

**A Study on the Prospect of Library
Resources Utilization Education
based on the results of short thesis
writing competitions :
Take Mingdao High School as an
example**

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In 2004, Taiwan's Ministry of Education initiated the first Short Thesis Competition for Senior High School Students for the purpose of helping them cultivate reading and researching skills as well as guiding them to make use of library resources and services to do research. Mingdao High School has been practicing a program called "Learning to Learn", in an attempt to make students, by using various learning strategies, think and learn for themselves so as to adapt themselves to the constantly changing society. To ensure the success of this program, the school library offered courses in short thesis writing, and encouraged students to participate in the island-wide Short Thesis Competitions. To Mingdao High School's satisfaction, the contestants' theses were all highly rated. The object of this study is, through an analysis of the results of the short thesis competitions, to understand the efficiency of Mingdao High school's current education on students' application of the library's resources. In addition, we also want to share our experience about how we lead students to write their theses, hoping it will serve as a reference for other senior high schools. The research method this study adopts is called the content-analysis

approach. In this paper, the award-winning short theses of the previous years are analyzed, including the types of topics chosen and how reference books are cited. A questionnaire is also used to help us understand how short thesis writing helps students learn.

Background

Taiwan's College Enrollment Promoting Association formally launched College Multiple Entrance Program in 2001. Senior high school graduates who could only enter colleges by passing the Joint College Entrance Exam can now choose to apply for their ideal colleges through recruitment. That is to say, their future will no longer be determined by a single exam. The implementation of College Multiple Entrance Program was based on the idea that students can choose to enter colleges through either exams or recruitment depending on their own personalities and interests. On the other hand, colleges can also recruit students that really suit them.

As its name suggests, a short thesis is a mini-sized research paper, which clearly demonstrates the writer's thinking logics and faculty of judgment. It is also a way to evaluate if students have acquired high-level learning skills. According to a statistic, in the 2007 Examination and Recruitment Separation Program, a total of 67 departments from 25 universities required applicants to hand in a short thesis in the second phase of their recruitment (Multiple-track College Entrance Examination Timetable, 2006). It shows that more and more universities are stressing students' ability to write short theses, which have become a criterion for colleges to select students.

Whether students can finish their short theses successfully is closely related to the information literacy education provided by the school library. The so called information literacy refers to the basic skills everyone must acquire in the age of information. American Library Association (ALA, 1989) defined information literacy as an individual who knows how to learn, to locate information, to organize information he finds, and to make use of it. In 1996, the Office of the Superintendent of Public Instruction and Washington Library Media Association defined information literacy as students having the following five important skills: 1. to recognize the need for information 2. to develop strategies in locating information 3. to discover and attain the information 4. to evaluate and analyze the information 5. to organize and use the information. In 1998, the American Association of School Librarians (AASL) and Association for Educational Communications and Technology (AECT) laid down some criteria for judging students' level of information literacy, including skills of communication, analyzation, integration, organization, and evaluation. These criteria have also been incorporated into the objectives and contents of school courses. This shows that the United States has taken pains to elevate students' level of information literacy.

It's seeking to, through the joint efforts of both schools and libraries, help students identify their need for information, search for information, and analyze and present information, with an ultimate goal to comprehend information and make efficient use of information and technology.

In recent years, the library of Mingdao High School has been devoted to raising students' level of information literacy with a view to helping them catch up with the fast-growing society. Accordingly, it keeps encouraging students to take part in *The Nationwide Short Thesis Competition*. With the guidance of both the library and teachers, the contestants' results are getting higher and higher every year. Thus, this study intends to analyze the results of the four latest competitions held in the past two years to discuss the effect and efficiency of its education in library resource utilization. Additionally, it would also like to share its experience in teaching students how to write short theses, wishing the experience can be used as reference by other senior high schools (Lai, 2001).

This paper consists of five sections: the origin and status quo of short thesis competitions, an introduction to Mingdao's premium learning environment, an analysis of the results of short thesis competitions, experience shared about student instruction, and, in the end, conclusion and suggestions.

The research method this study adopts is called the content-analysis approach. In this paper, the award-winning short theses of the previous years are analyzed, including the types of topics chosen and how reference books are cited. A questionnaire is also used to help us understand how short thesis writing helps students learn.

The Nationwide High School Students' Short Thesis Competitions

Origin:

Short thesis writing, an activity highly-evaluated by numerous high school teachers and students, originated as an in-school activity at Tainan Girls' Senior High School, and has blossomed into a national writing contest under the promotion of teachers from both Tainan Girls' Senior High School and other senior high schools in Taiwan. In 2004, the Ministry of Education initiated the first Nationwide High School Short Thesis Competition for the purpose of :

1. encouraging students to read extensively, join in discussions and researches, and develop competence in writing short theses.
2. providing them with a place to present research products, urging them to share research results with peers, and creating a trend of doing researches.
3. guiding them to apply library resources and services to conduct further studies

(Mingdao High School, 2004).

Since the main point in promoting short thesis writing around Taiwan is to sharpen all senior high school students' writing and researching abilities and to ensure their effective use of library resources, contestants who write good theses are placed into five different rankings (each ranking accounts for 20% respectively) according to their levels of proficiency to raise students' motivation to participate.

Status quo:

In the College Multiple Entrance Program, presentation of a short thesis has become a requirement in the second phase of screening; apart from that, the paper itself as well as the prize won in the short thesis competition can also add color to the portfolios that candidates prepare to show their learning outcomes and motivation to enter that department to the professors who grade them in an interview. For this reason, more and more senior high schools are urging their seniors to present short theses while applying for colleges; thus, the number of papers sent to compete for the awards has risen from 737 in March, 2004 to 6129 in October, 2006. (See Figure One)

Mingdao's premium learning environment

"Learning to Learn" program

In an era of information exploration, student's lives have been enriched and complicated due to their exposure to all kinds of living experience and information, which has posed a lot of new challenges to teachers. In a knowledge-based society, students gain access to information through different learning fields and different learning experience. In the process of dealing with the information they get, they have to learn to collect, analyze, reorganize, and integrate the information. Besides, when faced with problems, they have to exercise their judgment and creative thinking in order to grasp the core of knowledge. Only by doing so can they internalize the knowledge they gain and develop problem-solving and creative abilities in real lives. Hence, whether or not students can identify the accuracy, credibility, completeness, and effectiveness of information can actually determine their performance in work, life, and decision-making. Judging from that, developing an individual's level of information literacy is an urgent task in the current educational reform (Hong Kong Education and Manpower Bureau, 2004).

Mingdao High School has always been devoted to fostering the growth of outstanding youths through nurturing talents, noble character, and cultural nourishments at once. Its remarkable efficiency in education has gained praises from all parents. What's more, it

passed the ISO 9002 Quality Management Standards in 1999. Its principal, Albert Wang, strives to turn Mingdao High School into a learning-oriented school. As a result, its faculty hatched the “Learning to Learn” program, whose missions are:

1. to motivate students and inspire them to learn how to learn.
2. to encourage students to take positive and correct attitudes towards learning so that they can learn by themselves.

There are five strategies for practicing this plan:

1. preparation for learning: students are expected to equip themselves with basic learning skills, hold positive attitudes towards learning, understand the benefits of learning, and find out appropriate learning methods.
2. learning process: students are expected to manage their own affairs and studies, have clear visions, and become confident, calm, and independent learners.
3. task-based learning: students are expected to reflect on the same problem from different points of view, be willing to absorb knowledge and conduct in-depth research, and discuss different problems through team work.
4. use of learners’ profiles: to plan students’ learning activities and record their progress, enabling them to reflect on their own leaning process.
5. evaluation: to incorporate the idea of multiple intelligence into the design of courses. A variety of methods and tools are applied to test students at different learning stages.

The following specific goals are expected to be achieved through the above mentioned methods:

1. Students are able to collect, analyze, and filter different types of materials by means of information technology and the library.
2. Students are able to spot and specify their questions, as well as exercise different thinking strategies to conduct in-depth studies.
3. Students are able to sharpen their thinking techniques, initiate learning by themselves, and ignite inner motivation for learning.
4. Students are able to cooperate in learning, accomplish studies on specific topics in the form of a team, and present their learning products by oral and written presentations (Mingdao High School, 2002)

Mingdao’s learning center- a multi-faced and resourceful library

Mingdao’s school library, located in Hong Dao Building and occupies a total floor-area of 7, 300 square meters, was constructed under the supervision of its former principal, Kuang-ping Wang, based on his belief that an outstanding high school can not do without a good library, which allows students to cultivate their own interests and hobbies.

Currently possessing a collection of 15,000 volumes of books, outnumbering all the other senior high schools in Taiwan, Mingdao's library was appointed by the Ministry of Education in 1990 as the model library for all senior high schools in Taiwan.

Because the former and present principals of Mingdao have made great efforts to strengthen the library's services and functions, it actually plays a crucial role as the learning center, providing all kinds of teaching and learning resources. What's more, the library seeks to make any changes that are needed to better its services, and design various activities to familiarize students with its functions, wishing its abundant resources can be fully utilized by teachers and students. These activities include: courses in library resources utilization, recommendation of nice books, discussion groups for bookworms, exhibitions for works of art, blogs for joyful readers, writing competitions for students to talk about what they think after reading a book, seminars on how to produce a briefing, book fairs on all kinds of topics, Coffee Day on every Friday, and a series of activities during Library Week.

In the constantly changing modern society, only those who know how to learn by themselves can catch up with the time. In as early as 1993, Mingdao High School has made the instruction of using library resources a part of its formal curriculum, including:

1. familiarizing students with the library's environment, rules and scope of services.
2. introducing how the books are classified.
3. instructing students how to use the on-line public catalog, reference books, and the on-line database.
4. guiding students to read.
5. teaching students to write short theses.

How the library guides students to write short theses

To carry out the "Learning to Learn" program, the library encourages students to make use of its resources in order to fulfill their dreams of entering ideal colleges, and creating opportunities for teachers of different subjects to work together, the library has played a positive role in promoting short thesis writing. Since Mingdao has 98 classes in total, the library has devised some executive strategies for implementation of this program: The steps are as follows (Figure 2):

to gain support from other departments through communication. To reach consensus and acquire extensive support in order to smooth the promotional work, the library held several meetings in the initial phase to explain the advantages of encouraging students to write short theses to the principal and directors of all departments.

conducting seminars for both teachers and students :

- A. Teachers' seminars : Seminars of "Big Six and short thesis writing" were held to acquaint teachers with the relevant techniques so that they can teach students how to write short theses.
- B. Students' seminars: Courses in short thesis writing are offered for the freshmen each year. The contents of the courses include: how to enter competitions, the format/structure of short theses, methods to gather/ sort materials, writing skills, and correct citation.

offering cooperative courses. The library would also be happy to offer any courses to instruct juniors or seniors who are willing to enter the writing competitions.

providing guidance for individual student. Anyone who is faced with difficulties in writing a short thesis can turn to the library for help.

public awarding. In addition to making both teachers and students aware of the advantages of short thesis writing in their development of self-study abilities as well as in helping them enter ideal colleges, Mingdao High School also presents awards to the students in flag-raising ceremonies. By doing this, the award-winning students can gain more confidence and the other students can also be encouraged to participate in the competitions.

An analysis of the results of the competitions

With the efficient promotion of the library and the support of the directors of all departments and homeroom teachers, the number of the award-winning papers keeps increasing each year (Table 1), showing that the faculty and students think highly of the benefits from the results of the competitions.

An analysis of the relevance between the topics of the short theses and the subjects

When instructing students in choosing their topics, the library suggested that the students choose a topic from the subjects they are interested in so that they can obtain more relevant knowledge and can thus be better prepared for the Joint College Entrance Exam. As for those who participate in the competition for the first time, they can choose a topic related to their daily lives or to their interests to increase their willingness to conduct the research.

Figure 3 indicates that students from both the senior high school and comprehensive senior high school mostly chose topics from the "other" topic groups, such as business, restaurant management, information, etc, much more so for the comprehensive senior high

school students. The reason for the students choosing their topics this way is that the topic groups provided by the hosting unit are classified according to the subjects of senior high schools instead of those of comprehensive senior high schools. As a result, the students from the comprehensive senior high, whose subjects are relatively more complicated, had no choice but to choose a topic from the “other” topic group.

Taking a look at the topics of the award-winning papers by senior high school students (Figure 4), most of these topics fall into the other topic group (the Internet, medical study, business), social studies, and biology. Thus, it is suggested that teachers of natural science can further encourage their students to conduct research in the field of natural science for the purpose of developing students’ habits of doing relevant research and laying a foundation for scientific studies in the future.

Analysis of the library resources used by the students

The analysis of figure 5 shows that 43% of student citations comes from printed resources, (books 22%, periodicals 11%, newspapers 8%, doctoral and master theses 2%)(Figure 5). Because of rapid development of the Internet, a large amount of information can be easily obtained on the Web and forces the library to make some necessary changes. While some are worried that the Internet may take the place of the library, some scholars hold a rather positive attitude. For example, Mark Y. Herring, Director of Winthrop University, pointed out that not all the web-based information is reliable (Herring, 2001).

Though the students are constantly reminded that apart from the Internet resources, they should learn to use other resources. Still, the use of Internet citation is very common among young students. Teenagers need to learn how to evaluate the Internet information critically. Therefore, the library should focus more on these skills.

Questionnaire analyses

In order to successfully assist the students to do their theses, the library asked 200 participants to fill out a questionnaire. Of those completed, 158 of them were valid. The following are some of the important results obtained from the questionnaire.

Reasons for joining the short thesis competitions. As shown in figure 6, most of the students joined the short thesis competitions voluntarily: 58%, for the purpose of being credited when applying for colleges, and 16%, hoping to further develop self-study skills.

Difficulties. 30% of the students consider choosing an adequate topic and structuring the thesis to be the most challenging (Figure 7). The library and teachers

will assist to strengthen these skills.

Students obtain help from. 34% of the students asked their peers for help, whereas 60% consult their teachers (Figure 8). It is suggested that the library offer help in various ways, such as inquiries via e-mail or telephone.

Satisfaction with the library resources. Figure 9 indicates that 86% of the students are satisfied with the resources they obtain from the library, showing that the library-resource-sharing project, such as interlibrary loan, on-line electronic database works very well.

Satisfaction with the instruction from the library. As shown in Figure 10, the majority of students are content with the library instruction. This indicates that the education in library resource utilization is highly appreciated by the students.

Assistance further required. However, as shown in figure 11, 38% of the students hope that the library will assist them to collect information effectively. 29% need more help in formatting. The library is planning to further develop students' skills in its future training courses. As for the computer editing, students can gain more help from the teachers of the department of information technology.

Encouraging the students to try again. A vast majority of students, figure 12, 88% of the students are willing to modify their theses and to seek better performances (Figure 12). Those who are unwilling to do so are either winners or the seniors who are under study pressure.

Learned skills. The reason why the students are strongly encouraged to join the short thesis competitions is to train them to learn how to learn. The results in figure 13 show that 28% of students learn how to exam a problem in a more analytical way, while 25% think they are better equipped with the information literacy courses.

Experience sharing about student instruction

The following are some common mistakes that students should be more aware of.

Inadequate topics:

Some students chose key words as their topics, such as comics or soap. After consulting the teachers, most of them learn to define their interested topics better.

Fancy layout:

Some students were so used to putting fancy decorations in their reports. It seemed difficult for them to get their theses an academic appearance. They need to be more academic-disciplined.

Unclear introduction and conclusion

Students are not clear about the differences between reports and thesis writing. They should learn to articulate the topic they are interested in, how they plan to approach it, and their own thoughts about the topics.

Badly-structured.

Due to the lack of sufficient training, most senior high school students are not able to either develop their theses in a logical way or set up a good argument.

Inability to cite correctly

Adequate citations help readers know the sources of the materials. It also helps other researchers to refer to the relevant information. Therefore, correct formatting is a must, and each piece of information used in the thesis has to be cited clearly. Though examples are provided, some students fail to cite correctly.

Conclusion and suggestions

It's beyond any doubt that the short thesis competitions considerably enhance the students' learning skills, enabling them to use other resources apart from the classroom learning.

1. Most award-winning theses come from the unspecified topic group.
2. Students tend to cite from the Internet; therefore, the library must put a strong focus on helping them evaluate the web-based resources critically.
3. Most students are voluntary, and a high percentage of the students are willing to try again if they fail the first time. The students think they learn better by examining a problem in a more analytical way.
4. 30% of the students consider choosing an adequate topic and structuring the theses to be the most challenging, in which they need the most help. Most students ask experienced participants for help.

5. Most students are highly satisfied with the library resources as well as the instruction provided.

Suggestions for the hosting unit-the Ministry of Education

1. Topic groups should be more specified:
There are now eleven topic groups, however, some are rather confusing. In addition, most of the award-winning theses are in the non-specified group. Therefore, more specified topic groups are necessary.
2. Criteria should be reconsidered:
Because of the lack of detailed criteria, most theses can only be evaluated in terms of their contents. The layout, format and citation are not included criteria.
3. The allocation of award-winning theses should be removed:
The award-winning theses are allocated into five rankings, each accounting for 20% respectively. That means those theses are not exactly evaluated by the quality of the works. As a result, some award-winning theses don't fulfill the standards of good academic pieces. Therefore, we suggest there be no allocation of award-winning theses.

Suggestions for schools

For the library :

1. Librarians should be familiar with the various library resources. Though students are specially trained to use library resources, students can't find all they need in the library. It's important for the librarians to know how to obtain other resources, the library-resource-sharing project for instance. In this way, the library becomes a facilitator of students' learning.
2. Hard work makes a difference. Though there are loads of work for the library to do to better equip the students, we are very pleased to witness the progress the students make in critical thinking in thesis writing skills. All the hard work finally pays off. And we strongly believe that students should learn how to learn. Only by doing this, students can be a successful lifetime learner.

For teachers. To help the students acquire the habit of conducting research, teachers need to make some changes in teaching. For instance, students can be encouraged to do more critical thinking, to be more open-minded to new ideas and to

do short thesis writing. With the help from the library, all these can be achieved.

Learning how to learn is far more important than learning what to learn. Since students are going to live in a fast-changing world (4 times faster), it's difficult for us to decide what knowledge will be more useful in the future. On the contrary, we should highlight the importance of critical thinking, logical-thinking skills and problem solving skills. We need to train students to be able to analyze any problem they encounter, and learn to find a solution independently so that they will become better lifetime learners (Mingdao High School, 2004).

Mingdao High School successfully combines the information-literacy education with the short-thesis-writing program. The quality of the students' work is impressive. Hopefully, with this study, more schools will join the program and more students will benefit from the program and become competitive learners.

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Appendix

Table 1: A statistic showing the number of the award-winning theses in Mingdao in the past years

Date \ Results	1st	2nd	3rd	To be selected	Total
Mar-2005	19	13	48	46	126
Oct-2005	45	46	114	93	298
Mar-2006	87	155	64	54	360
Oct-2006	56	196	128	169	549

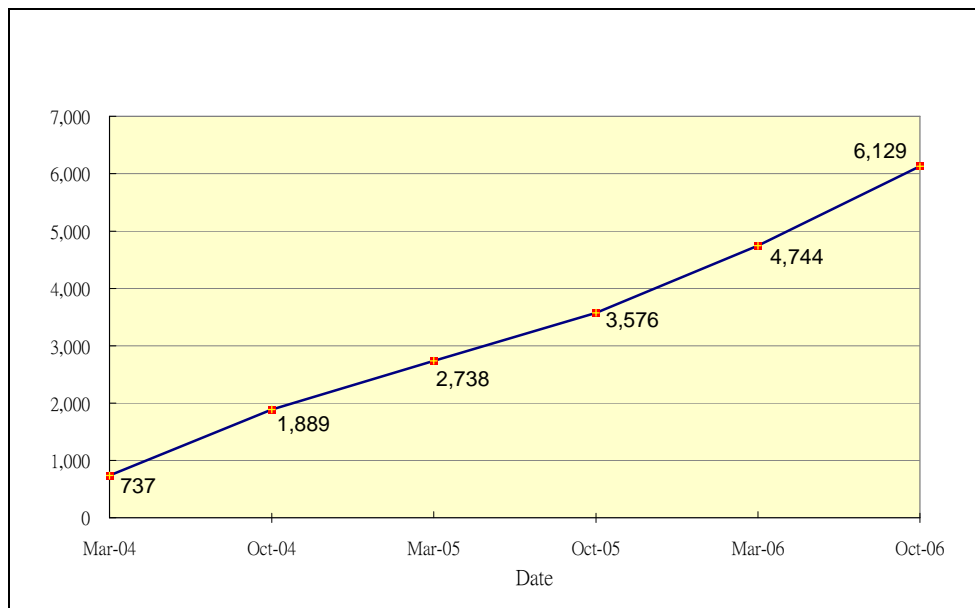


Figure 1: the curve showing the growth of the number of papers competing in the National Senior High School Short Thesis Competitions (provided by Tainan City De Kuang Girls' Senior High School)

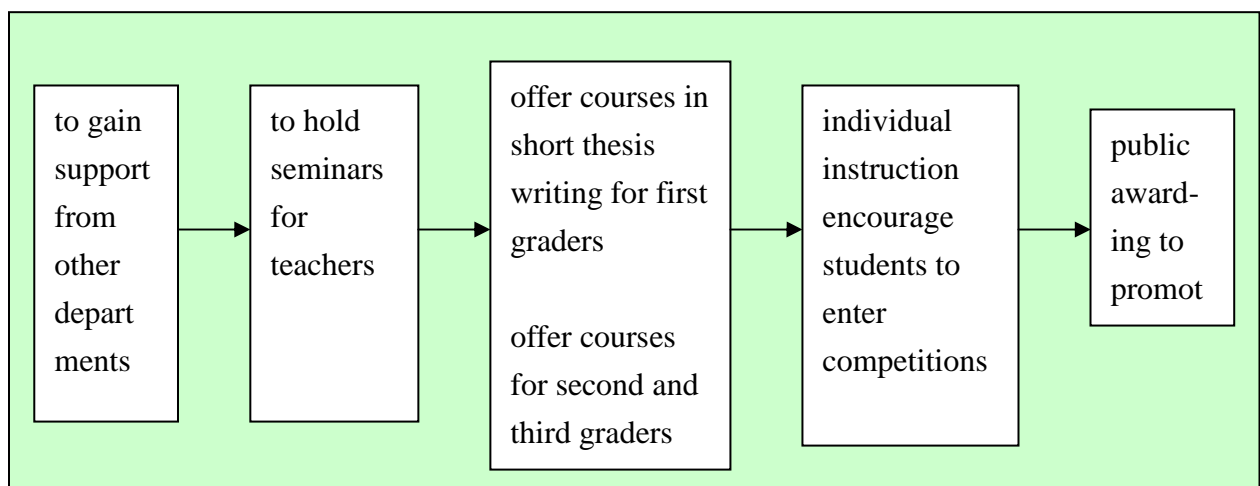


Figure 2: Mingdao Library's strategies for encouraging short thesis writing

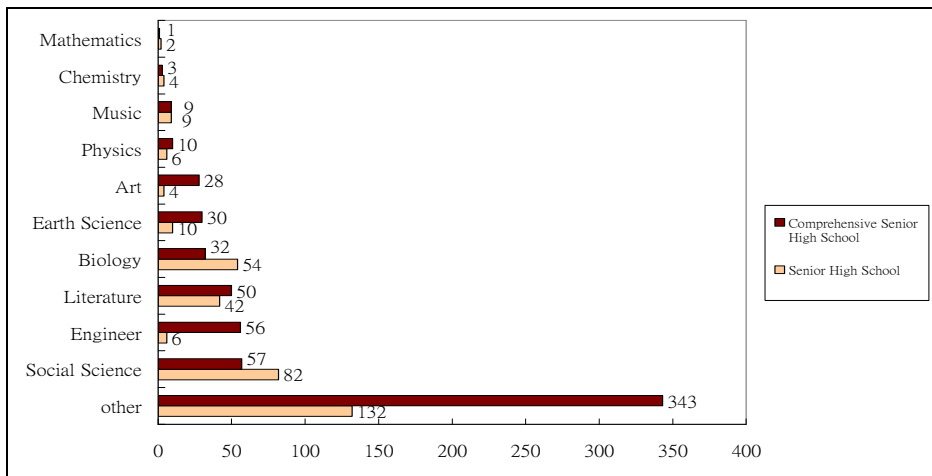


Figure 3: a comparison of the topics chosen by senior high school students and comprehensive senior high school students

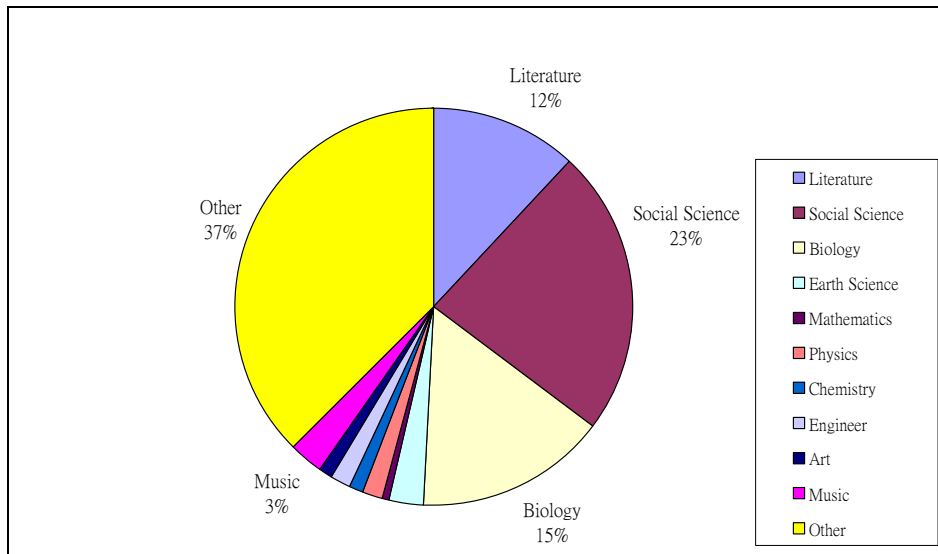


Figure 4: the proportion of each group of topics chosen by senior high school students

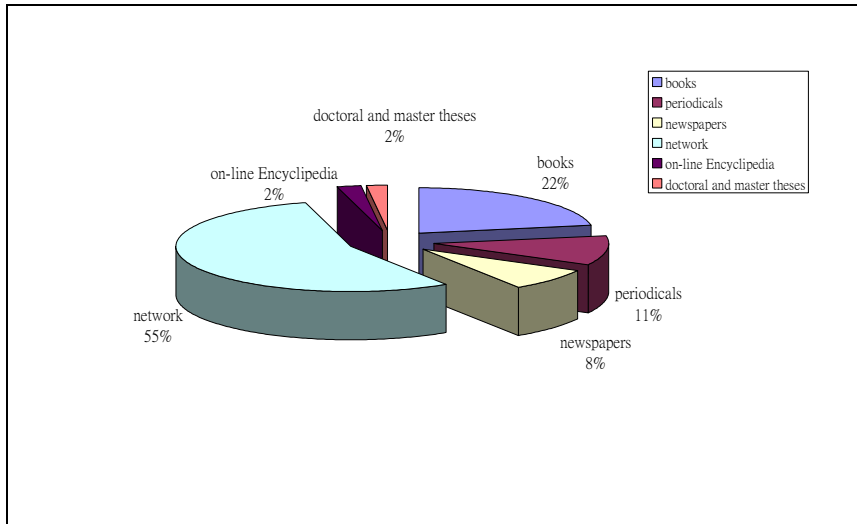


Figure 5: analysis of the library resources used by the students

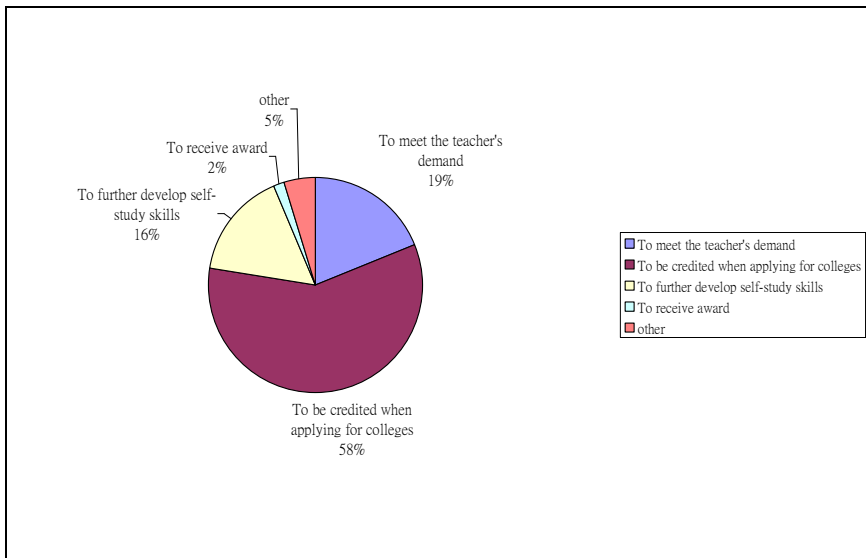


Figure 6: reasons for joining the short thesis competitions

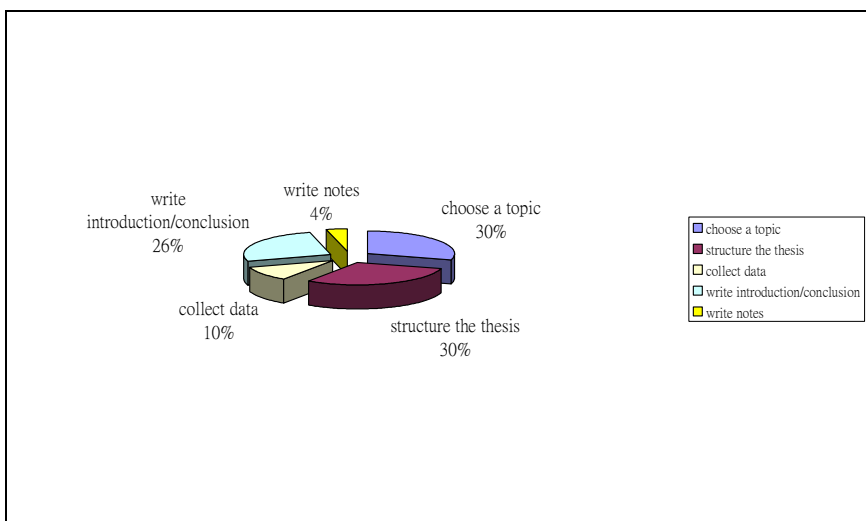


Figure 7: difficulties

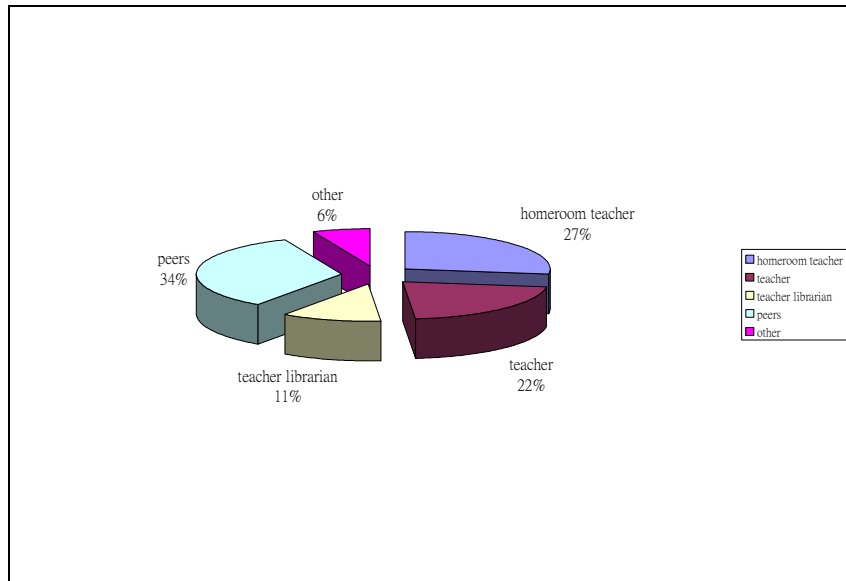


Figure 8:students obtain help from

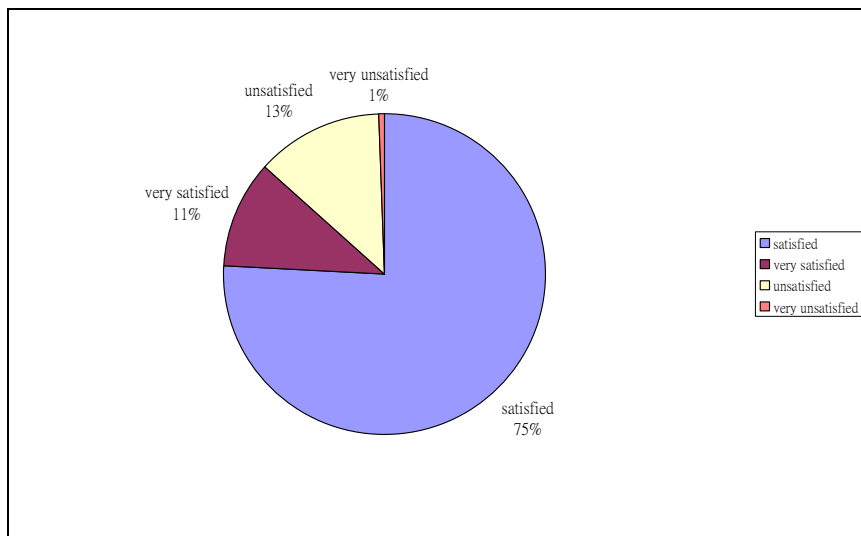


Figure 9:satisfaction with the library resources

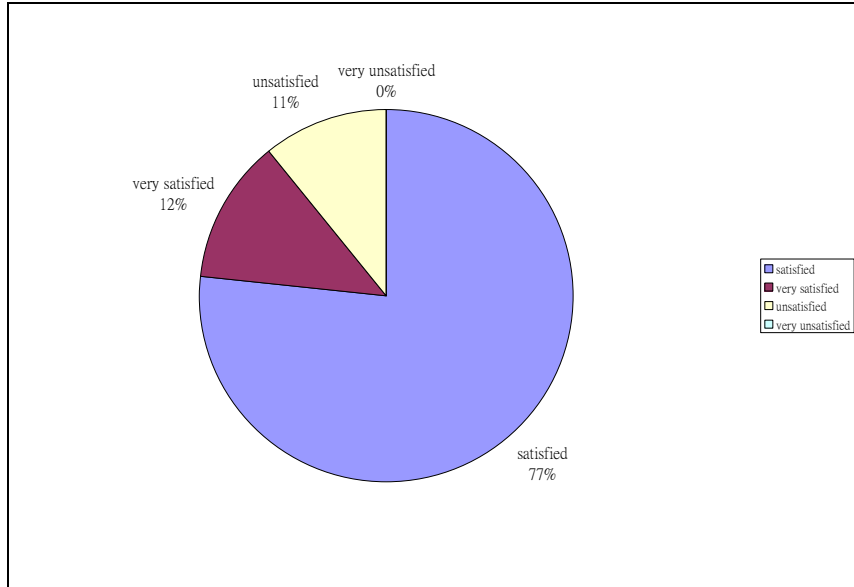


Figure 10: satisfaction with the instruction from the library

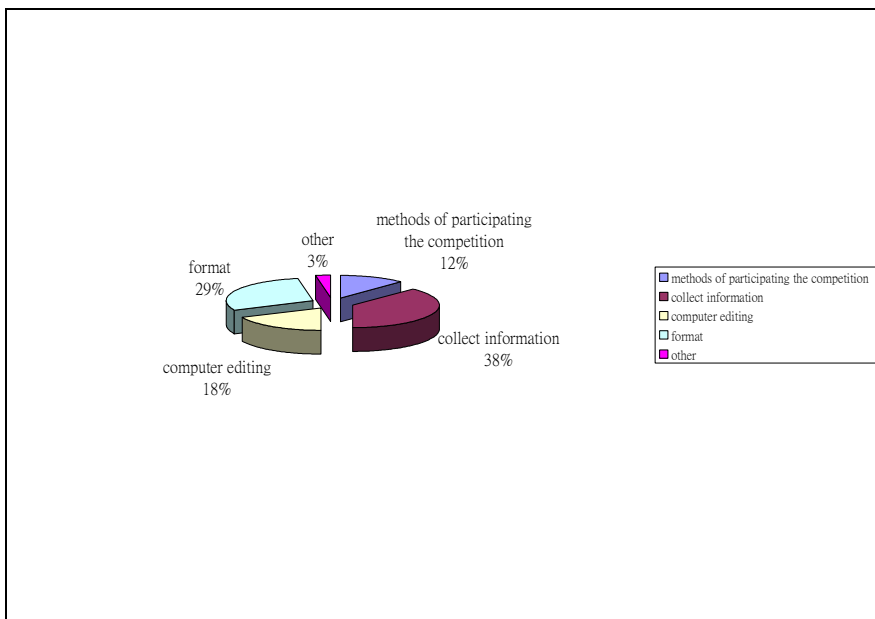


Figure 11: assistance further required

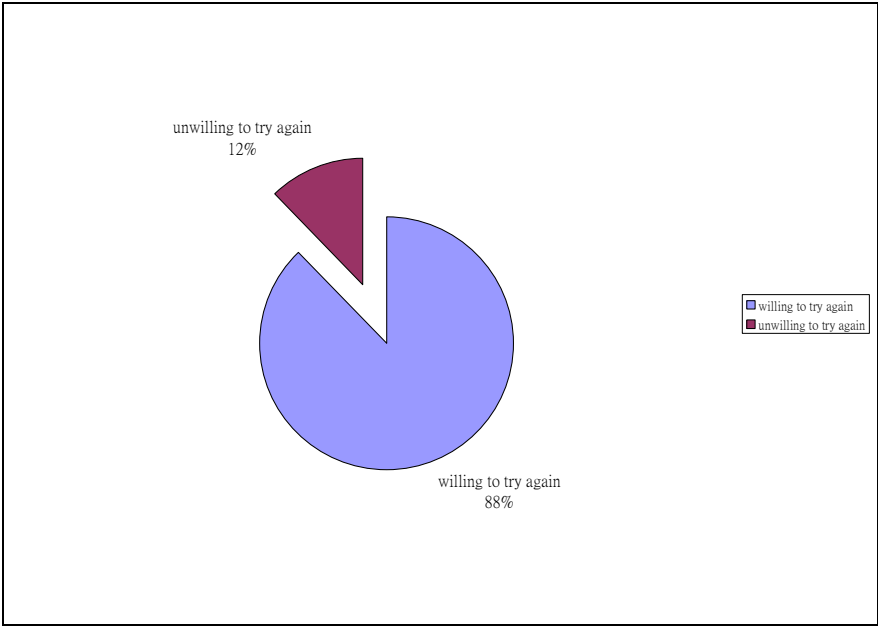


Figure 12: Encouraging the students to try again.

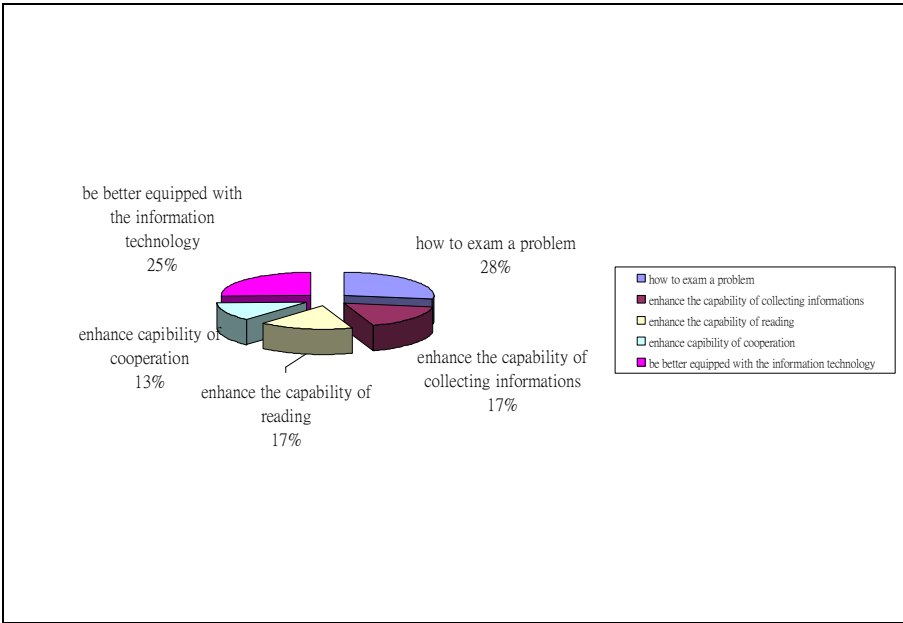


Figure 13: learned skills