Школьные библиотеки и информационные услуги: использование модели решения проблем для интеграции программ информационной грамотности и библиотечно-информационного обслуживания в школах (SLIS)

School Library & Information Services: Using a Problem-Solving Model to Integrate Information Literacy and SLIS Programs

Шкільні бібліотеки та інформаційні послуги: використання моделі вирішення проблем для інтеграції програм інформаційної освіченості і бібліотечно-інформаційного обслуговування в школах (SLIS)

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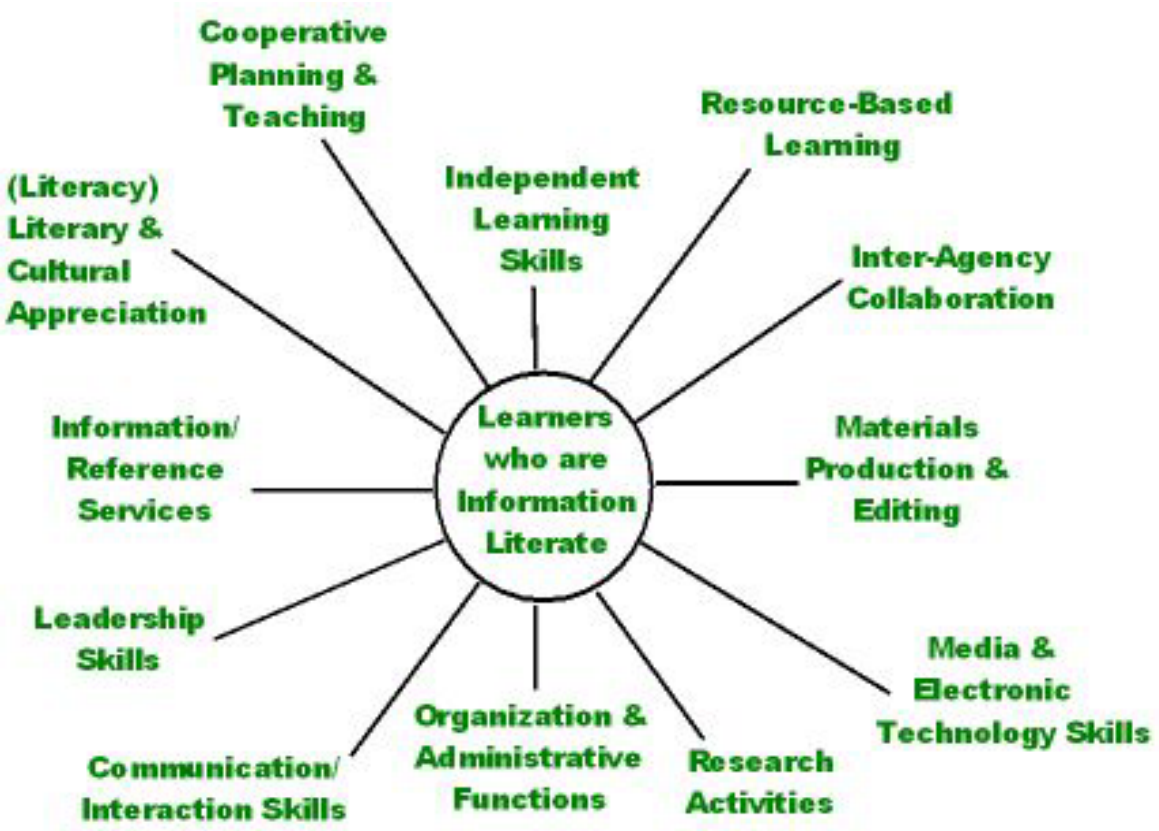
Представлен анализ международной модели решения проблем с целью демонстрации того, как в сотрудничестве со школьными учителями можно использовать эту модель в рамках программы школьной библиотеки для развития информационной грамотности.

An examination of an international problem-solving model to show how it can be used in the school library program to develop the information literacy skills in collaboration with classroom teachers.

Представлено аналіз міжнародної моделі вирішення проблем з метою демонстрації того, як у співробітництві з шкільними вчителями можна використовувати цю модель в межах програми шкільної бібліотеки для розвитку інформаційної освіченості.



«What a school believes about education will be demonstrated in the way it uses its library. « Former US Office of Education Director

«Don't tell me what you believe, show me what you do, and I will tell you where your priorities are. «

Background views

The school library is the place; the school library program is what happens in that place to make it relevant to the total educational program of the school.

THE SLIS PROGRAM COMPONENTS

The components that **integrate** the SLIS with the classroom teaching program are what differentiates modern SLIS schools from traditional libraries. The program components set the framework for the SLIS program expectations and assessments. They are the justification for having SLIS integrated into the educational program of the school. Through a quality SLIS program the **processes** of learning in the program permeate all activities in the school to help teachers and administrators develop information literate learners.

1. Information Literacy is a 'process» for learning. It is premised on the ability of the individual

- to recognize a personal need for information to solve a problem,
- to be able to develop a search strategy, buy posing important questions
- to locate the information pertinent to the topic
- to sort, organize, analyze and evaluate the information found
- to assess and evaluate information for quality, accuracy, authority and authenticity
- to synthesize and create one's own response to the information
- to present one's own perspective, new knowledge and understanding, or resolution to the problem to an appropriate audience (or to one's self)
- to evaluate the success of the activity in terms of the content investigated, theskills learned and the product's resolution
- to demonstrate that the knowledge has made a different in one's personal attitudes and behaviour.
- to recognize that the Information Literacy problem-solving model can be transferred to all aspects of a person's life. It is a tool to transform individuals into active members of a knowledge society.

Information Literacy includes the abilities to use the practical and conceptual tools of information technology (print, non-print, and electronic), to understand, form, format, location; to effectively use efficient methods to access information to format and publish textual and multi-media formats, and to adapt to emerging technologies.

1.1 What does Information Literacy Look Like? Sound Like? Feel Like?

1. Teachers have studied and adopted a **unified model of problem solving** in the school
2. Students use some aspect of the problem solving model in all assignments, to include:
    - Defining the problem
    - Accessing Resources
    - Analysis / Comprehension / Synthesis of information found
    - Demonstrate a change in Knowledge / Attitudes / Behaviour with respect to the topic
3. Assignments are planned to developing critical thinking skills
4. Students are encouraged to take an active role in defining the key questions that are central to their
5. research process
6. Students are expected to use a variety of media to obtain their information
7. Students have options in the methods of presenting the results of their systematic problem solving
8. activities
9. 7. Assessment of assignments involves both content and process used in reaching the finished product.
10. 8. rubrics are developed to assist students in understanding the levels of achievement needed to
11. successfully complete the projects.

1.2 Suggested Strategies for Implementation of the Information Literacy component

1. Principal will be encouraged to have the staff investigate various problem solving models, and to develop one that can be used commonly among all classes
2. Teachers are encouraged to use the problem solving model as a key step in the collaborative planning process
3. Charts, developed to describe the problem solving model, are displayed for ready reference
4. The common language of the model is used frequently to help students clarify their thinking and «name» the activities being done.
5. Samples of student work are displayed
6. Small projects are attempted to ensure success, rather than larger complex activities that can get bogged down.
7. Staff are encouraged to share their successes with each other.

1.3 How is the Information Literacy Component Evaluated?

[Questions for your principal to use]

1. Is there a common problem solving model used in the school?
2. Have there been training sessions to help teachers understand how to use the model?
3. Does the Principal encourage the use of the model as part of his/her evaluation process with teachers?
4. Can the students enunciate the stages of the model?
5. Do students automatically refer to the problem solving model when they begin a new project?
6. Are there samples of the students work using this approach?

> We must be prepared to help students become knowledge navigators in a sea of information.
> Freeston, 1995

The adoption of problem-solving models in many schools is one way in which information literacy programs are being implemented through the school library. The following charts illustrate a comparison of knowledge-based learning and inquiry-based learning. These two pedagogical approaches can be blended very effectively.

Taking care at the planning stage of a problem-solving activity is vital. Both the teacher and teacher-librarian should work collaboratively in setting both the content and process / skill goals for the lesson.

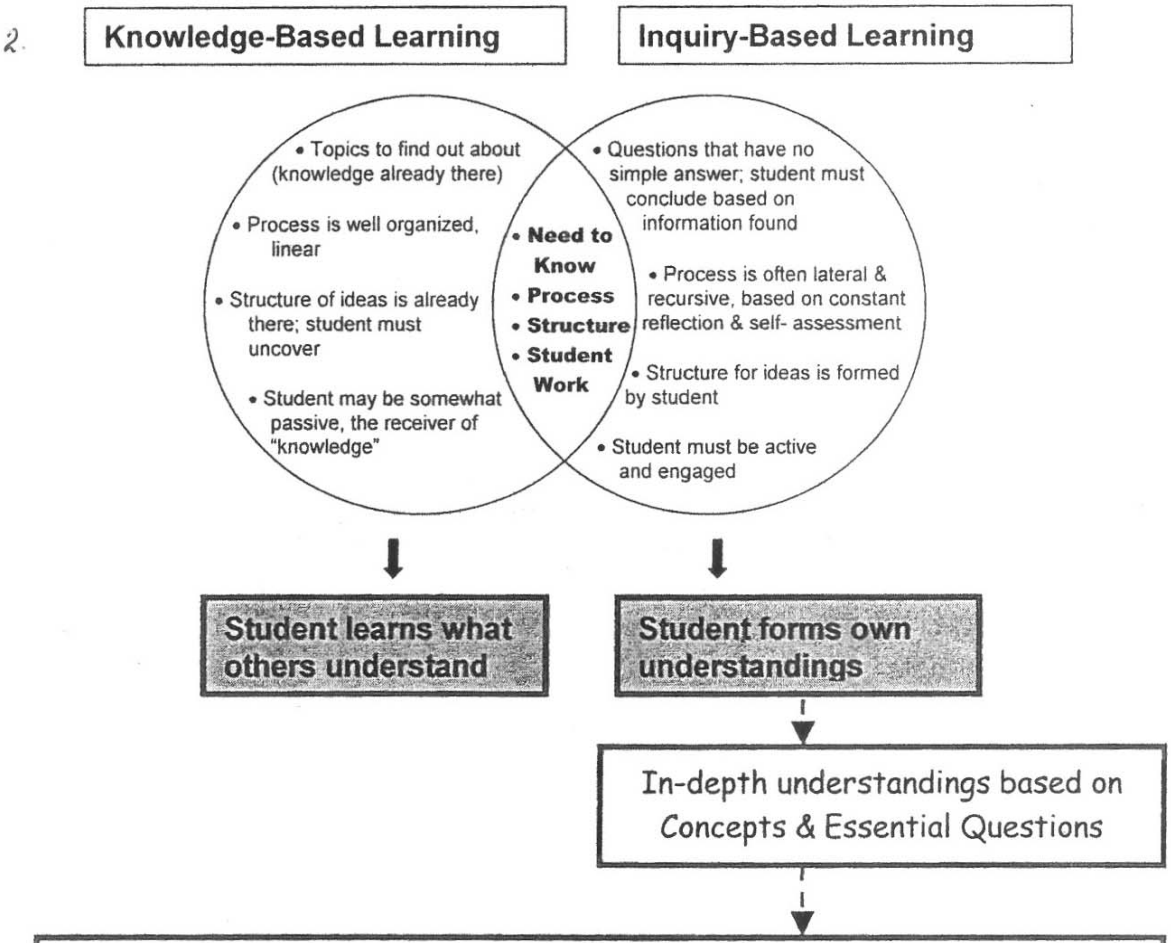
Essential characteristics of the questions posed by the teachers and / or the students are identified below.

One sample of the steps in a problem-solving model is provided. It is followed by a brief identification of the skills that need to be taught in the classroom in the library for students to be successful. The skills must be integrated, and must be cyclical to be effective.

EMPOWERING YOUTH THROUGH SECONDARY SCHOOL LIBRARIES

Barbara Stripling

2.



3.

CHARACTERISTICS OF ESSENTIAL QUESTIONS

- Have no one obvious right answer
  Example: Does art reflect culture or shape it?
- Raise other important questions, often across subject-area boundaries
  Example: In nature, do only the strong survive?
- Address the philosophical or conceptual foundations of a discipline
  Example: Is history inevitably biased?
- Recur naturally (can be examined by 1st graders and college students)
  Example: What makes a great book great?
- Are framed to provoke and sustain student interest
  Example: Does food that is good for you have to taste bad?

4. Sample of a Problem-Solving Model

The Sri Lanka Group Model for Information Literacy 2004.11.04
«EMPOWERING 8 «

Step	Empowering 8 Components	The student will be able to demonstrate an ability to: (Learning outcomes)
1	**Identify**	• Define the topic/subject • Determine and understand the audience • Choose the relevant format for the finished product • Identify the key words • Plan a search strategy • Identify different types of resources where information may be found
2	**Explore**	• Locate resources appropriate to the chosen topic • Find information appropriate to the chosen topic • Do interviews, field trips or other outside research
3	**Select**	• Choose relevant information • Determine which sources are too easy, too hard, or just right • Record relevant information through note-taking or making a visual organizer such as a chart, graph, or outline, etc • Identify the stages in the process • Collect appropriate citations
4	**Organise**	• Sort the information • Distinguish between fact, opinion, and fiction • Check for bias in the sources • Sequence the information in a logical order • Use visual organizers to compare or contrast information
5	**Create**	• Prepare information in their own words in a meaningful way • Revise and edit, alone or with a peer • Finalize the bibliographic format
6	**Present**	• Practise for presentation activity • Share the information with an appropriate audience • Display the information in an appropriate format to suit the audience • Set up and use equipment properly
7	**Assess**	• Accept feedback from other students • Self assess one's performance in response to the teacher's assessment of the work • Reflect on how well one has done • Determine if new skills were learned • Consider what could be done better next time
8	**Apply**	• Review the feedback and assessment provided • Use the feedback and assessment for the next learning activity / task • Use the knowledge gained in a variety of new situations • Determine in what other subjects these skills can now be used • Add product to a portfolio of personal productions

5. What skills, for whom, when, and how??

	Empowering 8: Problem Solving Model
Steps	
Index	**Step 1: IDENTIFY: Skill**
1	Defines the need for information
2	Makes a concept web for ideas in a project
3	Thinks of synonyms for topics being used (keywords)
4	Develops a plan to study the problem
5	Initiates a search strategy
6	Finds words in dictionary
7	Understands the parts of a book
8	Uses the card catalog or automated catalog to find information
9	Understands glossary and dictionary definitions
10	Makes efficient use of an encyclopedia: guide words, index, key words, cross references, sub-headings
11	Able to brainstorm and relate ideas in a group
12	Devises a time management strategy to meet the given deadlines
13	Thinks about the audience for the final product
Step 2	**Empowering 8: Problem Solving Model: EXPLORE: Skills**
14	Knows how to gather information from an interview, or field trip
15	Follows the basic rules for operating a computer in the lab or library
16	Skims to find information: main idea for the format, Specific information related to the question under study
17	Develops appropriate questioning techniques to clarify the requirements of the problem
18	Uses basic technical vocabulary for the computer e. g. monitor, keyboard, mouse, CPU, disk, CD ROM
19	Uses the computer to search Internet sources
20	Knows how to use reference sources
21	Uses the subject headings to find materials
22	'Listens' to find answers
23	Understands the functions of the parts of a book
24	Can use an atlas, map, globes to locate places
25	Uses other libraries outside of school
26	Can use an index, appropriate to age
27	Understands arrangement of materials in library
28	Draws on prior knowledge to brainstorm and cluster ideas
Step 3	Empowering 8: Problem Solving Model**: SELECT: Skills**
29	Evaluates the reliability of the information
30	Chooses resources appropriate to age and ability
31	Differentiates between fact and fiction
32	Selects and uses appropriate graphic organizers
33	Able to operate audio visual and computer equipment
34	Understand and complies with copyright requirements
35	Stays within the topic
36	Recognizes the value of fiction for specific topics, e. g. historical fiction
37	Chooses resources appropriate to age and ability
38	Understands glossary and dictionary definitions

39	Can use an index, appropriate to age
40	Makes efficient use of an encyclopedia: Guide words, index, keywords, cross reference, sub-headings
41	Finds words in a dictionary
42	Uses card or automated catalog to find materials
43	Uses other libraries outside of school
44	Skims to find information: main idea for the format, and specific information related to the question
45	Can read material in 'visual format' for information
46	Can make predictions based on the data available
47	Prepares a bibliography appropriate to age and ability
48	Relates, compares and evaluates information
49	Can use dictionaries effectively, appropriate to age
50	Knows how to use reference sources
51	Uses a computer to search Internet sources
52	Uses basic technical vocabulary for the computer
53	Follows the basic rules for operating the computer in the lab or library
Step 4	**Empowering 8: Problem Solving Model 4: ORGANIZE: Skills**
54	Makes a concept web for ideas in a project
55	Can paraphrase information orally or written
56	Can make predictions based on data available
57	Recognizes cause and effect relationships among facts
58	Compares information from different sources for opposing viewpoints and accuracy
59	Follows directions, whether written or spoken
60	Is able to work productively in groups
61	Identifies a sequence of events
62	Can summarize information in point form
63	Selects and uses quotations appropriately
64	Selects and uses appropriate graphic organizers
65	Able to operate av & computer equipment
66	Distinguishes between fact and opinion
67	Distinguishes between fact and fiction
68	Can draw tentative conclusions
69	Can use basic Windows operations for word processing, and printing
70	Interprets information in maps, graphs, charts
71	Develops an outline of ideas
72	Draws on prior knowledge to brainstorm & cluster ideas
73	Respects the rights and opinions of other people
74	Engages in reflective thinking to analyze and clarify the problem
75	Selectively cuts and pastes information from an electronic source to quote source and to make notes
Step 5	**Empowering 8: Problem Solving Model: CREATE: Skills**
76	Operates AV equipment properly
77	Produces material appropriate to audience
78	Produces AV or electronic responses to information
79	Compares information from different sources for opposing viewpoints and accuracy
80	Develops the ability to have faith in own judgment and point of view
81	Prepares a bibliography, appropriate to age and ability
82	Understands and compiles with copyright law
83	Uses footnotes appropriately
84	Edits material into final presentation format
85	Creates or uses charts to compare and contrast information

86	Recognizes a need to change a conclusion based on new information found
87	Is aware that there may be alternative solutions to a problem
88	Makes inferences
89	Makes generalizations
90	Creates presentations showing synthesis of information
91	Identifies unsubstantiated statements
Step 6	**Empowering 8: Problem Solving Model: PRESENTATION: Skills**
92	Stays within the topic
93	Understands and complies with copyright law
94	Uses quotations and footnotes appropriately
95	Recognizes an 'emotional' appeal
96	Summarizes information in point form
97	Completes the bibliography in standard format approved and used in the system
98	Uses media formats for presentation
99	Acknowledges personal and group achievement

Step 7	**Empowering 8: Problem Solving Model: ASSESS / EVALUATE: Skills**
100	Evaluates the product and the process, alone and with peers, and with the teacher and teacher-librarian
101	Respects the rights of the opinions of others
102	Is aware that there may be alternative solutions to a problem
103	Acknowledges personal and group achievement
104	Develops the ability to have faith in one's own judgment and point of view
105	Determines what to do differently next time
106	Recognizes areas for further study
Step 8	**Empowering 8: Problem Solving Model: APPLY / TRANSFER: Skills**
107	Applies new concept learned to another situation
108	Respects the rights and opinions of others
109	Shares success with peers
110	Shows someone else how to do something new that has been learned; shared learning
	***This list of skills is not meant to be exhaustive or comprehensive. It is a sample of some of the skills that teachers and teacher-librarians would need to develop to ensure that a problem-solving model leads to information literate learners*.

6. Summary

1. The role of the teacher-librarian must emphasize the 'teacher' expertise and experience to help both teachers and students fulfill the educational goals of the school and the library
2. The collaboration between teacher and teacher-librarian is fundamental to making best use of the physical and human resources in the library
3. Teacher-librarians can be expected to be both models and mentors in the Information Literacy process.
4. The students will respond enthusiastically to this type of learning when they understand that the teachers and teacher-librarians are willing to accept alternative answers and solutions to problems.
5. If you are a problem-solver, you will be excited by these prospects..