

THE INQUIRY LEARNING FORUM: VISITING CLASSROOMS AND BUILDING COMMUNITY

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Many teachers have good working relationships with the colleagues in their own building or school system, but often lack connections with other teachers that have similar interests and teaching responsibilities. Feelings of isolation can be frustrating to the practitioner. For example, being the only physics teacher in your school can keep you from sharing teaching strategies and content with someone who is familiar with your subject area. External relationships with other teachers are often developed during workshops or summer institutes, but are not cultivated or continued during the busy school year.

Furthermore, many teachers yearn for outside criticism about their teaching, but their desire is often not met because colleagues in the same building may be uncomfortable providing constructive criticism. Their colleagues might fear that they may offend their friends or that they may not be able to provide the objective feedback that their colleague may be seeking. Increasingly, teachers with these needs are turning to online environments in an attempt to find classroom resources and establish connections with other teachers.

The Inquiry Learning Forum (ILF) is a new and exciting opportunity for Indiana pre-service and in-service teachers. This video centered, Web-based learning forum is designed to support an online community of in-service and pre-service science and mathematics teachers interested in developing a better understanding of inquiry-based teaching. The ILF provides teachers and future teachers with opportunities to virtually “visit” the classrooms of other Indiana teachers. The ILF features a large video library of classroom

episodes and enables teachers to discuss, annotate, reflect upon, and replay these classroom episodes as needed. When an ILF member selects a specific classroom to visit, she or he can access a selection of video clips, reflections, and documents that embody the lesson highlighted in that classroom. These classroom episodes serve as a basis for teachers to receive feedback and develop a better understanding of inquiry-based teaching.

Inquiry and Reflection: Foundations of the ILF

As educators, our teaching practice is rapidly moving towards inquiry-based methods of instruction. Inquiry-based science teaching is emphasized by the *National Science Education Standards*,⁵ the *Benchmarks*,¹ *The Indiana Science Proficiency Guide*,³ and the draft *Indiana Academic Standards: Science*.⁴ Inquiry teaching methods and inquiry-based teaching is increasingly employed in Indiana science classrooms. Students are developing and utilizing inquiry skills so that problems may be investigated, data may be generated, and solutions may be formulated during the inquiry process. Solutions are seen as continuously evolving, not ends to be taken as truths. Like professional scientists, students realize that the products of inquiries are solutions that work in specific situations, but may not apply under all circumstances.

An additional part of our growth as teachers and “lifelong-learners” lies in becoming a reflective practitioner. Educators continually undertake different levels of reflection, whether formal or informal. Reflective practice helps us to look at our teaching and identify strengths and weaknesses. Teaching a lesson repeatedly always results in modifications, both major and minor. Even in the same day, we teach the last period differently based on how the lesson went during the first period. By documenting our practice and conducting more structured reflections (often with the help of others), we are more able to maintain dynamic practice and develop our teaching methods. As reflective practitioners, our goal should be to move towards self-evaluation and the synthesis of new approaches and teaching strategies.

Opportunities for reflection can occur during professional development activities, in which teachers interact with colleagues to provide a critical look at each other’s teaching. One of the problems is that these workshops and in-services do not have a very long lifespan. Relationships that were built during these activities are often not sustained. This makes it difficult to develop lasting professional communities that can provide teachers with meaningful feedback on their teaching. These circumstances can lead to further feelings of teacher isolation and loneliness. Ideally, we as teachers need easily accessible and active communities in which we can interact, gather resources, and develop our teaching practice.

Online Resources for Teachers

The Internet provides numerous unique professional development opportunities for teachers. Communities of teachers can gather and maintain contact at their convenience, as web-based technologies (such as chat tools) allow synchronous contact with other professionals, even during the hectic school year. There currently are a number of online professional development sites that have become fairly popular.

Teachers.net (<http://www.teachers.net/>), which bills itself as “The Ultimate Teacher’s Resource,” is one of the most popular sites. This large site focuses on providing lesson plans and resources, as well as opportunities for teachers to chat with one another and find jobs. It is an informal meeting place that is easily accessed; one can either “hit and run” to grab a lesson plan or hang out and communicate with a colleague half a world away. This repository of information serves the needs of many teachers well in that it gives them quick, easy access to the materials desired.

A different kind of online teacher professional development community is TappedIn (<http://www.tappedin.org>). TappedIn is meant to be a personalized virtual space. Each user has his or her own “office” in which she or he can place objects, have meetings, or just hang out. The site is centered on real-time chat interactions and regular meetings are held to discuss topics of various special interest groups (elementary, science, . . .). The real utility of this environment is that it can serve as a vehicle for cross-site collaboration. Teachers and other educators can meet at TappedIn and review or create artifacts together.

Despite the utility of these resources, neither of the aforementioned sites offers the unique opportunity to provide feedback on specific instances of teaching. As part of a community of specialized practice, we seek criticism of our teaching from our colleagues. The need exists for an easily accessible community in which we can share teaching experiences and thoughts on improving our teaching through critical interactions.

The Inquiry Learning Forum

The ILF offers a unique opportunity for Indiana science and mathematics pre-service and in-service teachers. It is designed to support a community of teachers interested in reflecting on their practice and talking about teaching in order to develop a better understanding of what it means to do inquiry-based teaching. This community provides opportunities to virtually “visit” the science and mathematics classrooms of other Indiana teachers (only Indiana pre-service and in-service teachers can become ILF members). As

teachers, we seldom have time to visit the classrooms of our colleagues and these experiences are often fleeting or isolated. Even when we are fortunate enough to be able to watch one of our colleagues in the classroom, there is seldom little time to really talk about what happened that day or develop a rich appreciation for what "exactly" the teacher was trying to accomplish.

For example, think about your own teaching. As we attempt to provide a particular learning experience for our students, there are hundreds, if not thousands, of decisions that we make as the class progresses. Would not it be fantastic if you could observe a colleague's class and then find out exactly what she or he was trying to accomplish at particular points in the lesson, why she or he chose to teach something in a particular way, or why she or he dealt with one of the students in a particular manner? This is possible during a live visit to a classroom, but there is seldom time to articulate the details of what a teacher was trying to accomplish. The ILF enables one to view a classroom episode as well as explore the teacher's reflections and thoughts on that class period. These reflections may be as specific as discussing a particular classroom management strategy or as general as the teacher's philosophy about using inquiry teaching in an advanced environmental science course.

When ILF members select a specific classroom to visit, they have before them a selection of video clips, reflections, and documents that form the lesson highlighted in that classroom. The video of the class is the focal point of each ILF classroom. A split screen allows an individual to watch the video while reading the teacher's reflection on that particular segment or exploring the other resources and links associated with the lesson. Associated resources include the lesson or unit plan the teacher is using, relevant curriculum standards, reference to resource materials, and discussion forums for ILF members to discuss classroom strategies for teaching and learning. Other topic-oriented discussion forums are also available for members to discuss issues and questions that arise out of a particular classroom.

In addition to the Science and Math Classrooms, there are five other virtual spaces designed to support the professional development needs of ILF members: a) the Office - a space to register for the site and obtain technical information; b) the Auditorium - a space for special events to occur; c) the Library - a place where teachers can go to access reference materials of interest, including references on teaching materials (software, other classroom artifacts like the graphing calculators, manipulatives, sensory probes, . . .), state and national standards, grants, applied research and theory, relevant state initiatives, and other materials the teachers identify as relevant; d) the Lounge - an informal meeting space to talk with other teachers via chat and asynchronous discussion forums; and e) My Desk - the teacher's personal space where she or he can store bookmarks to resources and relevant classroom videos to which she or he can return at a later visit.

Implications

The ILF extends the traditional notion of using the Internet to access and download lesson plans from a variety of sources. Not only do we as teachers have the opportunity to obtain lesson plans, unit plans, and other resources via the ILF, but we are able to watch other teachers implement these resources in their own classrooms, read the personal reflections of these teachers, and engage in discussions with these and other teachers about what we have seen, heard, or read. Every classroom resource available in the ILF community is "attached" to a videotaped segment of a lesson or a particular discussion thread. This enables teachers to not only find resources, but also to read or to hear about how they might be used in a particular classroom.

More importantly, the ILF is trying to transform the traditional notion of professional development. Too often, professional development refers to isolated workshop or in-service settings that teachers attend a handful of times each year. Despite the potential in these types of settings, professional development workshops often fail to address the specific needs of each teacher. The ILF is working to develop a community of teachers that share the common philosophy that professional development is a lifelong commitment and experience. The ILF provides a vast set of potential resources, experiences, and opportunities that teachers can choose to explore, thereby customizing their experience in the ILF community to suit their professional development needs.

The ILF also provides opportunities for Indiana teachers to make connections with other teachers. Members are able to interact with other ILF teachers who have similar backgrounds. For example, as the only earth science teacher in my high school, I am no longer isolated from other earth science teachers who share similar interests. Through the ILF I can develop and cultivate connections with other Indiana teachers. Members are able to initiate discussion forums on topics of interest as well as join in on any of the ongoing discussions (e.g., What is inquiry?, Using technology in the classroom, or one of the threads tied to an ILF classroom). In addition, the ILF will soon offer opportunities for groups to form working circles, or sub-communities, to facilitate collaboration on a particular project, product, or goal.

There are a number of ways to participate in the ILF community. Many teachers may simply choose to visit the site, watch a few videos, and read the related reflections and discussions. Others may choose to actively participate in the discussion by posting their own thoughts or ideas about what they have seen or read. One of the most invested ways to participate in the ILF is by becoming a contributing teacher. Contributing teachers are those who have videotaped their own classrooms, compiled the accompanying resources, and made them available to the ILF community. As a contributing

teacher you have the opportunity to receive feedback on your teaching in a safe and supportive environment.

The ILF encourages its members to become “critical friends” to other teachers. A critical friend is “a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person’s work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working towards.”² This relationship between ILF members provides endless opportunities for ongoing inquiry, critical reflection on their teaching, and professional growth. In other words, ILF is designed to support a community of “critical friends” helping each other to improve their teaching.

Summary

All of these opportunities, and others, enable ILF members to develop a sense of ownership and belonging to a meaningful community. Not only are teachers able to sustain their day-to-day needs of curricular ideas and artifacts via the ILF, but ILF members are also able to become part of a dynamic learning environment that fosters and supports their growth as teachers. The ILF is an outgrowth of the unique opportunities afforded by the Internet. Time and time again, teachers reiterate that the most valuable professional development experience is to be able to watch another person teach and to talk with other teachers. The ILF has leveraged the power of the Internet in a way that facilitates access to classrooms throughout the state of Indiana and provides endless opportunities for ongoing professional development through critical reflection, collaboration, and community participation.

Note: There is a new ILF classroom online almost every week. Since students are in the ILF video segments, registration is required and access is limited to Indiana pre-service and in-service teachers. Check it out today! <http://ilf.crlt.indiana.edu>

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