the book verbatim and it is their responsibility to read the text before coming to class. Further, we emphasize that not reading the assigned book chapters or articles before class puts them at a great disadvantage. When we are asked by students why this is so important, we explain the interactive nature of our courses. If students review the assigned reading before class, it increases the likelihood that they will be prepared to actively participate in class. If instructors make such a commitment to students, it is imperative that they put their philosophy into practice at the subsequent class meetings.

To operationalize this component, we have found it useful to read a particular chapter of the text and ask ourselves two questions. First, "what are the most exciting, compelling, and or beneficial topics within this chapter?" Another way to ask this question is, "If I were going to reduce the length of the chapter to 1/3rd its original size, what components would I leave in?" The answers to these questions help highlight the fundamentals that you could cover in your mini-lecture. Second, "What is not in this chapter that, in my opinion, should be?" We have found that some topics in the text are outdated since publication or there is new research related to a subject that is not in the
textbook. If such knowledge exists, then this can be part of the mini-lecture. If a teacher does indeed present such new information, we have found this can, at times, enhance the teacher's credibility with the students.

Along with identifying a few key principles, overhead transparencies and/or multi-media programs (e.g., Power Point, Astound) are an effective method to attract student attention and can provide a skeletal outline for note taking. A study by Kiewra, DuBois, Christensen, Kim, and Lindberg (1989) indicated that students record more notes on a skeletal outline than when taking notes conventionally. It is helpful to use brief headlines to alert the student's attention and then give them the responsibility to write down the important points from the lecture. Students will copy everything they see on an overhead. Including lengthy sentences often results in them spending much more time writing and much less time listening to what the instructor is saying.

While projection technologies, such as multi-media programs and overhead transparencies, can enhance the teaching process, we feel that it can also hinder a teacher's effectiveness. Too many overheads or multimedia slides can result in the teacher hiding behind the machinery and thus reducing interaction with the students during the mini-lecture. Our advice is to experiment with the number of slides used in the class and to make sure that a balance occurs between the instructor's time near the computer or overhead machine and time spent engaging the class in other ways. Although technology can help facilitate student learning (McKeachie, 1990), the self-of-the-instructor is still the most central and valuable tool in the classroom. No amount of technology can replace the energy, passion, humor, and inspiration necessary for quality instruction.

APPLICATION (20 MINUTES/35 MINUTES)

In our experience, this is the most important component of each class meeting. Students need to be able to understand how concepts can be applied to real world situations. Otherwise, they are left with concepts that have no meaning outside the classroom. According to McKeachie (1990), "lecture tends to be at least equal to, and more often effective than, discussion for immediate recall of factual knowledge on a course examination, but discussion tends to be superior for long-term retention" (p. 190). Studies in memory retention indicate that persons retain 20% of what they hear, 30% of what they see, and 90% of what they do and say (Bowman, 1996). We believe that long-term retention is essential in family science courses as we prepare students for careers in the helping professions. Further, the skills we teach can also be beneficial to students' personal relationships throughout their lives.

Effective methods for applying principles presented in the mini-lecture are listed below:

Lights, Camera, Action. Popular movies are a powerful pedagogical tool. The integration of collegiate education and video has increased significantly over the last decade. There are many examples of such a marriage of teaching and video technology (Marx, Jic, and Shep, 1994; Baker, 1993; Gerde, Shepard, & Goldsby, 1998). Within the management of the number of instructors to teach concepts from leadership and power to business ethics (McKeachie, 1990), in family therapy education (Alexander, 1994), these are the only ways using film in the classroom to illustrate a concept.

There are many reasons popular movies are an effective method for motivating students and stimulating them to think, presenting a variety of characters, goals, desires and behaviors. In conjunction with experiential exercises, film provides another way to analyze, and teach concepts and strategies. Film is an excellent means by which to connect with today's students.

There are numerous popular movies that can cover dynamics and specific issues that families cope with, such as parenting, divorce, abuse, chronic illness, alcohol and many other topics (See Appendix A). Popular movies can illustrate a particular concept, time can be spent analyzing and reacting. In special circumstances, I (TE) have used films and provided questions for discussion. For example, in a family systems course, I have used portions of the movie "Loving" to help students understand the effects of physical illness on family systems and with anticipatory grief in particular family systems. I have used film in assisting them in understanding the value of specific aspects of therapy in particular family systems.

The first challenge to using film is to choose the right clip. Simply showing movies for entertainment purposes is a waste of class time. Although some students may enjoy watching a film, they may not understand or appreciate the underlying concepts. Most will see such attempts as "fluff." In this way, films can be used to present important points of a movie. The instructor needs to predict the reaction of the audience and be proactive in connecting the class to the material.

Both of us have spent many hours reviewing and selecting films for our lectures. Finding the right clip can be challenging. Understanding concepts that by themselves may not have meaning can be more difficult if not presented in a particular context. Following the presentation of a study by Register (1994), our student (TE) showed a clip from the movie "Dead Man Walking" in which a� prisoner (Sean Penn) talking with his spiritual
of teaching and video technology (Marx, Jick, & Frost, 1991), and various discussions on the benefits of using specific films to illustrate key principles (Alexander, 1994; Baker, 1993; Gerde, Shepard, & Goldsby, 1996; Neck, Neck, & Meyer, 1998). Within the management domain, film has been used by a number of instructors to teach concepts from organizational behavior to leadership and power to business ethics (Michaelsen & Schultheiss, 1987; Porter & McKibben, 1988; Harrington & Griffin 1989; Kennedy & Lawton, 1992; Serey, 1992; Gerde, Shepard, & Goldsby, 1997). Film has also been used in family therapy education (Patterson & Van Meir, 1996) and medical education (Alexander, 1994). These are only a few examples of instructors using film in the classroom to illustrate a concept or theory.

There are many reasons popular movies are effective pedagogical methods for motivating students and stimulating their imagination. Film is multifaceted, presenting a variety of characters with different beliefs and desires and behaviors. In conjunction with standard texts, cases, and experiential exercises, film provides another medium by which to describe, analyze, and teach concepts and strategies. Film reflects popular culture and is an excellent means by which to connect with today's students.

There are numerous popular movies that help illustrate family dynamics and specific issues that families cope with daily, including marriage, parenting, divorce, abuse, chronic illness, alcoholism, death, psychopathology and many other topics (See Appendix A). Following a brief movie clip illustrating a particular concept, time can be set aside to discuss the students' reactions. In special circumstances, I (TE) have shown large segments from movies and provided questions for discussion. For example, in a class on death and dying, significant portions of the movie "Unstrung Heroes" was shown to demonstrate the effects of physical illness on families and how children cope with anticipatory grief in particular family systems. Students comment each semester on the value of film in assisting them in learning the course material.

The first challenge to using film is choosing relevant movie clips. Simply showing movies for entertainment purposes with no educational value is a waste of class time. Although some students will enjoy a diversion from class activities, most will see such attempts as "filler" that takes time away from legitimate learning. For example, I (TE) observed an instructor show 30 minutes of a movie with only a brief introduction and no discussion following the movie. We have both learned not to assume students "will just get" the important points of a movie. The instructor needs to elicit responses from the audience and be proactive in connecting the class material to the movie.

Both of us have spent many hours reviewing movies to locate clips that fit our lectures. Finding the right clip can be invaluable in helping students understand concepts that by themselves make little sense. For example, following the presentation of a study by Register and Henley (1992) that reveals seven major components of intimate experiences described by ordinary people, I (TE) showed a clip from the movie "Dead Man Walking". The clip showed a prisoner (Sean Penn) talking with his spiritual advisor (Susan Sarandon) just
before his execution. I asked the students in the class to look for the seven components of intimacy described in the lecture. Several students commented to me after the class how helpful the movie clip was in bringing the lecture to life. Such comments are common when integrating film into the classroom.

We acknowledge that using film requires considerable preparation time. For those instructors with limited time, we offer three suggestions. First, Alexander (1994) provides examples of movies that illustrate various aspects of family life. He includes subject headings for movies that address particular areas (e.g., life cycle transitions, grief and loss, alcohol abuse, sexual abuse, differentiation). Next to each movie, the author gives the specific location of important clips and summarizes what the clip illustrates. Second, a helpful time-saving tip is to keep notes of relevant movies seen to allow you to locate clips quickly once the movie is available on videocassette. Third, ask movieloving friends for recommendations. The challenge of using movie clips is not finding an example, rather, it is deciding which one of the many good illustrations to choose.

On Broadway. In addition to film, live dramatic accounts of couple and family interaction can be provocative. Theatre departments are an excellent resource to recruit students who are willing to participate in a class performance. Such students are often creative enough to design their own interaction with the instructor's guidance or present a scene from a popular broadway show. This technique, although time consuming, is particularly suited for large classes.

Get on a Roll. McKeachie (1994) describes role playing as: "the setting up of more or less unstructured situations in which students' behaviors are improvised to fit in with their conceptions of roles to which they have been assigned... Role playing is like a drama in which each participant is assigned a character to portray, but where no lines are learned" (p. 167). Role playing can be used to illustrate and apply principles discussed in class. Students can role play couple and family interaction. For example, following a mini-lecture on relationship patterns, the instructor can ask students to role play particular patterns (i.e., conflict, pursue-distance, triangling, underfunctioning/overfunctioning) and then begin a class discussion about how to interrupt the pattern. Students can then coach the "actors" on how to interact differently to allow for more healthy and productive relationships. Students are able to see themselves and their relationships within the role play. Many students have commented on how these role plays change the way they interact with friends and family.

Ask the Expert. One of the most powerful methods to illustrate didactic material is to invite people to class who can speak about their own personal experiences with the topic. In a class I (TE) teach on parenting, I invite parents with children at different developmental stages (pregnancy, infancy, preschool children, school-age children, adolescence) to describe their daily life and the challenges of parenting a child at a particular age. The class is then encouraged to ask questions. If students are reluctant to ask questions, the instructor can ask the students to write questions beforehand. However, it is preferable for students to also be a resource for finding guests. On occasion, I invite parents who have brought their own families to class to discuss their lived experience.

A Community Within a Community. In some social science courses to raise debate and controversy, it is helpful to bring in people who have much to say, at times, feelings and opinions. In a class on marriage, common-law marriage, family therapy, sex education, common-law marriage, etc., I have asked colleagues and family members for personal stories about their own relationships. These "experts" are asked to share their personal stories about their relationships and reactions of others to the stories.

Dividing the class into smaller groups to discuss specific topics. Such divisions can be a resource for finding guest speakers. On occasion, I have brought family members to class to discuss their lived experience.

Another kind of small group discussion is the discussion of the small group. For example, in a class on birth order, it is interesting to divide the class into small groups (e.g., eldest children, youngest children, only children, school-age children, adolescence) and have each group discuss their birth order experiences and opinions.

For Example. For instructors who are teaching a class on family therapy, bringing case examples to class can be very engaging for students. When presenting didactic material, it is important to obtain permission from clients and confidentiality with patient material is to implement this strategy. One of the advantages of the strategy is the differing perspectives that are shared, which often speaks to their own relationships and opinions are shared, students begin to see and develop an appreciation for the variety of approaches to the study of family therapy.

Game Shows. One can simulate a game show to create an environment in which learning is more engaging. A mini-lecture on sex education for children can be used to create a game show setting. For example, a game show called "Family Feud" can discuss a study reporting sex education for children, family therapy, and they responded to questions such as "Topic father, their daughters" and so on. This type of discussion from the entire class in comparison.
The instructor can ask the students to write down questions before the guests arrive. However, it is preferable for students to ask their questions directly to allow for more interaction. These "experts" can be found in many places by asking colleagues and family members for suggestions. Class members can also be a resource for finding guests. On several occasions, students have brought their own families to class to discuss their experiences.

A Community Within a Community. It is common for topics in family science courses to raise debate and controversy. Students often have much to say about their experiences and opinions on such topics as divorce, cohabitation, sex education, marriage, communication, and so on. Students who have much to say may, at times, feel intimidated to talk in a large class. Dividing the class into smaller groups to discuss the topic of the day can help reduce the size of the class and promote stimulating discussion. Providing specific questions for each group to discuss helps the discussion stay focused.

Another kind of small group discussion is to divide students into groups of common experience. For example, when giving a presentation on birth order, it is interesting to divide the class into oldest children, middle children, youngest children, and only children (Piercy, Sprenkle, & Wetchler, 1985). After each small group discusses their experiences growing up, the large group can attempt to predict what the qualities and characteristics (which can be written on the blackboard) of each birth position and then compare that to the discussion of the small group.

For Example. For instructors who are involved in work outside of the university (i.e., family therapy), bringing case examples into the classroom can be very engaging for students. When presenting a case, it brings drama and familiarity to the information presented in the mini-lecture. Of course, one needs to obtain permission from clients and confidentiality must be maintained if one is to implement this strategy. One of the most fascinating aspects of this strategy is the differing perspectives that are shared during discussion. Each student identifies something unique about the family or couple being presented, which often speaks to their own relationship history. As questions are raised and opinions are shared, students begin to see the complexity of relationships and they develop an appreciation for the multiple perspectives of their peers. The presentation of case examples also has an effect on how students view the instructor. The instructor is not just insulated in the boundaries of the university but is actively involved in the concerns of the community.

Game Shows. One can simulate a game show to review material. This helps create an environment in which learning is fun and playful. Following a mini-lecture on sex education for children, I (TE) implemented the game "Family Feud" to discuss a study reporting sexual topics addressed by mothers and fathers (Koblinsky & Atkinson, 1982). Two teams of 5 students were created and they responded to questions such as: "Topics mothers are most likely to discuss with their sons"; "Topic fathers are least likely to discuss with their daughters" and so on. This type of activity prompted much more discussion from the entire class in comparison to previous attempts at just
reporting the results. It was also closely tied to the mini-lecture, which helped prepare the students to participate in the game. It can sometimes take a bit of prodding to motivate students to participate, but students will eventually volunteer after the first few anxious moments. Other games that can be easy to adapt to the classroom include Jeopardy (excellent for reviewing factual information, i.e. how different cultures cope with death), and $100,000 Pyramid (also good for reviewing factual information as well as practicing communication skills, i.e. listening and understanding).

**Exercise, Exercise, Exercise.** Activities do not have to be complex; simple exercises are sometimes the best. For example, many are familiar with the classic grade school exercise of the "grapevine." The teacher tells a word, phrase, or sentence (message) to one student and this student whispers the word(s) to another and the message is passed from one student to another until every student in the class has heard the message. Of course, the teacher expects the message at the end to not be the same as the message that was told to the first student. Many times this exercise is used in elementary schools to illustrate the lesson, "It's not good to talk about someone behind their back because the message always gets distorted." This same exercise can be used in family science classes to discuss dangers of indirect communication. We, the authors of this article, have learned that even simple exercises like this one can be used in a college setting to help students apply the mini-lecture topics to their real world.

There will be times when a video example, role play, or exercise does not result in the planned outcome (e.g. the students don't really seem to get into the role play or the exercise's intended outcome does not occur). We have found, however, that even when activities flop, they can still facilitate the students learning and application of the material. For example, during one class period, I (CN) attempted to use the grapevine exercise described above to illustrate ineffective communication within groups of people. When the message had passed through over 50 people, the message at the end was the same exact message as the message delivered to the first student. At first, I thought that the exercise had bombed. I then decided to turn this negative into a positive by asking the class, "why was the message the same at both the beginning and the end of the exercise?" They mentioned that most people knew the purpose of the exercise (they had performed it in grade school) thus they were being alert and trying to make sure they delivered and received the message as accurately as possible and thus listened well. Then, I asked the class, "What might happen to contribute to the message NOT being the same?" They gave examples like poor listening and not being alert. Thus, the lesson was applied in the exercise even though it flopped.

Another example occurred during a class discussion on gender. I (TE) asked students to write their definitions of a "good man" and a "good woman". I expected to receive very stereotypical responses. Instead, the two lists that were generated had very similar words and phrases, such as caring, respectful, honest. Following some nervous moments wondering how to make the exercise...
I told the students what I had expected to occur. One of the students remarked that "good" characteristics are often shared by both genders. If she had been asked to simply define "man" and "woman" her lists would have been very different. I applied the lesson gleaned from my student and changed the exercise the following semester.

CONCLUSION (5 MINUTES/5 MINUTES)

This can be the briefest component of the model. The goals of the conclusion are to summarize what you have covered during the class and keep students motivated for the next class. We have found it helpful to end class with a bang rather than a whimper to communicate our enthusiasm for the material. An enthusiastic, dynamic conclusion helps demonstrate an instructor's passion for the material and commitment to student learning. In our opinion, students are more likely to show an interest in the course material when their instructor demonstrates enjoyment of the material. Further, research suggests that enthusiasm is a hallmark of a good teacher (Whetten & Cameron, 1991).

Due to the importance of a strong conclusion, it is important to watch the clock to allow enough time to give the conclusion before students get restless and pack up their belongings to leave. We recommend the following to prepare for the conclusion:

1. Be clear with the students about your expectations at the end of class meetings. Explain that class will end at the time specified on the syllabus and you will communicate to them when class is over.

2. Project your voice. When students get a hint that class is about over, the noise level will increase. Projecting one's voice will send a non-verbal message that class is not over. The instructor can also reiterate his/her expectations. For example, one might say "We have a few minutes left. I need your attention so provide you with this final piece of important information. This will ensure that you will get out on time."

3. Use an overhead to summarize the topic of the day. This will provide a visual cue for the students and reiterate the important points made during the class.

4. In addition to summarizing the material, give a conclusion that demonstrates your beliefs about why the material presented was important.

5. Build a bridge to the next class. How does today's topic fit with what will be discussed in the next class? This prepares students for the next class meeting and allows them to see the link between topics that, on the surface, may appear unrelated.

6. Provide a provocative statement, question, or quote that students can take with them as they leave. Such a statement can underscore the relevance of the day's topic for each of their lives.

7. Ask your students to evaluate the day's presentation. We have done this in two different ways: (a) Ask the students directly (What were the most
significant points made in today’s class?; How helpful was the activity in helping you understand the lecture?; (b) Ask students to anonymously write down feedback on a piece of paper or give them a brief evaluation form. This technique is similar to what Harwood (1996) calls "The One-Minute Paper." During the last few minutes of class, students are asked to write down one main point from the lecture and one question about the topic that lingers with them (Harwood, 1996). This is an excellent method to immediately assess what students learned and found most valuable during class. If some information was not understood, the instructor has an opportunity to begin the next class for clarification of material. This is also an excellent method to evaluate your teaching throughout the semester.

8. Ask students to write two test questions from the day’s presentation. This is another method to evaluate what students identify as the most important information presented in class. Further, the instructor is able to generate legitimate test questions from the students. I (TE) have created exams based solely on student questions.

FLEXIBILITY OF THE I-MAC MODEL

Although we have provided the steps of the model in a sequential order with time suggestions, each instructor who employs this model will benefit from its adaptability to meet the needs of specific instructors and courses. Each of us have deviated from the parameters of the model when necessary. For example, it is not uncommon for mini-lectures to continue longer than expected when the ideas generate comments and questions from the class. When an instructor is engaging students in such a way, he or she may decide to continue the discussion and shorten the application portion rather than cutoff a fruitful, educational exchange of ideas. Other classes may lend themselves to a blending or reversal of the mini-lecture and application sections. For example, at the beginning of a class on mate selection, I (TE) implemented an exercise developed by Dixson (1996). First, I paired students into pretend couples preparing for marriage. Each person privately filled out an instrument articulating their expectations of their pretend spouse and marriage. Next, each couple shared their expectations to determine areas of difference that could be problematic, areas of difference that would not be problematic, and had them predict the success of their marriage based on their expectations. Following a discussion about this exercise, a sample of theories and beliefs about mate selection were presented to the class.

The following questions are often raised about the I-MAC model.

First, can the model be used in a variety of courses? I (TE) have used this model in a variety of courses, including human sexuality, effective parenting, intimate relationships, death and the family, and several family therapy courses. I (CN) have implemented the model in my management courses. One may find limitations with this model if a course requires significant didactic teaching (e.g., research and statistics) or a course that is taught in an accelerated manner (e.g., summer school). Brief chunks of information can be presented during interaction and application. Second, can our classes meet weekly for 3-hours? In courses that either expand the application section (a work), or thoroughly evaluate the model. Taking a break during the mini-lecture transition is helpful. Finally, can the model be used in smaller classes? Class size has not been a barrier for us. We have used classes ranging from 10 students up to 550 students (in smaller class sizes, but it is obvious that class size has not been a barrier for us). Several students in each of us that the class feels much smaller during class.

STUDENT EVALUATION OF THE I-MAC MODEL

This I-MAC teaching model has been very effective. Student evaluations of our courses using the model. At the end of a course, students are asked to evaluate instructors using both objective questions and subjective questions highlighting by the students of the model. The application section is viewed for three reasons. First, students appreciate the opportunity to put themselves in real world situations. One student remarked that the points we make "feel very real." Another student noted that the introduction and application sections, "I learned about real life are used in class as a means to illustrate the key points of lecture." Another student stated that the speakers "admitted" to class, and gave us knowledge that we would not learn. Second, the discussion generated by the activity, "I learned a lot by listening to others." On a more negative note, some students have found the exercises "boring." Such comments have helped us determine which exercises may be better suited for the class.

Many students also commented on the external activities in our courses. They specifically liked "fun," "innovative," and "fun." We realize the personal
The model is most effective when brief chunks of information can be presented slowly to allow for more interaction and application. Second, can one apply the model in courses that meet weekly for 3-hours? In courses that meet weekly for three hours, we either expand the application section (a wonderful luxury) or repeat the steps of the model. Taking a break during the middle of class to allow for this transition is helpful. Finally, can the model be used in small and large classes? Class size has not been a barrier for us. We have used this model successfully in classes ranging from 10 students up to 550 students. The application section is obviously easier in smaller classes, but it is an essential part of larger classes that often feel impersonal. Several students in large classes have commented to each of us that the class feels much smaller due to the high level of interaction.

STUDENT EVALUATION OF THE I-MAC MODEL

This I-MAC teaching model has been instrumental in our teaching effectiveness. Student evaluations of our courses underscore the advantages of the model. At the end of a course, students are asked to evaluate the course and the instructor using both objective questions and narrative reactions. The most common strength highlighted by the students has been the application section of the model. The application section is viewed as helpful for two primary reasons. First, students appreciate the opportunity to apply the ideas presented in lecture to real world situations. One student expressed, "The video clips demonstrate the points you make very well. They also help you to remember the key points of lecture." Another student commented on the value of both the introduction and application sections, "I love the way movies and stories about real life are used in class as a means of communicating class material. Quotes at the beginning of class inspired me to focus and prepare for class." Another student stated that the speakers "added a very personal aspect to our class, and gave us knowledge that we wouldn't be able to get anywhere else." Second, the discussion generated by the activities is invaluable. One student remarked that "I learned a lot by listening to other people and their opinions." On a more negative note, some students have commented that too many movies were used. Such comments have helped us reevaluate how and when we use movies.

Many students also commented on their appreciation for the variety of activities in our courses. They specifically liked the changes of pace throughout the class hour which they view as "refreshing" and "stimulating." One student stated, "I enjoyed the creativity used in presenting material and how all students' learning styles were taken into account through the use of readings, papers, movies, games, and class discussion which I appreciated." This variety helps us steer clear of monotony that can lead to boredom and frustration in class.

Finally, the students have described our courses as "entertaining," "innovative," and "fun." We realize the personalities of the instructors, not just
the I-MAC model, help cultivate an environment in which students are motivated to learn and enjoy our classes. Implementing the model void of enthusiasm and energy will lead to failure in the classroom. However, the I-MAC model provides us with a structure that gives us safety and permission to experiment with creative ideas. We view our classes as ongoing works in progress, but with a stable structure.

This model provides a good balance of didactic material and application of concepts. More importantly, students are active participants as opposed to passive learners. For the instructor, the model provides a structure seldom taught during graduate education. Quality teaching is a learned skill and a creative enterprise. It is essential for aspiring professors to receive adequate training in teaching before and during their course assignments. The students we teach deserve such quality. We hope this paper will provide a guide for instructors new to the classroom and encourage established family science instructors to write about their teaching methods. In closing, we hope our suggestions in this article will help new instructors help their students “build bridges of their own”.

REFERENCES


Edwards & Neck I-MAC Teaching Model


APPENDIX A: A SAMPLE OF FILMS TO TEACH ABOUT FAMILIES

<table>
<thead>
<tr>
<th>Family Issue</th>
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<td>Child abuse</td>
<td>Radio Flyer</td>
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<tr>
<td>Sexual coercion</td>
<td>Accused</td>
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<td>Family systems</td>
<td>Shine</td>
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<td>Infertility</td>
<td>She's Having a Baby</td>
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<td>Communication</td>
<td>Husbands and Wives</td>
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<td>Parenting Styles</td>
<td>Parenthood</td>
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<td>Gender</td>
<td>The Great Santini</td>
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<tr>
<td>Mate selection</td>
<td>Annie Hall</td>
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<tr>
<td>Step-families</td>
<td>See You in the Morning</td>
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<tr>
<td>Aging</td>
<td>On Golden Pond</td>
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<tr>
<td>Sexual orientation</td>
<td>Philadelphia</td>
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<td>Death and dying</td>
<td>Unstrung Heroes</td>
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<td>Chronic/terminal illness</td>
<td>My Life</td>
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<tr>
<td>Disability</td>
<td>My Left Foot</td>
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<td>Culture</td>
<td>Joy Luck Club</td>
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<tr>
<td>Divorce</td>
<td>Kramer vs. Kramer</td>
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<td>Adolescence</td>
<td>The Breakfast Club</td>
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<tr>
<td>Alcoholism</td>
<td>When a Man Loves a Woman</td>
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<td>Parent-child conflict</td>
<td>Ordinary People</td>
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<td>Marriage/weddings</td>
<td>Betsy's Wedding</td>
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<td>Affairs</td>
<td>City Slickers</td>
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1Suggestions from Alexander (1994) are included in this list.