The Pathology Education Instructional Resource (PEIR, http://peir.path.uab.edu) was designed to provide resources for teaching and learning that are user-friendly and dynamic. Our main goal in creating this resource was to facilitate development of materials that would augment the learning environment for our students. Toward this end, the centerpiece of PEIR has been a Web-based collection of over 30,000 images and 8,000 test question items that faculty can use for developing digital teaching materials and examinations. In its original incarnation, the PEIR was a success with faculty and residents who mainly used the system to find exam questions as well as digital images to add to PowerPoint presentations. However, one main goal of the PEIR was not being fully realized—the creation of online teaching/learning materials. Other than HTML conversions of PowerPoint presentations, the PEIR resources were not facilitating faculty creation of Web-based resources.

Thus, a need was identified for an online authoring system to enable faculty to create new online educational materials as well as port existing materials to the Web. One major requirement for this system was its ability to be integrated with the PEIR image and test question databases. Evaluation of existing courseware packages revealed no commercial product that adequately met our requirements. Therefore, we developed our own authoring system and combined it with our image and test question databases into a single interface known as the PEIR Digital Library.

Through a Web browser, faculty can access the PEIR Digital Library and search for images, test questions, or existing instructional materials created by other faculty using the integrated authoring system. Selected images, questions, or materials can be added to a shopping cart for download or for use in authoring online materials. Once materials have been gathered into the shopping cart, faculty can begin the authoring process. (It should be noted that faculty are not limited just to PEIR images for authoring; the system is capable of using other existing images on the Web, or images may be uploaded into the system through the authoring interface.) Online materials are created by using a form-driven template to construct individual Web pages. Each page may contain multiple images, interactive questions, and faculty-authored text. Pages are combined into chapters and chapters into books. A given page may be used in multiple chapters and a given chapter in multiple books. Further, each author is allowed to use materials created by other authors. Thus, a chapter on heart physiology created by one author may be linked to a book on cardiovascular pathology being created by another author. Finally, each book can be password restricted by its author, each of whom is given permission to manage his or her own users/passwords.

Currently, the medical Pathology course curriculum from our own department has been converted to this system with a combination of faculty members, secretaries, support personnel, and even work study students participating in this process. Recently, we received a grant from the UAB Health Sciences Foundation to expand the system to include all of the basic science curriculum as well as radiology.