

Information Literacy Planning for

Educators: The ILPO Approach

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ILPO—Information Literacy Planning Overview—and the supporting documents combine the many facets of information literacy including critical thinking, problem-solving, and information technology into a planning document to support teachers and teacher-librarians. The program advocates a whole-school approach to the integration of information literacy into the curriculum, encouraging the development of a common language across year levels and subject areas. Through a problem-solving approach, plagiarism and regurgitation of information make way for creative and original thought. The project has been implemented in schools throughout Australia, and ILPO documents have been published in North America by the American Library Association.

Introduction

Within the realms of educational pedagogy, it is acknowledged that there is a responsibility to assist students to learn strategies that will enable them to function well in the society in which they live (Doyle, 1994; *Information Power*, 1999; *Teaching Information Skills*, 1997). In technological societies, this implies developing an ability to access and use effectively a plethora of information as easily as breathing. As educators, we are faced with the challenge of creating learning experiences for students that give them strategies that they will be able to use in their everyday lives and that they will continue to use into adulthood.

This article describes a project that won the 1999 IASL/SIRS Commendation Award. Outstanding and innovative projects, plans, publications, or programs that could serve as models for replication by individuals or associations are recognized by IASL through this award, which is sponsored by SIRS Mandarin, Inc., an information technology company that serves school libraries around the world. In making the award, the adjudication committee noted, "This is a truly significant and innovative project suitable for replication elsewhere in the world." The award winners, Jenny Ryan and Steph Capra, two practicing teacher-librarians with over 20 years experience in Australian schools, developed the project. It was born of a perceived need to create a cohesive and sequential information literacy program throughout the curriculum. The authors felt that their ability to plan effectively and efficiently was hampered by the lack of suitable information literacy materials that encompassed all of the aspects of information literacy. The project goal was to develop a planning tool for teachers to use when integrating information literacy strategies and skills into their curriculum planning. The

aim of the project was to create a planning tool that would incorporate the varied and disparate skills that comprise information literacy. In a school, teachers should share a common language and approach for the inclusion of information literacy in curriculum planning

The resources developed by the authors include the planning overview documents, *ILPO Information Literacy Planning Overview P/K-7* (1998) for teachers of students of 5 to 12 years and *ILPO 8-12* (1999) for students years. Four further books of resources, *ILPETS* (Information Literacy planning—Extra Teaching Support) were developed to support the teaching of these skills. The *ILPETS* books are content-free blackline masters or copy masters with activities and teaching tips for students and teachers resources have been republished by the American Library Association for distribution in the United States and Canada. The books have been retitled as *Information Literacy Toolkit Grades Kindergarten-6* and *Information Toolkit Grades 7 and Up*. These resources support teachers who may not be familiar with some of the skills, and provide a springboard for their professional development. A 16-page student Research Organizer was also developed based on the blackline masters from the resource books. The authors also produced a video to support the integration of information literacy across a whole school. This video has been used by schools in Australia and overseas to assist in the development of a whole-school approach to the integration of information literacy.

Although it is acknowledged that *information literacy* is a term that has diverse meanings (Spitzer, 1998) and has no universally accepted definitions, the authors believe an understanding of the key elements of information literacy is the basis on which students can move toward unlock intricacies of the information age. The authors also believe that critical thinking, problem-solving skills, and information technology skills should as an integral part of a program that seeks to develop and encourage students to move along a path to achieve a higher level of information literacy. We define information literacy as the ability to process and synthesize information using the skills found in the steps of defining, locating, critically analyzing, and synthesizing information in order to create an original response to a problem or task. The ability of individuals to use an information process model in their daily lives can enable them to participate effectively and confidently in the community in which they live and the world at large.

Project Framework

The goal of the ILPO project was to develop in students the ability to and use the skills of critical thinking and problem-solving into adulthood. The information process was chosen by the project writers as the central framework or organizing device for the project. This information approach uses a step or stage approach, as developed by Kuhlthau (1993) and adapted in 1997 by the Australian School Library Association (ASLA) as the Australian six-step process approach (Defining, Locating, Selecting,

Organizing, Presenting, and Assessing). The information process has been used extensively by many information professionals and is reflected in information process models developed in the United Kingdom, Australia, and North America. The information process has been used for over 20 years as a basis for developing information literacy in individuals and as such was adopted by the authors as a basis for the ILPO planning documents. The seminal work found in the student standards in *Information Power* (1999) was drawn on by the authors to validate skills developed in ILPO.

The steps of ILPO Information Process placed an emphasis on the analytical nature of the Selecting phase. The synthesis of old and new information to create new and original thinking was significantly developed in the Organizing phase. The six steps of the ILPO Information Process include:

- *Defining*: The stage of formulating questions, analyzing and clarifying the requirements of the problem or task. As a result of new learnings and understandings, this stage is constantly revisited during the entire process to refine and redefine the problem or task for further clarification.
- *Locating*: Following the defining stage, the student identifies potential sources of information and is able to locate and access a variety of resources using multiple formats.
- *Selecting/Analyzing*: The student analyses, selects, and rejects information appropriate to the problem or task from the located resources. An emphasis on analysis of the selected information is critical to the development of information literacy given the deluge of information available. Without developing high-level analysis skills to assess relative worth of information, students wade through endless and generally irrelevant information that does not suit their purpose.
- *Organizing/Synthesizing*: In this stage, the student critically analyzes and organizes the gathered information, synthesizes new learning incorporating prior knowledge, and develops original solutions to a problem or task. A problem-solving approach calls for synthesis of information to form new knowledge, which can be used to solve problems.
- *Creating/Presenting*: The student creates an original response to the problem or task, presenting the solution to an appropriate audience. There is a societal expectation that individuals will possess good communication skills in a variety of formats. For this reason, then, skills that emphasize communication are also significantly developed in this step.
- *Evaluation*: In this final stage, the student critically evaluates the effectiveness of his or her ability to complete the requirements of the task and identifies future learning needs.

The development of good problem-based assignment questions is critical to this process. Using this approach enhances the development of critical, creative,

and original thinking to produce solutions to problems. By using this approach, the common problem of plagiarism can be avoided, and students can extend their mental capacities to think more deeply. Students are confronted with ethical issues from an early age. The program ensures that progressive development of ethical considerations takes place to give substance to this critical factor. Development of these skills supports students become ethical and socially responsible members of society. In today's society of an abundance of information, the authors believe that ethical and socially responsible behavior should be explicitly taught and not left to a vague notion of learning by osmosis. Teaching students to acknowledge their information sources from the earliest age, giving them problems solve—not topics that merely require regurgitation of information—and thus eliminating plagiarism, and teaching students to make original notes are all skills that promote the ethical use of information.

In the preparation stage of developing the program, information literal benchmarks were sought worldwide to measure the appropriateness of the skills that were desired to be included in each of the information processes. Many documents were used in this benchmarking stage, the most significant being the Australian School Library Association CD-ROM *Teaching Information Skills* (1997) and the guidelines document *Information Power* (1999) published by the American Library Association. The work of McKenzie (1999) was a source of inspiration and direction. His emphasis on the development of students' original thinking and the integration of information technology in to the curriculum were particularly thought-provoking.

Information technology (IT) has created a new society. IT is a new literacy, one the writers believe is a subset of information literacy and, as such, the skills of information technology can be embedded into the information process. During the development of these resources, the authors grappled with the concept of integrating the skills of IT into the information process and found that IT skills can be successfully embedded. For example, in the Locating step, one can find the skills associated with Internet and database searching. In the Organizing/Synthesizing step, the skills of word-processing and using spreadsheets can be embedded. Desktop publishing and multimedia skills can be found in the Creating/Presenting process. Ongoing changes in IT can be incorporated into the Planning Overviews as they occur.

Using the ILPO Materials

The basic premise for writing this document was to facilitate consistent and efficient planning for teachers. Although the Australian State and National Curriculum Guides stated that these skills must be taught, there was little guidance for teachers as to how these concepts could be integrated into the daily curriculum. The ILPO document format was devised to be used by teachers when planning curriculum programs and serves as a record of the skills used and a springboard for lesson plans. It took many months for an appropriate format to be devised that worked on all levels. Innumerable

formats were considered and then discarded. The format finally decided on was in the form of a grid to enable easy use of the document. The grid format enables skills to be selected for each teaching unit and a record kept of the implementation skills into curriculum planning for the period of the academic year. All skills contained in that year level should have been selected and taught explicitly during this period.

The ILPO Planning Overviews were developed for every year level of both primary and secondary schooling. Year-level planners were decided on as the most accessible planning point for teachers who are still predominantly teaching and planning at a particular year level. The planners have also been used in schools with multi-age groupings and vertical curriculum access where students are at different learning levels for different subjects. The skills developed in the Information Process steps have been sequentially and developmentally written to provide a cohesive document. For example, defining the task in Year Twelve (17-18-year-olds) is a complex process: "Refines appropriate questioning techniques to clarify requirements of task; formulates an hypothesis; develops focus questions and responds to a task which may require identification of trends, analysis, critical evaluation, cause and effect." By comparison, the process of defining the task for Year One (5-6-year-olds), is less complex: "Draws on prior knowledge to brainstorm ideas and vocabulary for a given question; categorizes information into lists; brainstorms possible sources of new information." However, the basic task remains the same. The same principle applies to all the information process steps; the skills are incrementally harder for each year level.

In the year-level planning document, the increase in difficulty of a skill is indicated to the teacher by placing the text for the skill in bold type. This indicates to the teacher that this skill and its degree of complexity need to be explicitly taught and modeled with students. The degree of teacher support needed at each level for each skill is also stated. For example, a skill is first introduced "using modeled examples." This indicates to the teacher that specific learning activities need to be structured around an authentic task. As some mastery of a skill is achieved, the next incrementally harder level is presented in the document as needing to be achieved "with guidance," that is, the teacher is assuming a "guide on the side" style of teaching. As the student achieves mastery of a skill, after having spent possibly two to three years achieving this, it is assumed that no teacher guidance or support will be required by the student.

A series of graded documents (ILPETS Books 1-4) was developed to support teachers implementing lessons on the skills found in the ILPO planning documents. Some examples of these lesson stimulus activities include: Task Analysis, Referencing, Notetaking, Web Page Reviewing, Graphic outlines, Cause and Effect, and Boolean Searching. There are more than 120 activities in the four books. These lessons, in keeping with the philosophy of authentic learning, should always be taught in the context of a classroom activity, not as isolated, out-of-context "library lessons" that have no bearing

on current classroom activities. These activities are taken directly from skills found in the main planning documents. Each activity has a teaching-tip component to explain and suggest possible approaches to the task. These support sheets are also free of any content so that they may be applied to any curriculum need.

In each of the ILPETS books, starting with Book 1, a suggested sequence of activities is presented that forms a basic sequence of the research process. These blackline masters can be photocopied to create student research strategy booklets. For students who have reached some degree of understanding of the research process, the writers developed a separate Research Organizer booklet to guide students through their task and support the use of the Information Process. The 16-page booklet starts with analyzing the task, brainstorming, constructing a concept map of the task, and devising focus questions to guide their inquiry. It then moves into a notemaking section, providing pages to make notes under subheadings. By making notes under the separate subheadings, plagiarism is reduced as this process does not allow copying sections of text. Following the research notes section is a page devoted to expressing original thoughts, as a synthesis of the information researched. This allows opportunity for students to reflect on their learning, to create new personal knowledge, and to develop original thinking to help solve the problem or task that they have been set. The next page of the Research Organizer provides space and guidance for writing the bibliography or references. This guides the students with simple instructions on how to construct a bibliography. The last page is a self-assessment of the task, which allows the student time and space to reflect on how well he or she has completed the task in relation to the processes used. The Research Organizer is designed to replace pieces of paper or notebooks and is submitted with the final product as evidence of having completed the process steps.

By using this method of completing the research task, much can be accomplished. First, there is evidence for the teacher to gauge the level of students' understanding of the task. Second, if the Research Organizer is used by students across all the subject areas, a consistent common language is established regarding the information literacy processes, which enables students to cross-transfer these skills. By using this principle, teachers are providing a common approach across subject areas that assist students to realize that the information process can be applied to all research tasks, no matter what the subject matter, and transfer this knowledge to applications in university, work, and personal life. By attaching an assessable value to the successful completion and submission of the Research Organizer with the finished assignment, students will be more likely to value the completion of the process part of the question, not just the knowledge or content component. The authors believe that it is critical that the process of completing the assignment be assessed, as well as the knowledge components for information literacy to be developed in students.

The construction of assignments as problems or tasks is critical development of an information literacy policy in schools. Problem-centered assignments encourage critical thinking; open-ended questions develop higher-order thinking skills and stimulate ideas. Plagiarism is also circumvented by the provision of good questions. Good questions ask students to synthesize what they have read and noted, develop original thinking solve problems. This leads to new knowledge that can be applied in situations. Plagiarism is actively encouraged when students are asked to simply retell or restate information. By constructing questions that require a synthesis and transfer of information into new thinking, this regurgitation process can be prevented.

Examples of assignments stated as problems are to be found in the preamble of the ILPETS books. One example might be an assignment about Famous People. Instead of giving students the topic "Famous people" tasks such as, "Research one famous person; include their early life, date of birth, date of death, achievements and contribution to their country other interesting facts," the teacher might change the assignment to a problem question: "The Famous Person of the Century Awards. Create a series of categories and their criteria for this awards system. Select one person to nominate for the award and present an argument for your choice." Student engagement is likely to follow as they argue for their particular nomination. Writing assignments as problems takes practice, but problem-based assignments will lead to students being able to demonstrate their abilities to think critically, to solve problems, and to develop information literacy skills.

Implementing ILPO Across the School

The ILPO resources were developed to support the integration of information literacy throughout the school, fostering a whole-school approach to the teaching of information literacy. The authors actively support the concept that a whole-school approach to information literacy can be achieved most effectively through the integration of these skills in all subject areas over all year levels.

One of the factors that has made it easy for schools to use the ILPO Planning Overviews as a school-based document is that the Planning Overviews may be used electronically using the CD-ROM that was developed with the program. This tool has enabled schools to create a school-based program that suits individual school needs and facilitates the development of school-based policies on information literacy.

The authors' suggest that the appropriate year-level planning documents be given by the coordinator of the program, usually the curriculum coordinator or the teacher-librarian, to teachers at the beginning of each school year. Primary school teachers use one year-level plan for their grade. Secondary teachers who may teach several classes of one subject and several in another at another year-level use one for each subject and year level taught. For example, a teacher may have three Year Nine English classes and use one

planner for these classes. If the teacher also teaches a geography class to Year Elevens, another planner would be used for this class. The documents can be used in cooperative planning sessions with the teacher-librarian and other specialist teachers. The skills required for each unit/theme of work or assignment are selected, and lessons and the assessment task are designed. By noting the skills used for each unit in the grid, a full record of the year's work is accomplished by the end of the school year.

If this planning is completed across all the year levels and all subjects, a whole-school approach to information literacy may be achieved. This can provide continuity and developmental learning for students. A common language in information literacy can be developed, and the students have the opportunity of transferring this knowledge across subjects, across year levels, and for everyday applications. Teachers using these resources have noted that most subject areas have an inquiry process that is used by that department. This process is usually similar to the information process. When one coordinated information process is used throughout the school, students recognize this process in each subject area and can begin to use it automatically when facing a research task or problem.

For schools implementing a whole-school approach to information literacy using the ILPO resources, the process can take up to three years to implement fully. Most schools have found that it is easier to start implementing the planning overviews with a few people or subject departments. As more is known about the resources, teachers can go through a process of adapting the resources for their own school requirements. This adapted version becomes the school policy and is used over all subject areas. After a trial period, a review and further modifications take place. Induction of new teachers is an ongoing exercise. Use of the video has helped introduce new staff to the materials and the concepts.

This was the basic process that the authors went through with their school staff during the development of the materials. Staff feedback was sought and adjustments made to the skills and blackline master activities. A whole-school staff induction workshop introduced the remainder of the staff to the materials after a few trial groups had used them for over a year. That first whole-school staff professional development session was primarily driven by the need to integrate IT skills into curriculum planning. This was a point of need for the teachers at that time. One other school, multi-age in concept, was also running trials on the resources during this period. One of the earliest remarks heard was that the resources made planning these skills easier and that the ILPETS books explained the concepts to the teachers. This comment has been made to the authors many times since then.

Looking Forward

By developing the ILPO materials, the authors hoped to create a resource that could be used by themselves in their respective schools. The vision that they shared for a comprehensive information literacy planning document

has since been shared with many schools in Australia and indeed around the world. It would seem that teaching professionals share many common problems and dilemmas when integrating information literacy programs into the curriculum and that by communicating our collective ideas we will always move forward in this increasingly information-laden and complex age.

References

- Doyle, C. (1994). *Information literacy in an information society: A concept for the information age*. Syracuse, NY: ERIC Clearinghouse on Information and Technology.
- Kuhlthau, C. (1993). *Seeking meaning: A process approach to library and information services*. Greenwich, CT: Ablex.
- Information Power: building partnerships for learning*. (1999). Chicago, IL: American Library Association.
- McKenzie, Jamie. (1999). *How teachers learn technology best*. Bellingham: FNO Press
- Ryan, J., & Capra, S. (1998). *ILPO—Information literacy planning overview, Years P/K-7*. Brisbane: Capra Ryan & Associates.
- Ryan, J., & Capra, S. (1999). *ILPO—Information literacy planning overview, Year 8-12*. Brisbane: Capra Ryan & Associates.
- Ryan, J., & Capra, S. (1999). *ILPETS Information literacy planning extra teacher support book 1 Years 1-3*. Brisbane: Capra Ryan & Associates.
- Ryan, J., & Capra, S. (1999). *ILPETS Information literacy planning extra teacher support book 2 Years 4-5*. Brisbane: Capra Ryan & Associates.
- Ryan, J., & Capra, S. (1999). *ILPETS Information literacy planning extra teacher support book 3, Years 6-8*. Brisbane: Capra Ryan & Associates.
- Ryan, J., & Capra, S. (1999). *ILPETS Information literacy planning extra teacher support book 4, Years 9-10*. Brisbane: Capra Ryan & Associates.
- Spitzer, K., (1998). *Information literacy: Essential skills for the information age*. Syracuse, NY: ERIC Clearinghouse on Information and Technology.
- Teaching information skills: Australian School Library Association professional development CD-ROM*. (1997). Canberra: Australian School Library Association.

Author Note

Jenny Ryan and Steph Capra have worked in school libraries as a teaching/library professionals for over 20 years. Jenny and Steph co-authored *Information Literacy Planning Overview—ILPO* in 1998. In 1999, this work was awarded the IASL/SIRS Commendation for innovative practice in school libraries. Jenny and Steph have since written several more books and produced a video and other support materials on information literacy. Jenny and Steph currently consult in education, writing, and speaking, particularly in the areas of information literacy and information technology.