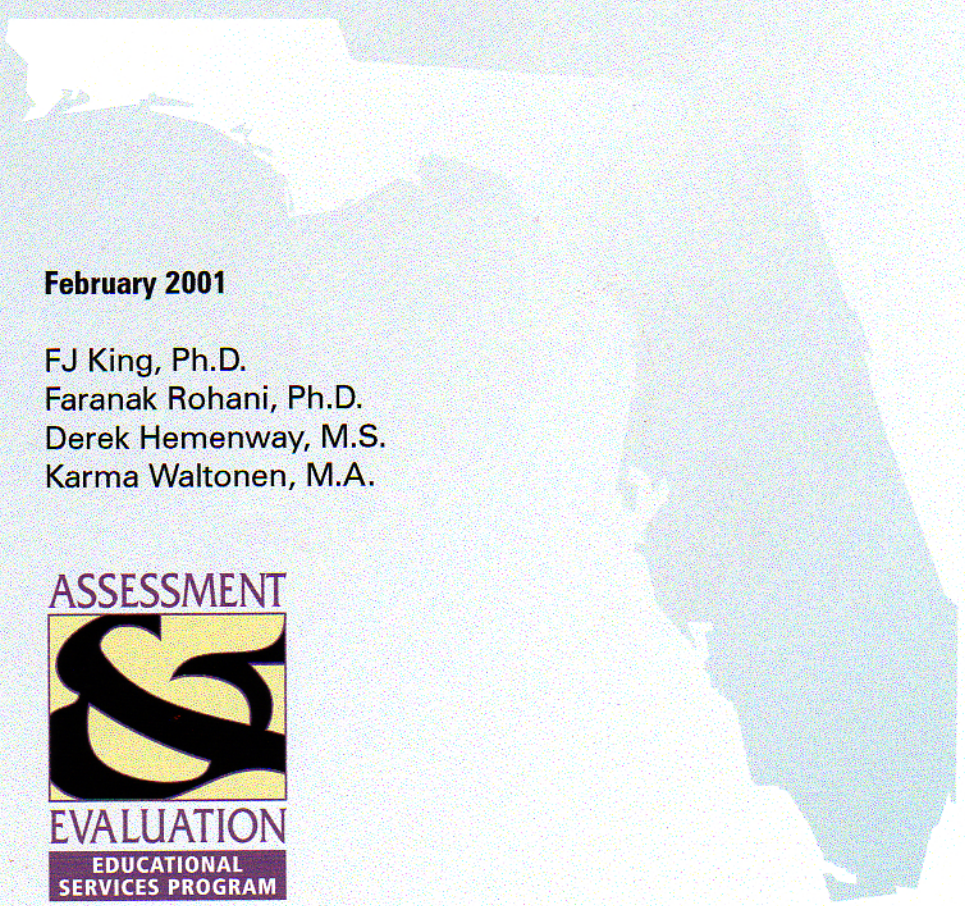
A Comparison of the **Advanced International Certificate of Education** and the **International Baccalaureate** Programs in Florida



February 2001

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ASSESSMENT & EVALUATION
EDUCATIONAL SERVICES PROGRAM

A publication of the Educational Services Program,
now known as the Center for Advancement of Learning and Assessment
www.cala.fsu.edu

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EXECUTIVE SUMMARY

The Advanced International Certificate of Education (AICE) and the International Baccalaureate (IB) are rigorous preuniversity curriculum and examination programs designed for academically able students. Both are two-year programs for junior and senior high school students and both offer preparatory preprogram curricula for freshman and sophomore students. This report compares AICE and IB programs in Florida schools and provides evaluation results and recommendations in accord with the mandate of F.S. 240.116(6), 1999.

Both IB and AICE offer well-balanced curricula, high academic standards, practical real-world applications, and international perspectives. Both emphasize the development of higher order thinking skills, including problem solving and creativity. IB presents a broad general education for students who can function well across the curriculum while providing for specialization in accord with students' interests and plans. AICE also provides a broad program but emphasizes an extremely flexible curriculum that can be tailored to the abilities, interests, and plans of students.

Program affiliation, annual subscription, and student per capita fees are considerably higher for IB than for AICE. Affiliation fees per school are $2,000 for IB; there is no comparable cost for AICE. Annual subscription fees per school are $7,300 for IB and $600 for AICE; student per capita fees are approximately $500 and $250 for IB and AICE, respectively.

In general, student, parent, and teacher satisfaction with both programs was positive. Students in both programs felt that they were challenged by their participation in the programs and well prepared for college. Parent statements agreed with those of students and in addition expressed the belief that students were receiving high-quality instruction from the faculties. Teachers in both programs were well prepared and enthusiastic about their work. Criticism from all three groups tended to be minor.

No major systematic differences in student selection or outcomes were noted when AICE and IB groups had been in their programs the same length of time. AICE examination grades of "E" were found to correspond most closely to Advanced Placement grades of 3 or better, for which many colleges and universities give course credit.

Recommendations

The most important differences found were that AICE graduates face more difficulty obtaining college credit for their courses than do IB graduates, costs are much higher for IB than for AICE programs, and AICE offers greater curriculum flexibility than does IB.

A general recommendation for the Florida Legislature and the Florida Commissioner of Education is that the AICE program be given recognition and treatment equal to that given the IB program. The pilot program designation should be removed and full status should be accorded the program.

The following specific recommendations are made:

1. Enrollment restrictions for AICE should be removed.
2. The AICE program should continue to receive the funding for supplemental FTE that it now enjoys:
    - Enrollment in a full-credit AICE course with a grade of 2 (E) or higher—.24 additional FTE;
    - Enrollment in a half-credit AICE course with a grade of 1 (E) or higher—.12 additional FTE; and
    - Receipt of the AICE Certificate—.30 additional FTE.
3. Bright Futures Scholarships should be guaranteed to AICE certificate holders who apply for them.
4. The AICE program should be described in the *Course Code Directory*. Pre-AICE and AICE courses should be given their own numbers in the *Course Code Directory* and in the *Counseling for Future Education Handbook.*

5. Florida universities and colleges should be encouraged to accept AICE exam results based on the AICE scale for passing scores for credit in the same way that AP and IB exam results are accepted.
6. Course forgiveness policies (no requirement for personal fitness, etc.) for AICE should be the same as for IB in schools in which these programs are located.
7. The AICE program's progress in gaining acceptance of AICE certificates for college credit from American universities and colleges should be monitored.
8. A final recommendation to the Legislature and Commissioner of Education is to make a statewide study that compares AICE, IB, and other acceleration programs such as the AP program. This study would compare program costs and student outcomes at the college level.

It is recommended that counties and schools considering implementation of either AICE or IB take into account the following differences between the two programs:

1. At present, except for the University of Florida, the AICE or supplementary GCE certificates are not automatically accepted for course credit at colleges and universities in the United States. IB students can obtain credit at many colleges and universities with their diplomas or exam certificates.
2. Direct program costs (affiliation, annual, and student per capita) are considerably higher for IB than for AICE. This could be of major importance in small counties that do not anticipate large enrollments in IB and, hence, do not generate large amounts of supplementary FTE.
3. Educational philosophies of the programs are somewhat different. Both AICE and IB emphasize broad preparation for all students, but AICE allows more flexibility in individual student programs.

A COMPARISON OF THE ADVANCED INTERNATIONAL CERTIFICATE OF EDUCATION AND THE INTERNATIONAL BACCALAUREATE PROGRAMS IN FLORIDA

Acceleration mechanisms for articulation between secondary and postsecondary educational institutions include internationally standardized examinations through which students may earn credit (Florida Statute [F.S.] 240.115, 1999). This report compares two such programs that use internationally standardized examinations in Florida—the International Baccalaureate (IB) and the Advanced International Certificate of Education (AICE).

The four objectives addressed in evaluating these two programs were to

1. contrast the two programs in terms of
    - requirements of school personnel and students,
    - program content, and
    - relative cost of the programs for districts, schools, and students.
2. study differences in student and parent satisfaction between the two programs and in teachers' perspectives of the programs.
3. determine whether there were differences between the two programs in student outcomes. Pertinent to these outcomes is the comparative quality levels of the students both before and after matriculation into the programs. The study also took into account how successful students were in high school and how successful they are in postsecondary programs.

4. develop a set of recommendations for schools, the Commissioner of Education, and the Florida Legislature concerning further implementation/expansion of the IB and/or AICE programs in the Florida public schools.

OBJECTIVE ONE: CONTRASTING THE PROGRAMS

A study of the differences between the IB and AICE programs must address them as acceleration mechanisms. This section begins, therefore, with a brief overview of the goal of acceleration and the Florida schools that offer the IB and AICE acceleration programs. The qualification requirements for school personnel and students are then contrasted in a review of the selection processes used to authorize a secondary institution to offer an IB or AICE program and to admit students to these programs. The programs' contents are then analyzed by comparing their histories, focuses, curricula, and instructions. The latter includes curriculum groups, courses and prerequisites, syllabus content, examinations, and grading systems. Finally, the programs are contrasted in terms of the funding they receive and the costs associated with them. These costs are discussed in regard to the fees charged by the IB and AICE program offices and then on three levels: district, school, and students.

Goal of Acceleration

According to F.S. 240.116 (1), articulated acceleration should serve "to shorten the time necessary for a student to complete the requirements associated with the conference of a high school diploma and a postsecondary degree, broaden the scope of curricular options available to students, or increase the depth of study available for a particular subject." To assess the status of systemwide articulation processes authorized under F.S. 240.115, the accountability process established by the State Board of Education includes a focus on educational continuity and the

adequacy of preparation of secondary students for smoothly articulating to a public postsecondary institution (F.S. 240.1162).

Review of curricular and examination materials provides evidence that the IB and AICE programs both serve these broad purposes. Both the IB and AICE programs provide a comprehensive two-year curriculum to allow graduates to fulfill requirements of various national education systems. The Advanced Placement (AP) and IB programs are known to set standards that establish credibility with college admissions officers and provide proof of secondary academic achievement on a high level, both of which are major issues (Kennedy, 2000, p. 1). AICE officials claim that their program "has international credibility as a university-entrance level qualification" and that "American universities have indicated the likelihood of awarding advanced credit to applicants with AICE certificates" (AICE Office, 1997, p. 11). To our knowledge, however, the University of Florida is the only institution in the United States that currently grants such credit.

It is necessary to mention another acceleration alternative, namely, the AP, as IB students often take AP courses as electives and AICE students in Florida take both AICE and AP examinations. Students who take AP courses in high school and pass the AP examinations are eligible for college credit and/or advanced placement at 2,900 colleges and universities worldwide that recognize the program. More than 52 percent of high schools in the United States offer a varying number of AP courses. The main differences between AP and the IB/AICE programs are concerned with student selection and curricula. Students need only obtain a letter of recommendation from a teacher to participate in an AP course. There is no standard curriculum. An AP student may fill his or her schedule with as many AP courses as the

high school offers or may choose to take only one or a few AP classes during high school (The College Board, 1999, 6–7, 10).

AICE and IB Programs in Florida Schools

Approximately 38 Florida high schools have IB programs. The earliest identified date of IB program implementation in Florida was 1983 (Eastside High School in Gainesville). Other schools reported implementing the IB program as early as 1986 and as recently as 1998. Students are admitted to the Pre-IB program in the 9th grade. These students take Pre-IB courses as prerequisites in the 9th and 10th grades for IB courses in the 11th and 12th grades. Since the 1993–94 school year, there have been approximately 150 graduating IB classes in Florida.

The AICE program is currently being piloted in three Florida counties. The AICE program in Bay County began in the 1995–96 academic year, in St. Johns County in 1998–99, and in Lake County in 1999–2000. Florida Statute 236.081, as amended by the 1997 Florida Legislature, specifies that the AICE program "shall generate full-time equivalent student membership" in the same manner as "students enrolled in the International Baccalaureate Program," allowing a maximum of 40 students in each pilot to generate additional full-time equivalent membership for enrollment during the 1997–98 school year, and then a maximum of 80 in the 1998–99 and 1999–2000 school years. Students enter the program in 9th grade. They take Honors and AP courses in grades 9 and 10 to prepare for classes offered for AICE and/or AP credit in the 11th and 12th grades.

Authorization to Offer the Program

Individual schools must apply to the parent organization of the IB program, known as the International Baccalaureate Organisation (IBO), or the AICE program, known as the Cambridge International Examinations (CIE), to be authorized to offer the relevant program.

IB Application Requirements

SECTION I
A. International Baccalaureate North America Application
B. Statement of reasons for adopting the program
C. Statement concerning the place of the IB diploma program in the school
D. Letter of support by the head of the school
E. Three-year implementation budget
F. Description of support services
G. Description of promotional programs and recruitment efforts
H. Affiliation plans
I. Signatures of all who worked on Section I

SECTION II
A. Letter of support by the superintendent
B. Letter of support by the president of the school board

SECTION III
A. List of faculty
B. List of IB diploma courses
C. Four-year sequence of courses
D. Description of Pre-IB program
E. Description of Creativity, Action, Service (CAS) program
F. Description of Extended Essay (EE) plans
G. Signatures of all who worked on Section III

SECTION IV
A. Course outline for each proposed course, signed by the teacher who prepared it
B. Resource analyses by each department

SECTION V
A. Description of the library
B. Inventory of audiovisual equipment
C. Description of computer services
D. Description of library programs
E. Signatures of all who worked on Section V

SECTION VI
A. Current course catalog
B. Description of the school community
C. Application fee

If the application is satisfactory, a site visit is scheduled when the first diploma class is in grade 9. Other visits may be scheduled, as desired, by members of the IBO administration. Full participation begins when the first diploma class is in grade 11. An affiliation fee of $2,000 is required. The annual basic fee per school is $7,300 (IB Teacher Training Workshop: Coordination, p. 13).

AICE Application Requirements

AICE requires application forms to be submitted that contain responses to questions concerning (1) number of full- and part-time qualified and unqualified teaching staff, (2) number of candidates to be examined in the fall and spring, (3) examinations and subjects for which candidates will be entered, and (4) number of laboratories, workshops, and domestic science facilities and their teaching purposes and pupil capacities. A site inspection focuses on teaching

facilities, qualifications of teaching staff, facilities for administering examinations, and security arrangements for storing examination materials, etc. The school coordinator of the program is required to confirm that all administrative and other conditions imposed by CIE will be met. An annually renewable fee of $600 must be submitted with the application.

Selection of Student Programs

Both AICE and IB programs recruit students from district middle schools in the fall and early winter. Student applications for entrance into the ninth grade Pre-AICE and Pre-IB programs for the following year are collected in February. Applications for both programs require (1) math and verbal standardized test scores; (2) grade point averages for English, math, science, and social studies for grades 6, 7, and 8; (3) recommendations from three teachers in the subjects mentioned above; (4) admissions agreement signed by both student and parent; and (5) personal data.

AICE also administers an essay test and an Algebra I test. IB requires that applicants submit statements concerning their involvement in both school and nonschool-related activities, including leadership roles in clubs, sports, church, and community groups. Applicants are also asked to state what they can contribute to the IB program and what they expect to gain from it.

In the IB program in Bay County, achievement test scores, teacher recommendations, and grade reports from 6th, 7th, and 8th grades are combined into a total rating. The combined scores are ranked and the top students are selected for admission. In Bay County, AICE uses the following criteria for admission to the program:

- a total battery score of at least the 85th national percentile on the California Achievement Test (CAT) or equivalent
- a minimum score of 70% on the Algebra I first semester exam

- a 3.0 cumulative grade point average (GPA) from grades 6 and 7 and the first semester of grade 8
- a minimum grade of C on an essay writing test
- favorable teacher recommendations
- favorable attendance and conduct records

These criteria may differ somewhat in other Florida AICE pilot programs.

Characteristics of the Programs

Characteristic features of the programs were investigated through examination of relevant documents. These included course syllabi, externally scored examinations administered in previous years, and informational and promotional literature. Additional information was obtained by attendance at two teacher training workshops for AICE and one for IB.

History

IB. The IB program grew out of the need to establish a common curriculum and university entry credential for geographically mobile students and the "hope that a shared academic experience emphasizing critical thinking and exposure to a variety of viewpoints would foster tolerance and intercultural understanding among young people" (IBO, 2000a). The program is available in English, French, and Spanish. The IBO, which administers the program, is a nonprofit educational foundation based in Switzerland. Founded in the 1960s, IB now has over 1,000 participating schools in 100 countries worldwide. If you would like to visit its Web site, the address is *http://www.ibo.org.*

The IB program awards a diploma to each student who meets defined standards and conditions (IBO, 2000b). The defined standards and conditions include completion of the required sequence of courses in each of six curriculum groups, the EE, the Theory of Knowledge

(TOK) course, and the CAS requirements. Students also must obtain an acceptable score on an exam in each of the six curriculum groups.

Students receiving the IB diploma are granted advanced placement and/or course credit at U.S. institutions. Those who do not receive the diploma, but garner high scores on individual examinations, may still obtain advanced standing or credit in courses related to the examinations, just as AP students do.

AICE. The AICE program provides a preuniversity curriculum and examination system administered by the University of Cambridge. This program is international in scope and provides syllabi in English, French, German, Spanish, Portuguese, and Arabic. U.S. higher education admissions administrators have reported that they would grant advanced placement for applicants with the AICE (Skaggs, 1995). The AICE program has "international credibility as a university-entrance level qualification" (AICE Office, 1996, p. 11).

Developed in consultation with universities, the AICE program was designed as a school qualification equivalent to an A Level (the advanced British secondary level) or IB program. The University of Cambridge Local Examinations Syndicate (UCLES), which administers the AICE program, is an educational assessment agency and a department of the University of Cambridge, United Kingdom, with offices in several countries (AICE Office, 1997, p. 3).

Students who satisfy the full requirements of AICE receive a curriculum group certificate (AICE Office, 1997, p. 4). If students do not complete the full set of group requirements, they receive an international General Certificate of Education (GCE) Advanced Supplementary (AS) certificate in individual subjects in which they have been successful. At the present time, AICE students who wish to receive college credits must use other acceleration mechanisms such as AP exams.

Focus

Descriptions of the IB and AICE programs express similar intent. Both focus on a balanced curriculum, assessment, high academic standards, practical real-world applications, and international perspectives. Both focus on developing higher order thinking skills, including problem solving and creativity. Table 1 contains information on the focus for each program.

Table 1: IB and AICE Program Focus

IB Program Focus	AICE Program Focus
The IB mission aims (International Baccalaureate Organisation, 1998, p. 4) • to develop comprehensive and balanced curricula and challenging assessments • to assist schools in developing individual talents of young people and to teach them to relate the experience of the classroom to the realities of the world outside • to emphasize intellectual rigor, high academic standards, international understanding, and responsibility • to develop critical and compassionate thinkers, lifelong learners, and informed participants in local and world affairs • to develop consciousness of the shared humanity that binds all people together while respecting the variety of cultures and attitudes that makes for the richness of life The IB curriculum includes (http://www.ibo.org/ibo/english/diploma.html) • stimulation of critical reflection upon the knowledge and experiences gained both in and out of the classroom • awareness of subjective and ideological biases • ability to undertake original research • opportunity to develop personal modes of analysis	The AICE program aims (Advanced International Certificate of Education Office, 1996, p. 1) • to provide a broad and balanced preuniversity qualification • to encourage good teaching practice and curriculum development • to promote tolerance and understanding through courses of international relevance • to provide professional assessment of students' performance and establish objective, internationally recognized standards of attainment The AICE curriculum encourages (Advanced International Certificate of Education Office, 1996, p. 6) • development of oral, practical, and thinking skills, as well as the acquisition of knowledge • an investigative approach to learning • use of initiative and creativity in solving problems • application of skills and understanding • ability to undertake individual research and work as part of a team

Curricular and Instructional Programs

Curriculum Groups. Table 2 provides a list of the curriculum groups for each program. Although the number of groups and titles differs, the content is similar. For example, the IB curriculum has six groups. In this six-group arrangement, the IB program separates mathematics

from sciences rather than combining them as in the AICE program, which is separated into three groups.

The course categories for the AICE and IB programs are similar. For example, Biology, Chemistry, and Physics are in AICE Group A and IB Group 4; History, Geography, and Economics fall under AICE Group C and IB Group 3; Environmental Science and Technology are in AICE Group A and Environmental Systems and Design Technology in IB Group 4; computing appears in AICE Group A and Computer Science in IB Group 6; Business Studies is in AICE Group C and Business and Organization in IB Group 3; classic and foreign/modern languages are in AICE Groups B and C and in IB Groups 1, 2, and 6.

Some differences in the curriculum groups also can be seen in Table 2. For example, Accounting is in AICE Group C while no similar listing is in the IB program. On the other hand, the IB curriculum offers courses not listed in the AICE curriculum groups, such as Philosophy, Psychology, and Social Anthropology—these appear in IB Group 3, but not in the AICE curriculum groups. Other differences include the listing of Technology in AICE Group A compared to Information Technology in a Global Society in IB Group 3. History of the Islamic World appears in IB Group 3 but not explicitly in the history offerings in AICE Group C.

Table 2: IB and AICE Curriculum Groups[1]

IB Curriculum ***IB requires at least one subject from each of the six groups.***	
Group 1—Language A1	
first language, including study of selections from world literature	
Group 2—Language A2, B, *ab initio*	
second modern language	
Group 3—Individuals and Societies	
History	Philosophy
Global History	Psychology
History of the Islamic World[2]	Social Anthropology
Modern American History	Business and Organization
Geography	Information Technology in a Global Society
Economics	
Group 4—Experimental Sciences	
Biology	Environmental Systems
Chemistry—General and Applied	Design Technology
Physics	
Group 5—Mathematics	
Mathematics	Mathematical Studies
Advanced Mathematics	Mathematical Methods
Group 6—Arts and Electives	
Second subject from group 2, 3, 4, or 5	Computer Science
Third modern language	Information Technology
Art/Design	Advanced Mathematics (Standard Level)
Music	University Calculus 3 and 4
Theatre Arts	School-Based Syllabus Approved by the IBO
Latin	Classical Greek

Source: International Baccalaureate Organisation (IBO). Geneva: n.d.; sample IB program from Bay County

[1]Not all classes are offered in every secondary institution.

[2]History of the Islamic World was the specialized history class for the 1999 testing year. IB chooses a different part of the world on which to concentrate its history every two years.

Table 2, continued

AICE Curriculum ***AICE requires five full credits with at least ½ credit from each of the three groups.***	
Group A—Mathematics and Sciences	
Biology	Mathematics
Chemistry	Mathematics: Statistics
Computing	Further Mathematics
Environmental Science	Physics
	Technology
Group B—Languages	
English (first and second language)	French (foreign language)
Spanish (first and foreign language)	German (foreign language)
Arabic (foreign language)	Portuguese (foreign language)
	Latin Language
Group C—Arts and Humanities	
Accounting	Geography
Art and Design	History
Business Studies	The World Since 1945
Economics	History: The Alternative Mode Syllabus
Social Studies (environmental issues, work, economics)	Music
	Latin Literature

Source: AICE, An Introduction, 1997; AICE Syllabus Synopsis, 1999; Milwaukee Public Schools, n.d.

The IB program requires at least one subject from each of six groups, with at least three and no more than four at a higher level. The IB curriculum results in a minimum of six subjects, one from each group.

In addition to the curriculum requirements, the IB program requires successful completion of three additional components, which stress both interdisciplinary studies and community service. The first of these components is the TOK interdisciplinary course, which "seeks to develop a coherent approach to learning which transcends and unifies the academic subjects and encourages appreciation of other cultural perspectives" (IBO, 2000b, p. 1). The student takes TOK in the final year of the IB program. The CAS component requires participation in community activities such as theater productions, sports events, and community service activities in an attempt to "educate the whole person" (IBO, 2000b, p. 1). The EE component requires a candidate to undertake original research and write an essay of 4,000 words on one topic of

special interest chosen from a list of 60 general subjects, acquainting "students with the kind of independent research and writing skills expected at university" (IBO, 2000b, p. 1).

The AICE program requires five full credits with at least one-half credit from each of three groups. Although AICE does not promote features similar to TOK, CAS, or EE, the syllabus materials for different courses include interdisciplinary applications. For example, Chemistry includes a focus on the beneficial and detrimental effects of scientific applications for the individual, the community, and the environment (AICE Office, 1999, p. 12). Similarly, Geography focuses on the understanding of how physical and human processes operate and interact in different environments (AICE Office, 1999, p. 26), and Physics encourages awareness of the beneficial and detrimental effects of scientific applications on the individual, the community, and the environment (AICE Office, 1999, p. 31).

The AICE requirement results in a minimum of three credits and a maximum of five, one half each from Mathematics and Sciences, Languages, and Arts and Humanities. Students may choose the other two credits, thereby allowing the curriculum to be tailored to individual students' interests, abilities, and future plans (AICE Office, 1997, p. 4).

The AICE program emphasizes a flexible, broad, and balanced curriculum; a variety of assessment techniques including external marking of examination papers, practical work, and individual research; a practical curriculum that encourages an independent approach to education; an international context with content chosen to be of worldwide relevance; and guidance for the setting and marking of school-based course work (CIE On-Line; AICE Office, 1997). Flexibility of the AICE curriculum can be demonstrated in Table 3 by comparing the kinds of subject combinations that might be chosen for a sciences specialist and a languages specialist from each of the three groups as follows (AICE Office, 1997, p. 6):

Table 3: Sample AICE Specializations

AICE Sciences Specialist	AICE Languages Specialist
Full Credit: Mathematics (Group 1) Further Mathematics (Group 1) Physics (Group 1) Chemistry (Group 1) Half Credit: English (Group 2) Social Studies (Group 3)	Full Credit: Environmental Science (Group 1) English (Group 2) French (Group 2) Spanish (Group 2) Half Credit: School-based language (Group 2) Social Studies (Group 3)

The differences in curriculum requirements between the programs can be attributed to fundamental differences in pedagogical beliefs. For example, the IB program believes the science student should be "challenged to learn a foreign language" (IBO, 2000b, p. 2), while the AICE program believes a "curriculum which forced students to take full credit courses in each of the subject areas would be unduly restrictive" (AICE Office, 1997, p. 4). IB's course offerings in both higher level (HL) and standard level (SL) can be compared to AICE's full and half credits, however. HL courses are composed of 240 teaching hours, while AICE full credits have 200. SL courses are made up of 150 hours, with AICE half credits at 100. Thus, the flexibility offered by the AICE curriculum requirements may also be achieved in the IB program through the mandatory mixing of HL and SL courses. In addition, IB's Group 6 is most often fulfilled by the student through the addition of another course from the first five subjects, enabling the student who is language gifted, for example, to take a third modern language. The EE and CAS requirements also allow the student to tailor the program to specific interests while allowing the program to maintain its ideals of liberal arts education. Examples of possible specializations are detailed in Table 4.

Table 4: Sample IB Specializations

IB Sciences Specialist	IB Languages Specialist
IB English SL (Group I) IB Spanish SL (Group II) IB History SL (Group III) IB Biology HL (Group IV) IB Math HL (Group V) IB Chemistry HL (Group VI fulfilled with course from Group IV) TOK CAS requirement: fulfilled by volunteering in local hospital lab EE: Physics applications	IB English HL (Group I) IB Spanish HL (Group II) IB History HL (Group III) IB Biology SL (Group IV) IB Math SL (Group V) IB French HL (Group VI fulfilled with course from Group II) TOK CAS requirement: fulfilled by volunteering with ESL students EE: Spanish Literature

Courses and Prerequisites. Table 5 provides a list of the IB and AICE sample offerings of courses and prerequisites. For ease of comparison, IB courses are listed next to the AICE courses for the same subject area. Courses appear in the center columns with prerequisites in the outside columns.

Both the IB and AICE programs include courses and specified prerequisites for English, Spanish, Chemistry, Biology, Mathematics, History, Economics, and Art. Courses listed for the AICE curriculum, but not the IB curriculum, include Latin and Physics. Courses listed for the IB curriculum, but not the AICE curriculum, include TOK and the sixth subject choices of Music, Psychology, Theatre Arts, or Second Science.

The IB and AICE listings differ in the titles and emphasis for mathematics and art. The IB course listing includes Math Studies or Math Methods and Precalculus or Calculus, and the AICE course listing includes Statistics, Mathematics, and Further Mathematics. The IB course listing is Art as a possible sixth subject choice, whereas the AICE course listing for Art and Design includes specialization in two components. It should be noted that some of the courses listed might not be available at all schools participating in the programs.

Table 5: Sample IB and AICE Courses and Prerequisites

IB Courses	IB Prerequisites	AICE Courses	AICE Prerequisites
English 11 English 12	*English 9* *English 10*	English	*Honors English I and II* *AP English Language* *D.E. English Composition*
Spanish III or IB French Spanish IV or IB French	*Spanish I or French* *Spanish II*	Spanish	*Spanish I, Spanish II* *Spanish III, Spanish IV*
Biology II or Chemistry II	*Biology I*	Chemistry	*Honors Biology* *Honors Chemistry* *Chemistry II*
Biology III or IB Chemistry III	*Chemistry I*	Biology	*Above plus Honors Anatomy and Physiology*
Math Studies or Math Methods	*Algebra II*	Statistics	*Honors Algebra I* *Algebra II* *Honors Geometry*
Precalculus or Calculus	*Geometry*	Mathematics	*Above plus Precalculus* *Math Analysis*
		Further Mathematics	*Above plus AICE Mathematics*
Theory of Knowledge	*Inquiry Skills and Practical Key Skills*		
History of the Americas Contemporary History	*World History* *American History I*	History	*Honors World History* *AP American History*
	Sixth Subject Choices		
Art (2–3 yrs)	*As most sixth subjects are taken as a second course from the other five areas, the prerequisites for the sixth area are the same as are listed above (i.e., if students take French as their sixth subject, they will need French I and II).*	Art and Design—specializing in 2 components: 1—Observational Study 2—Interpretative Study 3—Design Study 4—Critical and Historical Study 5—Craft Study	 *Art 2/D* *Drawing I and II* *Graphic Design I and II or Painting I and II* *Art 2/D and Art 3/D* *Drawing I and II* *Fabrics and Fibers I and II*
Music (2 yrs) Psychology (1 yr) Theatre Arts (2 yrs)			

Note to Table 5: IB Prerequisites are listed as Pre-IB courses. AICE Prerequisites are currently listed as Honors courses, with AICE course work listed as AP courses.

Syllabus Content. The content of the syllabus booklets for both programs appears in Table 6 (IBO, 1992, 1996b, 1997a, 1997b, 1998a; AICE Office, 1997, p. 9). The syllabus materials

differ in their focus, however. The IB program syllabus includes more information on how to teach the subject, whereas the AICE program syllabus is directed toward examination for each subject. Both syllabi specify aims, objectives, content, and assessment criteria.

Table 6: Syllabus Content

IB	AICE
• introduction • nature of the subject, a brief overview of the scope of study • aims, the educational purposes of the course • objectives, the learning outcomes to be demonstrated on the assessments • syllabus outline, the major parts of the course of study • syllabus details, detailed information about the content to be learned • assessment outline, scheme of assessment—major components and percentage of examination for external assessment and internal assessment • assessment details, explicit content to be included and performance specifications	• introduction • aims, the educational purposes of the course • domains (assessment objectives), knowledge, skills, and understanding • curriculum content, explicit identification of content to be learned, including a core of compulsory content and a range of options of which a certain number must be taught • scheme of assessment, components of the examination and marks awarded to each component • grade descriptions, the abilities that must be shown at different grades

A review of the objectives, curricula content, and assessment criteria contained in the syllabus materials illustrates the comparability of courses for the same subject areas. The greatest differences appear in the subject of mathematics with thematic organization of the content. Table 7 compares the subjects of Language A1 and English/First Language Spanish; Language B/Foreign Language; History; Biology; and Mathematics. While these courses are only a small sample of the variety of courses offered in both programs, these were studied in detail to get a picture of syllabic differences in each of the five major learning areas.

Refer to Appendix A for a set of tables with detailed information from each IB and AICE program syllabus reviewed in this section.

AICE Request for Special Topics Courses

In November 1998, Bay County submitted a request to the Florida Department of Education for approval of a set of special topics courses designed to meet the needs of the AICE program. Course descriptions in Science, Social Studies, English, Math, Art-Visual Arts, Computer Education, and Foreign Languages were submitted. Course requirements included, but were not limited to, relevant Sunshine State Standards benchmarks. The courses include embedded assessments and internationally scored end-of-course examinations.

Table 7: Course Summaries

IB	AICE
LANGUAGE A1	**ENGLISH/FIRST LANGUAGE SPANISH**
The focus of both programs is similar in areas such as literary and creative writing, reading and interpretation of literature, and use of language. The aims and objectives vary in wording, but cover similar territory. For example, the IB program requires independent literary criticism and textual commentary, while the AICE program requires commentary on writing, themes, and literary techniques. Both programs emphasize sensitivity and familiarity with literary works from diverse cultures and languages. Some of the IB and AICE objectives differ in levels of specificity. For example, IB requires candidates to provide precise and relevant examples, while AICE requires candidates to develop and exemplify ideas.	
This course is designed to develop an appreciation of literature and knowledge of the culture of the student's own society and other societies. Topics focus on independent literary criticism, expression of ideas and commentary, and knowledge of various works and groups of works.	This course includes opportunities for students to read a wide range of transactional and literary material, to practice writing in different styles, and to develop powers of logical and lateral thought. The syllabus is designed to stimulate effective and appropriate communication in speech and writing.
LANGUAGE B	**FOREIGN LANGUAGE**
Both programs address speaking, listening, reading, and writing skills and similar content using slightly different methods. Both programs emphasize development of enjoyment, positive attitudes, and intellectual stimulation for foreign language learning. Both programs emphasize the clear, fluent, accurate, and well-organized expression of messages, ideas, opinions, facts, examples, and perspectives.	
This program seeks to develop a sound linguistic base for further study, focusing on the use of an appropriate register. In addition, the syllabus seeks to develop insights into the culture of the country studied and has an objective that refers to contacts with the people of the country where the language is spoken.	AICE's syllabus seeks to develop skills, language, and attitudes for further study, focusing on the use of a variety of registers. Further, the aims include contacts with the culture where the language is spoken.
HISTORY	**HISTORY**
Both the IB and AICE programs organize the study of history into major themes. Although the number and wording of themes vary, the content appears to be similar. Both programs focus on independence movements and decolonization. In addition to the major themes, both the IB and AICE programs focus on expressing or explaining causes and effects and continuity and change.	
This syllabus focuses on the effects of war in the twentieth century, its nature, noncombatants, and the political, social, and economic effects. The IB program refers to the state and its relationship to religion and to the Cold War, ideology, spheres of influence, political, economic, and worldwide responses and developments. Also included are references to minorities and the establishment and work of international organizations. Fundamentally, the IB program focuses on different approaches and interpretations of historical events.	This syllabus focuses on conflict among superpowers, regions, and terrorism. The curriculum refers to ideology and belief concerning communism, capitalism, religion, and nationalism. Also included are references to race relations and international cooperation among world and regional organizations. Fundamentally, the AICE program focuses on the intentions, motives, and beliefs of people, and the relationship of present events to historical roots.

Table 7, continued

IB	AICE
BIOLOGY	**BIOLOGY**
Both the AICE and IB programs organize the study of biology into topic areas and prescribe the content to be covered in detail. Many of the content specifications in both programs cover similar topics such as the understanding and application of biological facts, principles, the scientific method, and experimental and investigative skills. Both programs cover the comparison of different types of observations, the advantages of light and electron microscopes, and practice in making and recording observations, evaluating data, and forming conclusions. Both address topics of global or national contexts, ethical and cultural influences, the impact of biology on the environment, scientific concepts, facts, techniques, terminology, and conventions. Both programs also cover topics such as cell theory, chemistry of life, human health and physiology, systems of classifying diverse species, human physiology and reproduction, control and coordination through the different body systems, and areas for additional specialized study. Both programs also provide a variety of practical activities related to the different topics in each syllabus. Although both programs emphasize the correct and appropriate presentation of scientific information, the IB program specifies the use of forms from the Vade Mecum to record results of a practical scheme of work and that each student must keep a Portfolio of Investigations and a log book. The AICE program requires the presentation of data in tables, graphs, pie charts, bar charts, column graphs, and histograms, but does not explicitly specify the need for a portfolio or log book in the syllabus materials.	
Biology topics include molecular and cellular biology, genetics and evolution, and organisms. Topics for higher level students include human reproduction, defense against infectious disease, classification and diversity, nerves, muscles, and movement; excretion; and plant science. Standard level options include diet and human nutrition; physiology of exercise; cells; and energy. Other options for both levels include evolution, neurobiology and behavior, applied plant and animal science, ecology and conservation, and further human physiology. This syllabus divides up the study of topics into a core and different levels. The IB program seems to provide greater emphasis on statistical analysis and includes a longer list of practical activities.	Includes well-designed studies of theoretical and practical Biology. Students also will study another topic in more depth, chosen from microbiology and biotechnology, human health and disease, and applied plant and animal biology. The course stimulates interest in the care of the environment and the beneficial and detrimental effects of technology and other applications of Biology on the individual, community, and environment.

Table 7, continued

MATHEMATICS	MATHEMATICS
The IB and AICE programs organize the study of mathematics differently. The IB program includes Mathematics Standard Level and Mathematics Higher Level. The AICE program includes Mathematics, Further Mathematics, and Mathematics: Statistics. The IB curriculum treats the subject of statistics as a subset within the standard and higher levels of the curriculum, but the AICE curriculum treats it as a separate course. The thematic organization of related topics also varies within these broad course-title differences. The IB and AICE syllabus materials include several similar aims—emphasis on enjoyment and satisfaction from engagement in mathematics, development of levels of confidence, understanding the logical and coherent nature of mathematics, using mathematics as a means of clear communication, and applying mathematics to different situations. For some aims, the wording differs, but express similar intent.	
IB	**AICE**
MATHEMATICS	**MATHEMATICS**
The syllabus details in the IB program materials are clearly structured. The amount of information to guide the teaching of mathematics is more extensive than the content of the AICE program. The IB syllabus details are organized into three sets of information for each objective: content, amplifications/exclusions, and teaching notes. In addition to content explanations, these syllabus details point out concepts included in the content and the linkages to make with related concepts and principles. The information in the tables containing these syllabus details in the IB higher level syllabus is identical to information appearing in the standard level syllabus, except for sections related to the topics designated as higher level only. The IB syllabus emphasizes some issues that are not explicitly included in the AICE aims—appreciating the international dimensions of mathematics, the multiplicity of cultural and historical perspectives, and becoming aware of the potential of technological developments. The structure of the syllabus guidelines for the IB program includes a list of topics expected as presumed knowledge (PK)—topics with which students should have familiarity before they take the written papers (examinations). The PK topics appear to be identical for both levels and include topics on number and algebra, geometry, and statistics. The higher level syllabus lists an additional set of presumed skills such as solving linear and quadratic equations and using the concepts of symmetry, reflection, rotation, similarity, and congruence to apply geometric properties.	The AICE syllabus emphasizes some issues that are not explicitly included in the IB aims—the importance of recognizing when and how to represent a situation mathematically, interpreting relevant factors, and selecting appropriate methods to solve situations. In addition to these differences, the AICE program includes aims and objectives explicitly focused on the subject of Statistics. Examples include developing awareness of the errors and uncertainties in statistical data and the need for a critical approach to drawing conclusions along with development of statistical knowledge and applications. Although the IB program includes an option for the study of statistics, it does not explicitly include the same level of detail as the AICE program.

Examinations

Inspection of the IB and AICE examinations shows assessment of similar types of learning outcomes within the comparable subject areas. The varieties of outcomes assessed include recall of information or knowledge, recall and application of concepts and procedural knowledge, application of simple or complex rules, and critical thinking or evaluation.

Both programs have external and internal graded exam components. Within the IB program, for example, "Conventional external examination techniques are chosen from a range of options: oral and written, long and short responses, data-based questions, essays, multiple-choice questions. These are complemented by internal assessment of course work by the teachers responsible for evaluating students over the two-year period" (IBO, 2000b, p. 3).

The IB sample external examinations for the five standard subject areas contained 96 pages compared to 28 pages for the AICE sample, yet the total examination time is about the same for both—between 13 and 14 hours. Although the number of discrete topics and structure of themes vary, the examinations often sample the same content such as "significance levels" in the IB examination compared to "significance tests" in AICE. Both sets of examinations contain about the same emphasis on solving problems. Both also have examinations that focus on the application of rules to perform calculations or solve equations and separate examinations that focus more on solving problems.

The IB and AICE external sample examinations differed from each other in several ways. First, the IB program questions contained three times as many visual representations such as charts, graphs, and geometric figures. Second, the IB examinations appeared to place greater emphasis on the display of methods in the working space for answers to questions on Mathematical Methods, Mathematical Studies, and Higher Level Mathematics. Third, although

both sets of examinations include a variety of formulae or calculations in the questions, the IB examinations seemed to contain about twice as many, either to convey information about the questions or to require performance of calculations. Refer to Appendix B for detailed comparison of examinations.

Grading Systems

The grading systems for both programs are criterion referenced. Student performance on external examinations is evaluated according to a set of predetermined standards; professional examiners assign grades.

IB. Student performance in the IB program is evaluated at two levels. Both higher level (HL) and standard level (SL) subject exams are graded on a seven-point scale:

1. Very Poor
2. Poor
3. Mediocre
4. Satisfactory
5. Good
6. Very Good
7. Excellent

A score of 4 or better results in passing the subject.

TOK and EE are graded on a five-point scale:

A. Excellent
B. Good
C. Satisfactory
D. Mediocre
E. Elementary

Various combinations of TOK and EE grades yield up to three bonus points. The diploma is awarded to candidates who earn a total of 24 (out of a possible 45) or more subject exam points and bonus points and who do not have any excluding conditions. It should be noted that a student must pass each subject area in order to receive the diploma. Students who do not qualify

for the IB diploma receive certificates for individual subject areas in which they earned a passing grade, which allows students to apply for advanced credit when they enter a university.

Internal assessment, required for most subjects, is carried out by subject teachers in two ways: (1) Teachers grade assignments according to criteria specified by the subject syllabus, and (2) teachers predict the grade that each student will achieve in the forthcoming externally scored exam. Student grades and predicted scores are submitted to an IB moderator along with a sample of the work done by several students that has been assessed by teachers. The moderator checks the sample to insure that the IB criteria have been applied. If not, adjustments are made to the students' grades. The student's final score is a weighted combination of the moderated teacher grade and the grade on the externally scored exam. In biology, for example, the external and internal assessment weights are 76% and 24%, respectively (IBO, 1996a).

The state of Florida awards additional funds to IB programs on the basis of examination scores and receipt of the IB diploma as follows:

- Enrollment in an HL or SL course with an examination score of 4 or higher—.24 additional FTE
- Receipt of the IB diploma—.30 additional FTE

(Bennet, 2000)

AICE. Externally scored AICE examinations are graded on a five-point scale. Points earned for full and half-credit courses are shown below. A grade of "U" (Ungraded) receives no points and is not a passing grade:

Full Credit		Half Credit	
Grade	Points	Grade	Points
A	10	A	5
B	8	B	4
C	6	C	3
D	4	D	2
E	2	E	1
U	0	U	0

The full AICE Certificate is awarded on the basis of five full credits. A maximum number of 50 points can be awarded. The certificate is awarded at three levels: (1) Distinction, 46 points or more; (2) Merit, 30–45 points; and (3) Pass 10–29 points. Students who do not qualify for the full certificate receive an International GCE Advanced Supplementary (AS) certificate that shows their grades in courses taken and the points they earned.

Most AICE courses include compulsory or optional school-based assessment (course work). This is any work assigned and graded by the teacher. Course work grades and samples of student work are sent to Cambridge for moderation by experienced examiners. Advantages of the course work option are given below:

- it permits the assessment of skills that cannot be tested in a formal written examination;
- it enables teachers to adapt courses to local circumstances and allows students to develop their own interests;
- it involves teachers in the assessment process, thus enhancing their expertise and understanding;

- it enhances the overall reliability of the examination by increasing the amount of assessment, and by testing students in differing contexts.

(AICE Office, 1997, p. 8)

It should be noted that IB's mandatory internal assessment techniques carry these same advantages.

Costs[3] of the IB and AICE Programs

The underlying intent of the IB and AICE programs as they are implemented in the public school system in Florida is to offer an advanced quality education to qualified students. Both programs are funded by the state of Florida through a performance-based funding system.

Florida's main method of financing the costs of public education is the Florida Educational Finance Program (FEFP). The FEFP is designed to equitably distribute funds to districts based on formulas that incorporate student counts, program costs, and the resources of different districts. The FEFP is based on the annual appropriation each year from the legislature and is developed through a series of calculations during the year by the Department of Education. While the process of calculating and determining funds is quite complex, the main components of the formula are FTEs, program cost factors, base student allocation, and district cost differentials (Office of Program Policy Analysis and Government Accountability, 1996).

FTE X Program Cost Factors = Weighted FTE (WFTE)

WFTE X Base Student Allocation X District Cost Differential = Base FEFP

[3]The analysis of costs in this report are based on estimates of the costs associated with running an AICE or IB program at the school level as well as expenditures at the district level using available data. It is difficult to determine costs more precisely than this since no formal cost reporting procedures specific for AICE and IB are implemented other than those for estimating district expenditures. Costs borne by students are also estimated. All costs are annual costs unless specified otherwise.

The primary funding for AICE and IB programs is supplemental FTE revenue. Supplemental FTE revenue is awarded in addition to the base FEFP funding for each county and is based on satisfactory student performance on examinations. As discussed previously, it is earned in the following manner:

AICE	Additional FTE	IB	Additional FTE
Full credit	0.24	Exam	0.24
Half credit	0.12	Diploma	0.30
Certificate	0.30		

The AICE program is being piloted in three counties: Bay, St. Johns, and Lake. The Bay County AICE program has been earning FTE revenue since 1998–99 and in St. Johns County since 1999–2000; the Lake County program is just beginning and will not earn FTE revenue until 2000–2001. In 1998–99, the IB and AICE programs in Bay County earned over $130,500 and over $23,000, respectively, in supplemental FTE revenue, while the IB program in St. Johns County earned over $79,500. In 1999–2000, IB programs in Bay and St. Johns Counties earned over $243,000 and over $144,800, respectively, while the AICE programs in Bay and St. Johns Counties earned over $70,500 and $10,600, respectively. In comparing these figures, note again that AICE, as a pilot program, has a much smaller enrollment than IB and therefore cannot yet earn the same revenue.

The costs associated with administering IB and AICE programs are similar to other educational programs and include typical expenses such as personnel, facilities, equipment, materials and supplies, and miscellaneous costs (such as overhead, clerical support, and postage). The main differences in cost between the two programs are fees, textbooks and materials, and teacher/staff training costs.

Fees Charged by IB and AICE Program Offices. Fees for membership and processing make up a major cost of IB programs. The IBO charges participating institutions several fees including affiliation, registration, examination, and per capita (IBO, 1998b). Fees vary in these categories depending upon a student's status as a "diploma candidate" (senior) or an "anticipated diploma candidate" (junior). Fees are also higher for diploma candidates (seniors) who take all six subject examinations in a single session than for those who do not. Thus, per capita fees for each student are $55 (diploma candidate), $70 (anticipated diploma candidate), or $125 (diploma candidate, all six subjects in a single session). Similarly, registration fees for examinations are $20, $45, and $65. A fee of $48 is charged for each subject test, and an additional $30 fee is charged for the extended essay component. For example, the cost of registration fees per student for an IB diploma candidate would be $290 for five subjects with one extended essay, and $383 for a diploma candidate who took all six subject exams in a single session. For an IB anticipated diploma candidate, the cost of registration fees would be $45 for registration and $48 per subject (for example, $93 for one subject examination). If per capita fees are added, the total cost of fees per student would be about $350 for a diploma student, $500 for a diploma student with all exams in a single session, and about $160 for each exam for an anticipated diploma student. See Appendix C for a listing of fees charged by the IBO.

Table 8 illustrates the cost of registration and per capita fees to the Bay County IB program:

Table 8: IB Registration Fees

1999 Registration Fees for Bay County IB Program		
Per Capita Fees		
61 Diploma Candidates	$55	$3,355
60 Anticipated Candidates	$70	$4,200
Total Per Capita Fees		$7,555
Examination Fees		
Registration Fees		
61 Diploma Candidates	$20	$1,220
60 Anticipated Candidates	$45	$2,700
Subject Fees		
368 HL/SL Subjects	$48	$17,664
61 Extended Essay	$30	$1,830
Theory of Knowledge (school)	$300	$300
Total Examination Fees		$23,714
Total Fees		**$31,269**

Source: IB Program Office, Rutherford High School, Bay County School District

Additionally, schools are responsible for a $2,000 affiliation fee and a $7,300 annual subscription fee. Schools with diploma candidates are also responsible for a fee of $300 for the TOK component. Schools must also pay $70 for each subject certificate issued. Finally, other miscellaneous fees are charged for services such as late registration, replacement documents, early results service, individual school reports, results inquiries, legalization fees, and issue of results by courier. The annual cost of all fees for a typical school's IB program in the past has usually averaged around $45,000 for a program with two IB classes of about 100 students each.

The AICE program has tended to be less expensive than the IB program in regards to fees, and also for travel/training and textbooks/materials expenses. Representatives of the AICE program in Cambridge, UK, prepared the following statement regarding AICE fees:

> Costs for the AICE comprise a minimal charge for materials, and a fee for submission of the examinations. At today's exchange rate, the fee is approximately $47 for each full-credit course and $24 for each half-credit course. Therefore, for a full course load

of 5 credits the cost per student would be approximately $240 in U.S. dollars. (Skaggs, 1995)

Costs of the AICE program were also estimated to be around $225–$230 per student at the beginning of the implementation of the pilot program (AICE implementation meeting). Currently, fees for the AICE program in St. Johns County are estimated to be around $50 per student per course (Villadoniga, 2000). Thus, fees for the AICE program can currently be estimated to be around **$**250 for a full-time student. AICE also charges each program an annual $600 fee.

Other typical expenses of both programs include personnel (a full-time coordinator and other program staff), training/travel expenses, additional equipment such as computers and laboratory supplies, and textbooks and materials. The next two sections discuss these types of costs in greater detail. Table 9 illustrates typical budget items for an IB program in Florida.

Table 9: Budgeting an IB Program

Category	Expenditure
Direct Fees to IB	Approximately $45,000
Textbooks	Additional Textbooks
Supplies and Materials	Laboratory Equipment, Computers
Teacher Pay/Training	Travel Costs
Coordinator	Annual Salary + Benefits
Postage and Faxing	Approximately $1,300

Source: IB Teacher Training Workshop: Coordination, Florida League of International Baccalaureate Schools

District Costs. AICE and IB program expenditures data for 1998–99 for Bay County indicate lower overall expenditures for the AICE program compared to the IB program, but a higher cost per student for the AICE program. The budget categories with the greatest expenditures for the IB program are dues and fees, personnel, travel, textbooks, and supplies. For AICE, the greatest expenditures are supplies; other purchased services; textbooks; and furniture, fixtures, and equipment. Table 10 illustrates these expenditures.

Table 10: District Expenditures for IB and AICE Programs, Bay County, 1998–99[4]

Category	IB	AICE
Salaries	$27,897	$0
Employee Benefits	$8,367	$29
Travel	$15,000	$2,764
Rentals	$0	$752
Repairs/Maintenance	$2,516	$0
Communications	$2,047	$114
Other Purchased Services	$712	$5,181
Supplies	$8,498	$9,544
Textbooks	$12,933	$3,805
Periodicals	$75	$0
AV Materials	$0	$428
Furniture, Fixtures, and Equipment	$3,177	$5,646
Computer Software	$915	$45
Dues and Fees	$46,030	$0
Other Personal Services	$4,403	$1,140
1.5 Teacher Units	$66,702	$66,702
Total Expenditures	**$199,272**	**$96,149**
Estimated Expenditures per Student	**$996**	**$1,201**

Source: Budget Office, Bay County School District

Note that Bay County's IB program had a higher amount of total expenditures at $199,272 compared to $96,149 for AICE, while the AICE program had a higher amount of expenditures per student at $1,201 compared to $996 for IB. The largest expenditure to the district for both IB and AICE is the 1.5 teacher unit allocation. This allocation covers the cost of a full-time program coordinator and other program staff. It is estimated by the district to be $44,468 per unit (including benefits), for a total of $66,702 for each program.[5] This cost per student of the AICE program would therefore decrease given a higher student enrollment since the teacher unit allocation would remain constant regardless of the number of students enrolled.

It should also be noted that Table 10 lists no expenditures for categories such as salary or dues/fees for the Bay County AICE program. District and school staff in Bay County indicated that there were no additional staffing expenditures for the AICE program beyond the teacher

[4]The number of students enrolled was estimated at 80 for AICE and 200 for IB.

[5]The estimate of $66,702 is a conservative one; personnel with extensive experience or advanced degrees may earn a higher salary (Snyder, 2000).

units allocated by the district. In regards to the dues/fees category, during 1998–99, AICE student exam fees were paid for out of Bay High School's budget. The district also gave the Bay High AICE program a start-up loan of $30,000 (Snyder and Reach, 2000).

School Costs. According to staff at the Bay County IB program, there are no outstanding costs to schools not paid through the FTE allocation, rather there is a net gain of funds to the school (Brown, 2000). Table 11 shows the typical school-level costs of the IB program in Bay County.

Table 11: Bay County IB Program Costs

Summary of Estimated Costs of the IB Program at Rutherford High School	
Dues and Fees	$58,000
Travel	$15,000
Personnel	$3,000
Textbooks	$7,000
Computer/Technology	$3,500
Office Expenditures	$14,000
Total	**$100,500**

Source: IB Program Office, Rutherford High School, Bay County School District

Table 12 illustrates the breakdown of costs for the 1998–99 school year in Bay County for the AICE program. Notice that the total expenditures reported for the school were greater than the FTE revenue. Bay High had a total of $27,260 in AICE expenditures but only $23,090 in FTE revenue. Moreover, out of this amount, over $8,000 was owed to the district, leaving only $14,782 in FTE revenue for Bay High. In short, the Bay AICE program expenditures were greater than revenues. The district, however, also paid for the program coordinator's position.

Table 12: Bay County AICE Program Costs

Estimated Costs of the AICE Program at Bay High, 1998–99	
Expenditures	
Supplemental Materials (text and videos)	$2,589.11
Teacher Training/Staff Development	$2,777.74
Field Trips	$260.20
Postage	$1,361.15
Exam Fees	$8,850.89
Office Supplies	$285.16
Office Equipment	$717.50
Publications (AICE brochure)	$291.85
Publications (yearbook, newspaper)	$151.60
Miscellaneous	$75.00
Clerical (paid through school budget)	$9,900.00
Total Expenditures	**$27,260.00**
Revenue	
FTE Revenue from DOE	$23,090.00
Start-up Loan Payment to District	($6,000.00)
Overhead Payment to District Office (10%)	($2,308.00)
Net Income to BHS from DOE	**$14,782.00**
Net Cost to BHS	**$12,478.00**
Other Program Expenses: 1.5 Teacher Units (paid by District Office)	**$66,702.27**

Source: AICE Program Office, Bay High School, Bay County School District

AICE program staff in St. Johns County also confirmed that not all AICE expenses are paid for out of the FTE allocation. For example, funds from the school's AP budget have been used to pay for both AICE and AP training and supplies in cases of dual usage by both programs.

Student Costs. Compared to the implementation of the IB program in other locations, IB students in Florida have relatively few monetary costs. In some other states, schools have charged students for exam, registration, and other fees;[6] while in Florida, students are not held responsible for paying the fees associated with the program. The only costs that students and

[6] See for example *Booker T. Washington High School* in Tulsa, OK, at http://www.btwhs.org/ib/costs.htm, and *North Canyon High School* in Phoenix, AZ, at http://www.pvusd.k12.az.us/news/IB/ibhome.htm

their families in both the IB and AICE programs in Florida are responsible for are field trips (which are not mandatory). However, it should be remembered that the cost of field trips is a common expense for many students and their families outside of either IB or AICE. IB and AICE participants may even have an advantage in this regard, as some schools have set up fund-raising organizations unique for each program. The AICE Parent Association at Bay High School, for example, uses several fund-raising strategies to meet additional costs, including sales of goods such as candy and candles, garage sales, a "pancake supper," and services volunteered for donations.

Objective One Summary

The IB and AICE programs are designed for secondary students "to shorten the time necessary for a student to complete the requirements associated with the conference of a degree, broaden the scope of curricular options available to students, or increase the depth of study available for a particular subject" (F.S. 240.116 [1]).

The IB program was implemented in Florida at least as early as 1983 and currently is in operation in approximately 40 high schools. The AICE is currently being piloted in three Florida Counties. The purpose of Objective One of this report was to contrast the two programs in terms of requirements of school personnel and students; differences in program content; and relative costs of the programs for districts, schools, and students.

Both programs require individual schools to submit formal applications to offer the program. A site visit is made to the applicant school by relevant program personnel if the application is satisfactory. The IB requires a one-time affiliation fee of $2,000 and an annual subscription fee of $7,300; an annually renewable fee of $600 must accompany the AICE application.

Both programs recruit students from the district middle schools in the fall and early winter for the ninth and tenth grade preprogram years. The two-year full program curriculum begins in eleventh grade. Students' applications for both programs require (1) math and reading standardized achievement test scores; (2) grade point averages; (3) recommendations from three teachers; (4) admissions agreement signed by both students and parents; and (5) personal data.

Both IB and AICE present well-balanced curricula, high academic standards, practical real-world applications, and international perspectives. Both emphasize the development of higher order thinking skills, including problem solving and creativity.

The IB curriculum is made up of six groups: (Group 1) Language A1—first language; (Group 2) Language A1—second language; (Group 3) Individuals and Societies; (Group 4) Experimental Sciences; (Group 5) Mathematics; and (Group 6) Arts and Electives. The AICE curriculum is divided into three groups: (Group A) Mathematics and Science; (Group B) Languages; and (Group C) Arts and Humanities.

A comprehensive assessment of five core subjects determines that IB consistently offers more detail in its syllabus and demands more detail in its exams. For example, mathematics is graded on both the answer and the calculations used to arrive at that answer. The main difference between the two programs lies not in their syllabi, but in their application of the curricula. That is, IB students must take a wider variety of core courses; while it is possible to go through the AICE curriculum without having taken a second language or a science, only 1/2 credit must be taken from each of the three broad groups.

Both programs allude to their interdisciplinary qualities and their worldwide applications. AICE cites flexibility as its great strength, yet there are limitations in specific secondary school

offerings. It is also possible to have flexibility in the IB program, although it is a pedagogical aim of the IB program to produce students who have been challenged in a variety of subjects.

The IB program has three unique components: CAS, TOK, and EE. These requirements encourage interdisciplinary work and allow for a certain flexibility in the ability to specialize one's research.

The grading systems for both programs are criterion referenced. IB external examinations are graded on a seven-point scale. TOK and the EE are graded on a five-point scale. AICE exams are graded on a five-point scale. A sixth category is reserved for papers that earn no credit. Both programs use internal and external grading procedures to insure fairness in the quantification of the challenges of the programs. In addition to fulfilling auxiliary requirements and passing all exams, IB students must make 24 out of 45 possible points to garner a diploma. AICE students must pass all exams and gain at least 10 out of 50 points to obtain a certificate. During these pilot program years, AICE students took both AICE and AP exams in an attempt to garner college credit.

Both programs earn supplemental FTE revenue based on satisfactory student performance on external examinations. In 1999–2000, IB programs in Bay and St. Johns Counties earned over $243,000 and $144,800, respectively, while AICE programs in those counties earned over $70,000 and $10,600, respectively. Because of its pilot status, AICE has a much smaller enrollment than IB and cannot yet earn as much revenue. Examination and other fees charged by the IB program exceed $500 per student while AICE charges approximately $250 for each full-time student. District and school program costs for IB are completely paid for by earned supplemental FTE revenue. AICE supplemental revenue does not cover all district and school program costs because of smaller enrollments. Program costs to students in both programs are

minimal. Almost all of these costs are met by fund-raising events sponsored by program parent associations and other private sources.

A comparison of the programs by cost is challenging, as AICE is only a pilot program. That is to say, a cost per student analysis in any given school factors in only approximately 80 students in an AICE program compared to an estimated 200 in IB. Though IB tends to be a more expensive program in terms of annual fees, textbooks, and training, AICE currently has a higher cost per student amount due to their lower numbers. Further, at the present time, AICE's expenditures are higher than their performance-based FTE revenues.

OBJECTIVE TWO: STUDENT, PARENT, AND TEACHER SATISFACTION

The goal of Objective Two was to examine the satisfaction level of students and parents and to examine teachers' attitudes about the programs. These questions were addressed first through a review of literature relating to IB and AICE participant satisfaction and through a survey of students, graduated students, parents, and teachers.

Studies on IB and AICE Satisfaction

Only one study was located that dealt with the issue of student and faculty satisfaction. Thomas (1987) surveyed both IB diploma holders who were enrolled in several universities and university faculty to determine their attitudes concerning the IB program as preparation for the university. Questionnaires were sent to universities in the United States, Britain, and Canada. Each university was asked to distribute them to three students and three teachers. Usable data were obtained from 71 students and 53 faculty members in 48 universities (22 from the US, 21 from the UK, and 5 from Canada).

Table 13 shows the ratings of the 71 students for items related to the value of the IB program for preparation for university studies.

Table 13: Ranking of Distinctive Features of the IB Program as Valuable Preparation for Studies (by % of response)

Feature	Excellent	Good	Useful	Little Value	No Value
Programme as a general preparation	64	12	4	—	—
For one's special field of study	18	45	25	12	—
Insistence on foreign language	38	23	23	12	4
Insistence on mathematics	40	21	25	8	6
Extended essay	42	28	16	11	3
Theory of knowledge	15	19	36	17	13
Guided course work	26	42	18	14	—
Range of tests	23	40	29	6	2
CAS activities	23	23	28	18	11
Emphasis on internationalism	45	28	16	4	7

Source: Thomas, 1987, Annex 10

Thomas (1987) included the following comments in his discussion of the results of objective and open-ended items:

> Students can be judged to have thought that their IB programme placed them at an advantage for their university studies. The most frequently mentioned aspects were the breadth of the programme allowing them a wide range of options at university, the sense of discipline instilled, the study habits and skills encouraged, the emphasis on essay writing and the research skills heightened by the extended essay. (p. 7)
>
> Following the expression of general satisfaction, there is evidence of lack of appreciation of the usefulness of a foreign language and the insistence on mathematics. The least appreciated was the Theory of Knowledge component upon which many students commented about their vagueness of its aims and the general low level of instruction (in comparison with other disciplinary areas). Likewise the CAS activities were lowly ranked especially by students coming from state schools where these seem to be given scant attention. (p. 7)

Table 14 shows the ratings of the 53 university faculty members for items related to the value of the IB program as preparation for university studies. Thirty-nine of the respondents were from the UK, seven from Canada, and five from the US. Two were from other nations. Thirty-two percent were from science departments and 30% were from social sciences.

Thomas (1987) found that most faculty had known of the IB program for 5 to 10 years. However, most of them had not had contact with more than a "handful" of IB students and felt ill prepared to respond to the questionnaire meaningfully.

> Again, faculty expressed reticence to base opinions on such a small sample. Rankings in general are above average, with the only surprises coming in the low registration over the value of having a good command of a foreign language, evidence of work in the social services and of artistic tendencies. (p. 11)

Table 14: Ranking of Distinctive Features of the IB
(% of distribution)

Feature	Excellent	Good	Average	Low Value	No Value
As a 6 subject programme	25	65	10	—	—
For own discipline the insistence on foreign language	14	35	26	14	11
Insistence on maths	44	36	18	2	—
Evidence of internationalism	18	45	27	5	5
Open-mindedness	30	43	19	2	—
Research skills	21	51	26	—	2
Writing skills	24	51	20	5	—
Oral expression	30	45	25	—	—
Evidence of artistic appreciation	15	20	38	27	2
Social service	13	41	26	18	2

Source: Thomas, 1987, Annex 11

Survey Instruments

From the fall of 1998 through the spring of 2000, a series of mail-out survey instruments were developed to receive feedback from current students, graduated students, parents, and teachers of the AICE and IB programs. Only the IB and AICE programs in Bay, St. Johns, and

Lake Counties were included in this study. Although there are several other schools in the state that have IB programs, these locations were chosen because the AICE program is being piloted only in these counties. The diploma award rates for the Bay County IB program in 1998–99 was 28% and for 1999–2000 was 66%. The diploma rate for the St. Johns County for 1998–99 was 90% and for 1999–2000 was 59%. The statewide IB diploma rate for 1998–99 was 76%. The 1999–2000 diploma rate was not available at the time of this study (Personal Communication, Karen Bennett, Florida Department of Education, August 31, 2000). The use of IB programs at schools in other counties for comparison with the AICE programs could have introduced population characteristics not present among students of Bay, St. Johns, and Lake Counties. At the time of this study, Lake County's AICE program was just beginning. It did not begin until fall of 1999 and was only offering courses in Math and English. Lake County also did not have an IB program. It was decided that the IB program in St. Johns County's would be the most comparable IB program for Lake County's AICE program.

Survey instruments were developed by project staff at the Educational Services Program (ESP). Information relevant to survey development was obtained from the review of literature and from AICE and IB program staffs. In order to develop comprehensive and valid survey instruments, however, a preliminary open-ended survey was designed. Feedback to the drafted open-ended survey was solicited from the IB and AICE coordinators at Bay County. The open-ended surveys were sent to AICE and IB students in Bay and St. Johns Counties in 1998–99. This survey explored student and parent perspectives on the respective programs. In the open-ended survey, in addition to a few demographic questions (gender and grade level), students were asked to provide comments regarding their reasons for participating in IB or AICE,

strengths and weaknesses of the programs, and changes needed in the programs. Parents were also asked to provide any comments about the programs on a form provided.

The results of the open-ended survey were analyzed and used in development of the final survey instruments for students, graduated students, and teachers. Below are brief descriptions of the contents of each survey instrument:

Current Student Survey

The current student survey for both programs was based on responses from the earlier 1998 and 1999 surveys. Students were asked to use a "Strongly Agree"—"Strongly Disagree" scale to respond to statements regarding issues including the program learning environment, quality of teachers and other program staff, difficulty level of academic workload, course content, program requirements, academic honesty and student discipline, present and future benefits, and effects of program participation on other student activities. The IB survey also asked for students' opinions regarding the CAS, TOK, and EE requirements. Recipients of both surveys were also asked to list any changes that they felt would improve the program. See Appendix D for a copy of the surveys.

Graduated Student Survey

Three different survey instruments were developed for the population of graduated students. One survey was developed for IB students in Bay and St. Johns Counties and one for the AICE graduated students in Bay County. A third survey was developed for the AICE graduated students in St. Johns County. Development of a specific survey for graduates of the St. Johns County AICE program was due to the fact that the program began in the fall of 1998 and was only offering one course (English).

The graduated student survey solicited demographic information (gender and age). In addition, recipients were asked specific question about age at time of graduation, type of diploma received, name of college or university attended, other postsecondary activities, college GPA, field of studies, the number of courses for which they received college credit, and interaction with other program students. The recipients were also asked to rate different features of the two programs on a five-point scale (Excellent—No Value) similar to that used by Thomas (1987). Finally, the recipients were asked if they would recommend the program to other school students, if they benefited from participation in the program, their opinions concerning social interaction while in the program, difficulties in obtaining college credit, and any additional comments concerning their post high school experience as related to the program participation. For the AICE survey in St. Johns County, all questions relating to the AICE certificate, program benefits, social interaction with other students, and ratings of the program features were deleted. See Appendix D for a copy of the surveys.

Parents' Comments Form

Each student survey (current and graduated) package contained a one-page form for parents to list their feelings or experiences regarding the AICE and IB programs. See Appendix D for a copy of the form.

Teacher Survey

Teachers were asked a series of questions regarding their professional backgrounds and years of teaching experience. Teachers were also asked to indicate their teaching specializations, particularly in regards to IB, AICE, AP, and Honors classes. AICE teachers were also asked to describe any experience they had had with AICE distance training. Teachers of both programs were then asked to use a "Strongly Agree"—"Strongly Disagree" scale to respond to statements

regarding issues such as program quality, college preparation, adequacy for exceptional students and minority students, and organization; student morale, stress levels, and student retention; and materials, exams, and class size, IB teachers were also asked about their opinions regarding CAS, TOK, and other aspects of the IB program. See Appendix D for a copy of the surveys.

Survey Dissemination

During February, March, and April of 2000, all surveys were sent to recipients. The entire populations for each survey instrument in each county were surveyed. These numbers are displayed in Table 15. The names and addresses of these subjects were obtained from AICE and IB program staff, except for current students and graduated students in Bay County. Due to mandated county procedures, AICE and IB program staff in Bay County were not allowed to release contact information for current and graduated students. ESP prepared survey packages and delivered them to Bay County AICE and IB program coordinators who then mailed them to participating students. All surveys for St. Johns and Lake Counties, however, were prepared and mailed directly by ESP to survey recipients in those counties.

Table 15: Survey Dissemination

Program	Number of Students	Number of Teachers	Number of Graduated Students
Bay County			
AICE Program	170	12	30
IB Program	300	22	63
St. Johns County			
AICE Program	132	25	14
IB Program	260	24	29
Lake County			
AICE Program	24	N/A	N/A

Each survey was packaged together with an appropriate cover letter. Survey recipients were informed in cover letters that all information would be kept confidential and that no names or other means of identification would be used (similar notification was included in the instructions

on each survey instrument). Recipients were asked to return completed surveys using an enclosed postage-paid business reply envelope.

Current and graduated student survey packages for both programs also included the Parents' Comments form. These packages were addressed to the parents of these students. In the cover letters, parents were first given a brief description of the study. They were then encouraged to review the enclosed survey and were requested, if they had no objections, to give it to their child to complete.

About two weeks after the dissemination of each survey, follow-up letters were sent to each survey recipient to remind him or her about participating in the study if they had not already completed and returned their survey. The follow-up letters also informed recipients of a phone number that they could call if they needed more materials or if they had questions about the project.

Response Rates

A total of 1,081 surveys were disseminated. Of these, 26 were returned by the post office as undeliverable due to incorrect addresses. A total of 357 were completed by recipients and were returned, for an overall response rate of 33.7%.

The only addresses available for surveying graduated students were parents' addresses. The initial survey of graduated students generated low response rates (19.1% for IB and 13.6% for AICE), most likely due to the fact that many graduated students are college students and do not live with their parents (although cover letters for these surveys did ask parents to encourage their child's participation in the survey even if they were not living at home). In order to increase the rate of return, graduated student surveys were re-disseminated in August 2000, a time that many students might be staying with their parents for the summer. A cover letter with detailed

instructions was included with these survey packages. Parents were first instructed to disregard the package if they and their child had already completed a graduated student survey in the spring of 2000. If their child was with them, they were asked to give the survey to their child and encourage him or her to complete and return it. If their child was not living with them, they were asked to provide the student's address or e-mail on an enclosed form and return it. If they did not feel comfortable providing us with their student's contact information, they were asked to contact their child, obtain responses to each item, complete the survey, and return it.

The responses for the August dissemination of the graduated student surveys increased the response rates somewhat. Nine surveys were completed and returned (5 AICE and 4 IB). Only 1 parent responded to our request for student contact information. As a result, the recalculated response rates for IB graduates was 22.8% and 25% for AICE. See Table 16 for more details about response rates of individual surveys.

Table 16: Survey Response Rates

Survey	Sent	Undeliverable	Received	Response Rate
AICE Students	302	8	118	40.1%
IB Students	560	10	159	28.9%
AICE Teachers	37	0	30	81.1%
IB Teachers	46	0	27	58.7%
AICE Grads	44	3	11	25%
IB Grads	92	5	21	22.8%
Total	1,081	26	366	33.9%

Findings

In this section, survey findings are reported by program (IB or AICE) and by survey category (current students, graduated students, teachers, and parents). Comparisons between IB and AICE responses for each survey item are presented but are only discussed for items that have a 10% or greater difference in responses. It should be noted that not every respondent answered

every item. Thus, the statistics reported in this section are based on the actual number of responses given for each item.

Current Students Survey

The majority of students from both programs appeared to be generally satisfied with their experiences. For example, if "Strongly Agree" and "Agree" responses are combined, 82% of AICE respondents and 91% of IB respondents agreed with the statement "participation in the [IB/AICE] program is good preparation for college." Similarly, 84% of AICE respondents and 88% of IB respondents agreed with the statement "participation in the [IB/AICE] program should help me get a college scholarship," while 74% of AICE respondents and 87% of IB respondents agreed with the statement "participation in the [IB/AICE] program lets me challenge myself to do my best work." Table 17 provides a summary of responses received for each scaled item.

Table 17: Student Satisfaction (IB N=159, AICE N=118)

(SA=Strongly Agree; A=Agree; U=Undecided; D=Disagree; SD=Strongly Disagree; DK=Do Not Know)

Statement	SA %	A %	U %	D %	SD %	DK %
The program conveys a friendly, helpful atmosphere.						
IB	29	55	10	5	1	2
AICE	44	44	7	3	1	1
The coordinator has helped me understand the program and how it can help me reach my goals.						
IB	30	37	9	16	4	4
AICE	45	34	12	6	3	1
Teachers in the program are skillful and knowledgeable in their subject areas.						
IB	48	39	8	4	0	1
AICE	41	47	9	3	1	1
Guidance counselors in the program are well qualified.						
IB	22	37	12	9	2	18
AICE	42	25	14	3	2	15
My guidance counselor has helped me select my courses and plan for college.						
IB	17	30	16	18	10	10
AICE	31	25	16	13	9	7
The program should provide students more time for conferences with teachers and guidance counselors.						
IB	19	33	25	17	1	5
AICE	23	29	18	24	3	4
Courses in the program are harder and more demanding than regular courses.						
IB	73	23	2	0	0	2
AICE	42	38	5	9	4	2
There are not enough course options in the program.						
IB	23	29	22	20	3	4
AICE	20	20	17	36	5	3
The content of some courses is of no value to me.						
IB	13	30	15	27	10	4
AICE	15	20	22	25	14	3
Students in the program all obey the honor code/rules in the student handbook and the county code of conduct.						
IB	4	21	8	39	22	6
AICE	11	23	13	33	12	9
The program should have better discipline and safeguards against cheating.						
IB	13	24	22	30	7	4
AICE	9	20	22	32	11	5
Participation in the program lets me challenge myself to do my best work.						
IB	39	48	9	4	1	1
AICE	36	38	9	10	4	3
Participation in the program is good preparation for college.						
IB	67	24	6	1	0	2
AICE	43	39	8	3	2	5

Table 17, continued

Statement	SA %	A %	U %	D %	SD %	DK %
Participation in the program should help me get a college scholarship.						
IB	63	25	4	2	1	6
AICE	57	27	6	3	2	5
I expect to get the diploma/certificate when I graduate.						
IB	41	28	16	5	1	10
AICE	42	24	17	7	3	8
I expect to get college credit for some of the program courses.						
IB	54	34	4	1	1	6
AICE	64	24	4	3	2	3
My family is happy about my participation in the program.						
IB	61	28	5	3	1	3
AICE	62	28	6	1	2	1
Too much work is expected from students in the program.						
IB	16	24	23	28	6	2
AICE	14	14	24	36	12	0
I sometimes find participation in the program very stressful.						
IB	47	37	8	6	1	1
AICE	26	43	10	15	4	1
There are not enough group activities for students.						
IB	11	31	20	29	4	6
AICE	16	20	23	28	8	6
I am exposed to new people and ideas in the program.						
IB	21	44	14	14	7	1
AICE	20	42	14	16	8	1
Participation in the program makes it difficult for students to mingle with students outside the program.						
IB	28	34	6	23	9	0
AICE	16	16	9	36	25	0
Participation in the program has not interfered with my taking part in extracurricular activities.						
IB	14	39	10	24	11	2
AICE	26	33	9	19	13	2
Participation in the program has not interfered with my having a job.						
IB	7	12	7	18	10	47
AICE	14	17	9	12	13	35
Some students do not participate in the program due to the high cost of field trips, projects that require special books, a computer, etc.						
IB	3	4	5	31	36	22
AICE	2	7	4	28	39	20

Note: Percentages may not add up to 100% due to rounding error.

There were noticeable differences between the responses of IB and AICE participants for several items. When "Strongly Agree" (SA) and "Agree" (A) responses were combined, the following items had differences of 10% or greater.

- *The [IB/AICE] coordinator has helped me understand the program and how it can help me reach my goals.*

  Although 79% of AICE respondents felt that the program coordinator had been helpful, only 67% of IB respondents did. The difference in responses to this item may be attributable to the higher workload of IB coordinators compared to AICE coordinators in terms of the numbers of students.

- *Courses in the [IB/AICE] program are harder and more demanding than regular courses.*

  Although the majority of respondents from both programs responded affirmatively concerning this statement, more IB respondents (96%) than AICE respondents (80%) felt that their courses were harder and more demanding than regular classes.

- *There are not enough course options in the [IB/AICE] program.*

  While about half (52%) of IB respondents felt that there were not enough course options for them, only 40% of AICE respondents did.

- *Participation in the [IB/AICE] program lets me challenge myself to do my best work.*

  A higher percentage of IB respondents (87%) than AICE respondents (74%) reported that the program challenged them to do their best work.

- *Too much work is expected from students in the [IB/AICE] program.*

  Although less than half of respondents from each group agreed with this statement, a higher percentage of IB respondents (40%) than AICE respondents (28%) felt that too much work was expected from them.

- *I sometimes find participation in the [IB/AICE] program very stressful.*

  Eighty-four percent of IB respondents felt that the program was very stressful, and 69% AICE respondents did.

- *Participation in the program makes it difficult for [IB/AICE] students to mingle with students outside the program.*

  Slightly less than a third (32%) of AICE respondents agreed with this statement, but more than half (62%) of IB respondents did. The disagreement among many AICE respondents with this statement may be due to the fact that most AICE students attend AP and other classes and interact with students not in the AICE program, while typically IB students do not interact with non-IB students.

- *Participation in the [IB/AICE] program has not interfered with me having a job.*

  Almost half of IB respondents (47%) and a third of AICE respondents (35%) checked "don't know" for this statement, and many students reported that they have not worked while in the programs. Of the remaining students who did express an opinion regarding this statement, more than a third of IB respondents (35%) and almost half of AICE respondents (48%) agreed that the program had not interfered with them having a job.

An additional series of questions were included on the IB student survey to assess students' opinions regarding the CAS, TOK, and EE requirements. Thomas' (1987) study and our initial open-ended survey indicated that many students were uncertain of the value of these requirements. Table 18 summarizes the responses to these items.

Table 18: IB Students' Responses Regarding the CAS, TOK, and EE Requirements

Survey Item	SA %	A %	U %	D %	SD %	DK %
The Creativity, Action, Service (CAS) requirement is a beneficial part of the IB program.	19	33	15	7	6	21
CAS hours take up too much time.	11	15	12	28	11	24
I find the Theory of Knowledge (TOK) course to be of great value.	12	11	11	1	1	64
I find the Extended Essay requirement to be of great value.	9	15	16	10	4	46

Note that a large percentage of IB students responded "don't know" to the questions concerning the TOK and EE requirements. These responses could be due to the fact that respondents have not yet had these requirements. The data indicate that most respondents recognize the merit of these requirements. Less than 15 percent of respondents disagreed with statements concerning the value of CAS and EE as beneficial components of the program. Only two percent disagreed with the statement concerning the value of the TOK course.

Two multiple-response items were included on both student surveys to explore how students felt about their ability to participate in extracurricular activities and whether or not they felt they had improved themselves due to participation in either program. Table 19 reports responses received for these two items.

Table 19: Students' Responses Regarding Participation in Extracurricular Activities and Personal Improvement Due to Program Participation

Statement	Percent
Check the reasons, if any, that the program has interfered with your participation in extracurricular activities.	
1. I have too little time left after homework.	
IB	57
AICE	35
2. The program schedule conflicts with activity schedules.	
IB	9
AICE	12
3. The program administrators discourage participation in most nonprogram activities.	
IB	3
AICE	2
4. Other.	
IB	23
AICE	18
Statement	**Percent**
Check the ways, if any, that participation in the program has helped you improve.	
1. My study skills are better.	
IB	58
AICE	49
2. I organize and manage my time better.	
IB	54
AICE	51
3. I am interested in things I didn't know about before I entered the program.	
IB	46
AICE	40
4. I am better able to separate factual information from material designed to persuade me.	
IB	38
AICE	31
5. Other.	
IB	25
AICE	20

Only one item, "I have too little time left after homework," had a significant discrepancy between IB and AICE respondents. More IB respondents (57%) than AICE respondents (35%) felt that they did not have time left after homework. Although several respondents from both groups reported that they did not have enough free time, there was a high rate of involvement in extracurricular activities. Out of 159 respondents to the IB Student Survey, 132 listed an average of three extracurricular activities such as sports; academic, social, and artistic clubs; church-

related activities; and jobs. Among AICE respondents, 106 out of 118 total respondents listed involvement in an average of three or more extracurricular activities.

In addition to the categories listed in Table 19, respondents listed a variety of other reasons why their participation in IB/AICE has interfered with extracurricular activity participation. Twenty-one IB respondents said that they could not participate in extracurricular activities due to course workloads, and 10 mentioned stress-related difficulties. Other reasons given by IB respondents were lack of support from teachers and staff (2), job schedule (1), and the CAS requirement (1). Twenty AICE respondents listed course workloads, and 4 mentioned class schedule conflicts. Other reasons given by AICE respondents for not participating in extracurricular activities included stress (3), lack of support from teachers and staff (2), and lack of transportation (1).

In addition to the items listed in Table 19, respondents listed a number of reasons why or why not participation in IB or AICE has helped them improve. Although many of these responses contained remarks that fit into the categories listed in the previous table, there were several responses that provided additional information. These comments are summarized in Table 20.

Table 20: Respondents' Opinions Regarding Personal Improvement Due to Program Participation

Reason	IB Respondents (N=159)		AICE Respondents (N=118)	
	Frequency	Percent	Frequency	Percent
The program is challenging.	9	6	11	9
I have learned to be more efficient.	5	3	3	3
I have learned leadership skills.	5	3	2	2
I am more prepared for college.	4	3	3	3
Subjects are taught in greater detail than in regular classes.	4	3	0	0
I have met new friends.	3	2	2	2
I have learned to see things from new perspectives.	2	1	3	3
The program's field trips are beneficial.	1	Less than 1%	0	0
High quality of teachers.	1	Less than 1%	1	Less than 1%
The program is motivating.	1	Less than 1%	2	2
I have learned how to write better.	1	Less than 1%	0	0
I have learned stress management.	1	Less than 1%	0	0
Negative comments about the program.	4	3	1	Less than 1%

Some of the responses to this question include the following (all comments are direct quotes; no corrections have been made for spelling or grammar):

- *It has helped me understand that greatness takes hard work. [AICE respondent]*
- *It has helped me plan my future better. [AICE respondent]*
- *It has given me a very competitive peer group to keep goals high and performance high. [AICE respondent]*
- *I have learned to ask better questions. [AICE respondent]*
- *I have a broader view of things. [AICE respondent]*
- *I have learned more things in more detail than a standard student would be able to. [IB respondent]*
- *I have learned to do things right, the first time. [IB respondent]*
- *I am more motivated; a more well rounded student. [IB respondent]*

- *I'm now a more decisive person and I'm not afraid to voice my opinions. [IB respondent]*
- *I have learned how to ask for help. [IB respondent]*

The final question on each student survey asked survey recipients to list any changes to the IB and AICE programs that they would like to see. Respondents listed a variety of items summarized in Tables 21 and 22. Note that for both programs concerns regarding course options/program flexibility and teacher-student communication were at the top of the list.

Table 21: IB Respondents' (N=159) Opinions Regarding Program Changes

Response	Frequency	Percent
Better teacher-student communication regarding program requirements	20	13
More course options/flexibility in selection	18	11
Less work	17	11
More qualified teachers	14	9
More interaction with other students	13	8
Satisfied, no changes	10	6
Better guidance regarding CAS/TOK/Essay requirements	9	6
Less stress	8	5
More field trips	8	5
More foreign language course options	8	5
More elective course options	8	5
More college preparation activities	8	5
More punishments for cheating	8	5
More variety of students	4	3
Smaller classes	3	2
More qualified students	3	2
Need information/handbook	3	2
More qualified counselors and more interaction with counselors	2	1
More equipment/supplies	1	Less than 1%
Study skills/time management training	1	Less than 1%

Table 22: AICE Respondents' (N=118) Opinions Regarding Program Changes

Response	Frequency	Percent
More course options/flexibility in selection	20	17
Better teacher-student communication regarding requirements	7	6
Exemption from basic courses (P.E., LMS, etc.) and schoolwide functions	6	5
More interaction with other students	6	5
More positive reinforcement/rewards	6	5
University acceptance/college prep	5	4
More elective course options	5	4
Teacher/staff qualifications	5	4
Less work	5	4
Lower workload for summer classes	4	3
Need information/handbook	4	3
More field trips	4	3
More qualified counselors and more interaction with counselors	3	2
Teacher-teacher communication	3	2
Double math requirement in same year[7]	3	2
Dual exam requirement[8]	3	2
Less stress	3	2
Satisfied, no change	2	1
Smaller classes	2	1
More teachers	2	1
More parent involvement	2	1
More foreign language course options	1	Less than 1%
More qualified students	1	Less than 1%
More fund-raisers	1	Less than 1%
Program orientation (like Pre-IB)	1	Less than 1%
Peer tutoring	1	Less than 1%

The following are some of the responses received for these questions:

- *I think my school has one of the best IB programs in the country. [IB respondent]*
- *I think it is a good program the way it is. There is not much of anything I can think of that I would change. [IB respondent]*
- *I would like to see a more relaxed, comfortable atmosphere that could still prepare me for college and my career. [IB respondent]*

[7]Many students reported that their school's AICE program necessitated taking two higher-level math classes in the same year. All respondents who commented on this issue wanted this changed.
[8]As AICE exams are not accepted at any U.S. institution besides the University of Florida, AICE students must take both AICE and AP exams in order to receive college credit. All students who commented believe this adversely affects their performance on both exams.

- *More communication between teachers so that students are not overwhelmed with work at times. [IB respondent]*
- *Harder consequences for those students caught cheating. [IB respondent]*
- *I would like to see more classwork and less homework. [IB respondent]*
- *There should be a better selection process for the students entering the program. [IB respondent]*
- *More interaction with non-IB students. I feel that some students have no lives outside of IB. [IB respondent]*
- *I would like to see every college accept it. More class choices. A Pre-AICE program to prepare Freshmen and Sophomores for the program like what IB does. More teachers. More course options. [AICE respondent]*
- *I would like to see less summer reading. [AICE respondent]*
- *I'm content with the way that the programs organized now. I see no need for change. . . . [AICE respondent]*
- *More chances to "mingle" w/kids outside AICE. [AICE respondent]*
- *Maybe to allow the course requirements to be a bit more flexible. Such as in 10th grade where 2 math classes are required. [AICE respondent]*
- *I would really like it if the AICE program provided positive reinforcement because every two weeks they send home progress reports to show how bad you are doing in your classes. . . . [AICE respondent]*
- *I would like to see more classes offered, as well as, more minorities recruited into the program. [AICE respondent]*

Parents' Comments

Each student survey package included a one-page form asking parents to provide any comments they had about the IB or AICE program. Most parents who provided comments expressed overall satisfaction with each program. Most also discussed areas or aspects of the program that they thought needed improvement. The content of parents' comments are summarized in Tables 23 and 24.

Table 23: Comments from Parents of Current IB Students

Response	Frequency
Satisfied comments	
Students are challenged	13
Excellent college prep	9
Has qualified teachers	5
Strong curriculum	4
Student grading	4
College credit	2
CAS	2
Increases student confidence	2
Newsletter	1
Sets goals	1
Teacher/student interaction	1
Private school quality education	1
Boosters club	1
Learning community	1
Criticisms	
Students are stressed/overworked	9
More qualified teachers	9
More qualified counselors	5
CAS not properly administered	5
Course options/choices	4
Need more interaction with other students	3
Student-teacher relationships	3
Class size too large	2
Program not demanding enough	2
Lacking motivation	1
Need more team work	1
Need better middle school preparation	1
More emphasis on social skills	1
Material presented too quickly	1
Integrate course material	1
More field trips	1
Inappropriate reading material	1
More equipment/supplies	1
More fund-raisers	1
More discipline	1

Table 24: Comments from Parents of Current AICE Students

Response	Frequency
Satisfied comments	
Challenging	15
Student-counselor relationships	11
Teacher quality	5
College prep	4
Coordinator	4
Course options	1
Program flexibility	1
Teacher-student relationships	1
Global standards	1
Learning community	1
Criticisms	
Stress	5
Course options	4
Elitist	3
Expensive field trips	3
Double math requirement	3
Not challenging	2
Electives	2
Weak verbal skills	1
No life management skills courses	1
Parent meetings	1
Low GPA	1
No science/math	1
Summer work	1
English self-taught	1
Teacher-student relationships	1
Too much homework	1
Parent involvement	1
No college recognition	1
Mixing classes with honors	1
Need community involvement	1
Not well rounded	1
Private education for public school cost	1
No guaranteed scholarship	1
Too difficult	1
Pressure to donate	1
More language classes	1
Fund-raising	1
Handbook	1
Not enough homework	1
Teacher quality	1
Smaller classes	1

The following are some of the comments received from parents:

- *I hope my daughter continues to excel in the IB program next year. [IB parent]*
- *I feel somewhat inadequate evaluating any program with such little experience. For the most part the program has been acceptable. I have been greatly disturbed at the attitude of several teachers. The disrespectful comments, the attitude of I have the power and I will use it as I see fit really bothers me. At this point I am not convinced my child will remain in IB. This will be her decision. . . . [IB parent]*
- *We strongly encourage and support our daughters participation in the IB program. Instead of "dumbing down," schools should be encouraging more academically challenging courses. IB offers this challenge. [IB parent]*
- *. . . There should be some requirement standard for teachers. My child has had excellent teachers and some very poor. [IB parent]*
- *Having this program in public school gives "<u>any</u>" child the opportunity to have extended education as other students in "private" school. [IB parent]*
- *We feel the IB program is an ideal way to prepare for college and life long learning. [IB parent]*
- *I feel very fortunate to be able to have my children participate in this demanding yet highly rewarding program. [IB parent]*
- *I think IB is a wonderful program and feel that my son has risen to the challenge. Although no longer a straight A student—he is challenged. I would rather him be a challenged B/C student than an unchallenged A student. [IB parent]*

- *My son has truly been challenged and excited about his classes and teachers. He is enthusiastic about attending school, which is a wonderful thing for a 9th grader. [IB parent]*
- *My daughter is enrolled in the IB program and is thriving under its curriculum and challenges. As she receives recruitment letters from major universities throughout the country, we begin to realize how important the challenges of this program have been for her. [IB parent]*
- *At this time, I feel this program will help prepare my son for college. I do know that he is challenged with the program and is keeping him interested in school. [AICE parent]*
- *The only negative aspect I can see with the program is my child is sometimes stressed from the workload. She won't admit it, but she has little or no social life, because she is drained. I like the fact that she is challenged. I just worry about the stress. [AICE parent]*
- *We feel our daughter has benefited greatly from the AICE program. She is doing very well, is interested and enthusiastic in her studies. [AICE parent]*
- *My son participated in the I.B. program his freshman year. He is now at another school, a sophomore and participating in the AICE program. The I.B. program was too stressful. There was no time for extracurricular activities. The homework was several hours a day, seven days a week. AICE is still a lot of homework but does not seem to be as stressful. There is time for extracurricular activities. My child is very happy this year. He was very unhappy in I.B. The AICE program is challenging, which is what we were looking for. . . . [AICE parent]*

- *Overall I feel the AICE program is very good. My daughter is doing excellent her freshman year, and has enjoyed most of her teachers. Most fieldtrips are too expensive for the average family. [AICE parent]*
- *My daughter is very happy with her classes, however she is complaining about next year being forced to take 2 math classes. Also I am hearing that she wants to take a film class and there is no room on her schedule. . . . She wants to drop out, says there are no benefits, says the schools she's interested in don't really acknowledge AICE. . . . [AICE parent]*
- *I am unhappy with the AICE program at St. Augustine High School. My child will not be returning to the program next year. I wish that she had never taken part in the program but I guess we learn from our mistakes. The organization is elitist. . . . The kids are challenged in some courses with extra work and tougher courses, which results in a lower GPA. . . . [AICE parent]*
- *Overall we are very pleased. However, 1) we would like to see more flexibility in the order in which classes can be taken (i.e., biology, AP advanced, before chemistry, etc.); and 2) improvement in allowing more credits/classes for foreign language, as currently does not meet preferences of many colleges (as I have been told). [AICE parent]*

Graduated Students Survey

IB. Twenty-one graduates of the IB program responded to the survey. Seventy-one percent were female, and 71% had graduated from high school at the age of 18. Sixty-two percent indicated that they received the IB diploma upon graduation. After graduation, all began attending college in the fall of 1999. Two-thirds of IB graduates were attending Florida universities and colleges, with only 33% attending out-of-state institutions. Table 25 lists the

colleges and universities attended by IB graduates. Table 26 lists the majors and minors of respondents.

Table 25: Colleges and Universities Attended by IB Graduates

Baylor University	Tulane University
Florida State University	University of Florida
Furman University	University of Miami
Gulf Coast Community College	University of South Alabama
Huntingdon College	University of West Florida
Randolph-Macon Women's College	Vanderbilt University

Table 26: College Majors and Minors of IB Graduates

Majors	
Agricultural Leadership Education	International Studies
Architecture	Math
Business	Microbiology and Cell Science
Chemistry	Music
Communications	Philosophy
Criminology	Pre-Law
General	Pre-Medicine
Health Science Education	Undecided
Minors	
Agricultural Communications	Psychology
Business	Sociology
Education	Studio Art
English	Undecided

Students were asked to indicate how much college credit they had received for their high school course work (including IB, AP, dual enrollment, etc.). Table 27 shows the numbers of students who received college credit. Note that the credit reported is the number of classes credited rather than credit hours.

Table 27: College Credit for High School Course Work among IB Graduates

Number of Credited Classes	Number of IB Graduates
1	1
2	1
3	2
4	5
5	0
6	2
7	0
8	1
9	0
10	0
11 or more	5

Only 35% of respondents said that they had difficulty in obtaining college credit for their IB course work. The following are some of the comments respondents made concerning difficulties in obtaining college credit:

- *I didn't get the diploma, so I really don't get any college credit.*
- *Had difficulty receiving credit for history.*
- *Baylor was not as accommodating as the Florida universities in giving IB credit.*

College GPAs for these students for the fall of 1999 ranged from 1.83 to 4.25, with a mean of 3.18 and a standard deviation of 0.69. Thirty-eight percent said they "often" interacted with other former IB students in the fall of 1999, while 29% said they "seldom" did. Less than half (48%) said that they would have liked more interaction with other IB students during the fall of 1999, while 52% said they would not have liked more interaction.

Students were asked to rate several features of the IB program. These ratings are detailed in Table 28. Respondents seemed to be generally satisfied with program features, with most features receiving ratings of "Excellent," "Good," or "Useful." Some respondents appeared to be dissatisfied, however, with the Theory of Knowledge component and the program's role in preparation for a student's special field of study.

Table 28: IB Graduates' Rating of IB Program Features

Program Feature	Excellent		Good		Useful		Little Value		No Value	
	Freq	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*
Program as general preparation for college	15	71	1	5	4	19	0	0	1	5
Program as preparation for your special field of study	7	35	2	10	5	25	4	20	2	10
Program emphasis on foreign language	10	48	3	14	4	19	3	14	1	5
Program emphasis on mathematics	10	48	7	33	3	14	1	5	0	0
Extended essay component	7	33	4	19	7	33	1	5	2	10
Theory of knowledge component	9	43	2	10	2	10	5	24	3	14
Course work	8	40	9	45	3	15	0	0	0	0
Difficulty level of IB tests	10	48	5	24	5	24	1	5	0	0
CAS activities	10	48	3	14	5	24	3	14	0	0
Program emphasis on internationalism	7	33	6	29	4	19	4	19	0	0

Slightly more than half (52%) responded with "Yes, with Enthusiasm" to the question "*Would you recommend the IB program to high school students?*" Ten percent responded with "Strongly Yes," and 24% responded with "Yes, with Reservations."

The final section of the survey asked students to express their opinions regarding financial benefits and overall benefits of the IB program and whether the program enhanced or interfered with social experiences in high school. Several students responded affirmatively to the question "*Do you think that your participation in the IB program has been of benefit to you or your parents financially (decreasing the cost of college tuition)?*" Out of 21 students, 7 received full or partial tuition scholarships, 2 reported college credit, 4 reported their IB experience as financially beneficial in general, and 1 reported having a competitive advantage in admissions and scholarship applications. Other students, however, felt that the financial benefits of participating in the IB program were less than expected. Six students complained that they had not received as much financial help or college credit as they had hoped, and three of these felt that they could have gotten more benefits had they not been in IB. Two other students reported that the college credit and scholarships that they had received were due to their GPA or their AP

credits and not due to their participation in the IB program. The following are some of the responses received for this question:

- *We didn't have to pay for a full year of college.*
- *I have a full scholarship as a result of getting the IB Diploma.*
- *I received the Florida Bright Futures 100% tuition because I received the IB diploma. Whereas I only had the 75% because of SAT/ACT scores.*
- *I could have gotten the same amount of money just taking dual enrollment and AP classes.*
- *I believe that my scholarships were based on my grades . . . grades I would have had without the IB program.*

Students were next asked "Do you think that the overall benefits you have obtained as a result of your participation in the IB program are worth the effort you put into the program?" Students who responded affirmatively to this question listed benefits such as good college preparation (10), general benefits (4), competitive advantages in getting scholarships and/or college credit (2), increased self-confidence (1), and new experiences (1). A few students, however, felt that the benefits they had obtained were not worth the effort they had expended. Two students felt that the IB program has few or no benefits. Other criticisms of the IB program included: too much program focus on tests (1), too much stress as a result of program participation (1), and lack of rigor and difficulty in the program (1). The following are some of the responses received for this question:

- *I was very well prepared for college. Essay exams and paper writing were easy for me because of my IB experience.*
- *. . . It allowed me to experience things that I would have otherwise not have gotten too.*

- *I see no benefits from the IB program.*
- *I feel truly prepared for my test/exams and confident with major assignments at the college level. I also tutor upperclassmen. I feel the work pays off everyday. That confidence is worth it all. I am not intimidated by the college classroom or course work.*
- *I was more than prepared for college, but the program put to much emphasis on the IB test.*

In response to the question *"Do you feel that being a part of the IB program interfered with or enhanced your social experiences in high school?"* many students reported enhanced social experiences such as closer relationships (6), enhanced interpersonal skills (1), and new friends (3). Eight students reported no interference with social activities. Three students, however, reported not having enough interaction with non-IB students, and one student reported not having enough free time to spend with friends. Two additional graduates felt that the program interfered but did not specify. The following are some of the comments received in response to this question.

- *I feel that it enhanced my social life. I made many good friends.*
- *Although IB limits the numbers of people in your classes and you don't meet as many people, I feel that was an enhancement. You have less acquaintances, but learn to develop more close personal relationships with fewer people.*
- *Interfered—this was the sacrifice for participating in I.B., having the "head in the books" syndrome.*
- *. . . I wish I could have had more interaction with non-IB students.*

- *It definitely interfered! Even my electives were full of IB people. I never got to interact with people in the rest of my graduating class.*
- *I was involved in numerous activities in high school and in no way did the IB program interfere.*

The final question on the survey asked students to comment on any aspect of their post high school experiences as they relate to the IB program. The following are a sample of the comments received for this section.

- *IB made my first year of college much easier than it would have been if I had not participated in the program. It helped me improve my writing, time management, and critical thinking . . . I learned how to work more effectively with others. . . .*
- *The main idea of IB is good that most academically-driven people take all hard classes, but I've seen and heard, and experienced stress that no high school student, no matter how interested in succeeding, should deal with.*
- *I received sophomore standing at FSU as a result of my hard work and dedication to earning the IB Diploma.*
- *I feel much more prepared for the college classroom atmosphere.*
- *Excellent preparation for college! I would do it again!*
- *IB experience was great. Demanding and challenging but within reason. Teachers were fantastic, college prep was outstanding. College is much less stressful as a result of my IB experience. The IB experience did not inhibit my ability to take part in other high school activities. XXX High School has done a wonderful job implementing the IB program.*
- *I could never replace the experiences and great teachers I had in the IB program. . . .*

- *The IB program is ideal for students entering a public, Florida school. They potentially can receive a year's worth of credit. For students not attending a public school, IB is of little value. I would have been better off taking all AP classes. I would have gotten more credits without as much time and effort in high school. Had I to do it over again, I would not have participated in the IB program. I only wish someone had taken the time to explain fully what the program was, how much work it would entail, and how credit would or would not transfer.*

AICE: Bay County. Eleven graduates from the Bay County AICE program responded to the survey. Sixty-four percent were female, and 64% graduated from high school at the age of 18. More than half (55%) received an AICE certificate upon graduation. All respondents attended college in the fall of 1999. Almost three-fourths of AICE graduates (72%) were attending Florida universities and colleges. Table 29 lists the colleges and universities attended by AICE graduates. Table 30 lists the majors and minors of respondents.

Table 29: Colleges and Universities Attended by AICE Graduates

Bucknell University	Stetson University
Florida State University	U.S. Coast Guard Academy
Georgia Institute of Technology	University of Central Florida
Gulf Coast Community College	University of Florida
Indiana University	

Table 30: College Majors and Minors of AICE Graduates

Majors	
Art Computer Science Electrical Engineering Engineering Industrial Engineering	Journalism Mechanical Engineering Political Science Undecided
Minors	
Africa Studies Art Computer Science	Political Science Spanish Undecided

AICE students were asked to indicate how much college credit they had received for their high school course work (through AP or dual enrollment). Table 31 shows the numbers of students who received college credit. As stated previously, note that except for the University of Florida, no institution will give credit for AICE course work. Thus, the reported credited classes were likely due to AP and dual enrollment.

Table 31: College Credit for High School Course Work among AICE Graduates

Number of Credited Classes	Number of AICE Graduates
1	0
2	0
3	2
4	0
5	3
6	0
7	0
8	1
9	0
10	0
11 or more	0

About two-thirds (67%) of respondents said that they had difficulty in obtaining college credit for their AICE course work. The following are some of the comments respondents made concerning difficulties in obtaining college credit:

- *I received credit for both AICE English and History but chose not to use it to fulfill my university requirements. It was there for me, however, without any difficulties.*
- *I was given no credit. During Christmas break several of my friends said they were receiving credit from UF. Upon returning to FSU in January, I called the registrar's office to ask about credit. I was directed to another department, and from that one to another one. I was finally told that it would be checked on and that I would be called back. I have never received a call and have no idea who to call for help in this matter.*
- *I have not needed to use my AICE credit.*

- *I am still attempting to receive credit for my AICE classes. Many colleges told me when I applied I would receive credit and it has been difficult to try and actually receive credit.*
- *No one I talked to had heard of AICE. I did not receive credit for AICE courses only the AP courses I took.*
- *Have been trying for months to get somebody to answer questions about credit for AICE—Latin, keep getting referred from one dept. to another . . .*

College GPAs for these students for the fall of 1999 ranged from 2.5 to 4.25, with a mean of 3.3 and a standard deviation of 0.55. Thirty-six percent said they "occasionally" interacted with other former AICE students in the fall of 1999, while 27% said they "often" did. Fifty percent said that they would have liked more interactions with other AICE students during the fall of 1999.

Students were asked to rate several features of the AICE program. These ratings are detailed in Table 32. Respondents seemed to be generally satisfied with program features, with most features receiving ratings of "Excellent," "Good," or "Useful." Note, however, that some respondents appeared to be dissatisfied with the program's emphasis on internationalism, foreign language, and mathematics, and on the program as preparation for one's special field of study.

Table 32: AICE Graduates' Rating of AICE Program Features

Program Feature	Excellent		Good		Useful		Little Value		No Value	
	Freq	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*	*Freq*	*%*
Program as general preparation for college	5	46	6	55	0	0	0	0	0	0
Program as preparation for your special field of study	2	18	4	36	2	18	3	27	0	0
Program emphasis on foreign language	0	0	4	40	4	40	0	0	2	20
Program emphasis on mathematics	7	64	2	18	0	0	0	0	2	18
Course work	4	36	5	46	2	18	0	0	0	0
Difficulty level of AICE tests	3	27	6	55	2	18	0	0	0	0
Program emphasis on internationalism	2	20	2	20	2	20	4	40	0	0

Slightly more than half (55%) responded with "Strongly Yes" to the question "*Would you recommend the AICE program to high school students?*" Eighteen percent responded with "Yes, with Enthusiasm" and 27% responded with "Yes, with Reservations."

The final section of the survey asked students to express their opinions regarding financial benefits and overall benefits of the AICE program and whether the program enhanced or interfered with social experiences in high school. When asked "*Do you think that your participation in the AICE program has been of benefit to you or your parents financially (decreasing the cost of college tuition)?*", some students responded affirmatively and cited benefits including scholarships (3), increased competitiveness in admissions and scholarship applications (2), and college credit (1). Other students, however, reported no financial benefits for participating in the AICE program (6). The following are some of the responses received for this question:

- *It has not affected us financially for better or worse.*
- *The AICE program allowed me to be a stronger candidate for scholarship opportunities, lessening the financial burden placed on my parents.*
- *There were no scholarship offers for me.*

Students were next asked "Do you think that the overall benefits you have obtained as a result of your participation in the AICE program are worth the effort you put into the program?" A few students felt that benefits including college preparation (2), quality education (3), competitive advantage in admissions (2), college credit (1), and general benefits (3) were worth the effort they had expended in the AICE program. Two respondents, however, felt that the benefits were not worth the effort. The following are some of the responses received for this question:

- *The art courses were worth it, but I'm not so sure about the rest. It seemed I had to work real hard on other courses like math & English. That isn't a bad thing, it just didn't prepare me for my special field of study.*
- *The AICE provided me with stellar educational opportunities. It forced me to think globally, a skill often left out of the classroom.*
- *I feel the AICE classes were comparable to my AP classes and required the same effort. I don't really see many benefits. It prepared me some for college.*
- *AICE made it clear to colleges just how hard I had worked and the high level I achieved.*

In response to the question *"Do you feel that being a part of the AICE program interfered with or enhanced your social experiences in high school?"* several students (6) reported no interference with social experiences. Additionally, two students felt that their participation in AICE enhanced their social experiences in high school because they remained active with the general student body but were also able to form close relationships with other AICE participants. One student, however, reported a little interference with social activities during senior year due to a greater workload than non-AICE students:

The final question on the survey asked students to comment on any aspect of their post high school experiences as they relate to the AICE program. The following are a sample of the comments received for this section.

- *AICE at this point in time is worthless if the student takes A.P. in addition. The completion of the class are equal college credit. The only benefit of AICE I found was best teachers in the field, and "college-like" experience of harder work-loads.*

- *AICE helped me tremendously w/art because it prepared me better for the courses I would be taking this year. Also, I think it prepared me better for college as a whole as far as studying goes. I had been working hard in high school, so I wasn't as shocked with the load of college work.*
- *I consider myself very fortunate to have had the opportunity to participate in a program as worthwhile as the AICE program. It helped me lay the foundation for future academic work and success.*
- *I've been far ahead of my peers in the areas I'm interested in, Science and Math, because AICE allowed me to focus more time and learning on what I was interested in. That was the reason I picked AICE over IB, and I'm extremely glad I did.*
- *. . . From my experience with AICE, I feel that it gives students a feel for college like courses, but does not bogg them down too much with work.*

AICE: St. Johns County. Six students from the St. Johns County AICE program also responded to the survey. Note that these students did not complete the entire AICE program; only AICE English was offered in St. Johns County at the time. Two of the six respondents were female, and three of the respondents graduated from high school at age 18. After graduation from high school, all six respondents attended college in the fall of 1999. GPAs in the fall of 1999 ranged from 2.7 to 3.9, with a mean of 3.4 and a standard deviation of 0.66 (only three students reported their GPAs). Two students stated that they had difficulty obtaining college credit for their AICE course work. Two students said that they "never or rarely" interacted with other former AICE students during the fall of 1999, and two students also said that they would have liked more interaction with other AICE graduates during that time. Finally, two students

responded with a "strongly yes" to the question "*Would you recommend the AICE program to high school students?*"

Parents' Comments. Twelve parents of IB graduates and 7 parents of AICE graduates returned completed "Parents' Comments" forms. The following are some of these responses:

- *The intellectual and social maturity level my child achieved from the IB program far exceeded any she could have obtained in the conventional high school curriculum.*
- *While the IB program is a good way to prepare a student for college, I am not sure that it is the only way. There is a lot of unnecessary paper work and duplication of IB and AP tests*
- *. . . the main advantage of a student being in the IB program is to raise their class rank! . . . I think a student can be fully prepared for college by taking honors, AP + dual enrollment classes.*
- *The AICE program was an awesome experience for my daughter . . . it seemed to offer her the best of all worlds.*
- *I can't honestly say that there was any benefit to my daughter being in AICE.*
- *I would like to say that we have found the IB program to be outstanding in all respects.*
- *[Our daughter] was very well prepared for college from participating in the IB program. We were disappointed, though, that there weren't more scholarship opportunities. That is what sold us on the program. In retrospect she would have gotten about the same number of hours credit if she had just taken Advance Placement Classes. We did like the smaller class size and the teachers were excellent.*
- *When our son was researching the advanced academic programs available in our area, he wanted a program that was challenging, allowed him to participate in the high*

school marching and symphonic bands, allowed him to be in classes with students outside a specific academic program, and would best prepare him for college. The AICE program's goals and objectives seemed best suited for our son.

- *I believe the IB program was very beneficial. The curriculum was challenging and the professors were well-prepared and very interested in the educational success of my daughter.*
- *We felt the IB program was one of the most significant events to happen in our son's life. Our younger son is not in IB and attends a different high school where he is not challenged at all. He is simply coasting through school. Our eldest son was challenged and forced to think and learn . . . It was a hard, demanding program, but we feel our son is a better person for it.*
- *I think this [AICE] is a wonderful program + fully support it.*

Teacher Survey

Teachers were asked to provide information on their professional and educational backgrounds and on their current program responsibilities. Only IB and IB teachers in Bay and St. Johns Counties were included in the survey because Lake County had just started offering program courses in the fall of 1999 and there were only two teachers in the program. One of the AICE respondents was an administrator, and there was one counselor respondent from each program. Their responses were included in the analyses when appropriate.

- Fifty percent of IB teachers and 90% of the AICE teachers had graduate degrees or had done graduate work.
- All IB and AICE teachers were teaching in the fields in which they had done undergraduate or graduate work.

- The median number years of teaching experience were 16.0 and 15.0 for IB and AICE teachers, respectively.
- The median number of years of teaching program or program-related courses was 5.0 for IB and 4.5 for AICE teachers.
- The median number of program or program-related courses taught since the beginning of the program at the respondents' schools was 2.0 for both IB and AICE teachers.
- The median number of nonprogram related courses currently taught was 2.0 for both IB and AICE teachers.
- The median number of nonteaching program responsibilities assumed in an academic year was 1.0 for both IB and AICE teachers.
- The median number of program teacher training workshops attended was 3.0 for IB and 1.0 for AICE teachers. The range of number of workshops attended was 0–9 for IB and 0–4 for AICE, with two IB and five AICE teachers who did not attend any workshop training.
- One hundred percent of IB teachers and 75% of AICE teachers were satisfied or very satisfied with the training workshops.
- Four AICE teachers had received distance training in lieu of or in addition to the teacher training workshops. Three of them reported that they were satisfied or very satisfied with the training.
- The median number of students taught in program or program-related classes was 20.0 for both IB and AICE teachers.

Teachers from the IB and AICE programs in Bay and St. Johns Counties rated various aspects of the programs on a five point scale: “Strongly Agree,” “Agree,” “Uncertain,”

"Disagree," and "Strongly Disagree." Table 33 shows the percentages of teachers in the two programs that selected each option in response to each program aspect.

Table 33: IB and AICE Teachers' Ratings of Various Aspects of Their Programs (IB N=27; AICE N=30)

(SA=Strongly Agree; A=Agree; U=Uncertain; D=Disagree; SD=Strongly Disagree)

Statement	SA %	A %	U %	D %	SD %
The program fosters a high level of competence in the following skills:					
1. Research					
IB	48	44	7	0	0
AICE	35	31	31	3	0
2. Writing					
IB	82	19	0	0	0
AICE	54	36	11	0	0
3. Math					
IB	63	26	11	0	0
AICE	32	32	36	0	0
4. Oral Expression					
IB	70	22	4	4	0
AICE	38	38	24	0	0
5. Citizenship					
IB	56	30	11	4	0
AICE	17	38	45	0	0
The program does a good job of preparing students for college.					
IB	85	38	0	0	0
AICE	62	15	0	0	0
Program students are better prepared for college than similar students who are not part of the program.					
IB	82	11	4	4	0
AICE	48	24	17	10	0
The program provides an appropriate educational environment for individual students with varying abilities.					
IB	56	22	11	11	0
AICE	28	38	17	14	3
Instructional materials for program courses are adequate.					
IB	44	44	7	4	0
AICE	17	55	21	7	0
Program exams are fair.					
IB	44	36	20	0	0
AICE	38	28	35	0	0
Morale is high among program students.					
IB	22	52	19	7	0
AICE	24	52	17	7	0
Some classes taken by program students are too large.					
IB	15	30	7	48	0
AICE	28	24	21	21	7
Program students are well integrated into the whole student body.					
IB	41	33	7	19	0
AICE	21	57	11	7	4

Table 33, continued

Statement	SA %	A %	U %	D %	SD %
Program students do not have enough time for extra-curricular activities or jobs.					
IB	0	11	15	33	41
AICE	0	18	25	43	14
Program students are subjected to high levels of program-induced stress.					
IB	4	33	22	30	11
AICE	0	19	41	41	0
Too many students drop out of the program.					
IB	0	11	11	63	15
AICE	0	4	39	50	7
Minority students are encouraged to apply to the program.					
IB	37	22	37	0	4
AICE	21	57	21	0	0
Program requirements are sometimes modified to meet the needs of exceptional (ESE) students.					
IB	4	15	67	11	4
AICE	11	18	64	4	4
The program parent organization is well organized.					
IB	44	52	4	0	0
AICE	25	50	25	0	0
The program parent organization is very productive and supportive.					
IB	59	37	4	0	0
AICE	32	50	18	0	0
IB Specific Questions					
Statement	**SA %**	**A %**	**U %**	**D %**	**SD %**
The program has the reputation of being elitist.	4	44	11	26	15
Creativity, Action, Service (CAS) hours take up too much time.	0	4	22	52	22
The Theory of Knowledge (TOK) course is of great value to students.	44	26	22	4	4

Interpretation of the results is complicated because of the large number of AICE teachers who marked the uncertain option for many items (for example: "Research", "Math", and "Citizenship Competence"; "Program exams are fair"; "Program students do not have enough time for extra-curricular activities or jobs"; "Program students are subjected to high levels of program-induced stress"; "Too many students drop out of the program"; "Program requirements are sometimes modified to meet the needs of exceptional (ESE) students"; and "The program parent organization is well organized"). There were a few items that inspired uncertainty in the

IB teachers as well, such as "Minority students are encouraged to apply to the program" and "Program requirements are sometimes modified to meet the needs of exceptional (ESE) students."

It seems likely that the high number of uncertain responses on the part of the AICE teachers was due to the fact that the AICE program in St. Johns County had been fully operational for only one semester and that the Bay County program was in only its fourth year of operation. This uncertainty factor in the AICE teacher response patterns appears to confound results in both negatively and positively worded items. For this reason, negative responses ("Strongly Disagree" and "Disagree") were inspected to discover differences in positively worded items between ratings by the two groups of teachers, while positive responses ("Strongly Agree" and "Agree") were interrogated to find differences in negatively worded items for the two groups. For example, the question about math competence (#3) appears to show a great discrepancy between the two groups if only the "Strongly Agree" and "Agree" categories are used (i.e., 89% for IB and 64% for AICE). If the negative responses ("Disagree" and "Strongly Disagree") are examined, however, it is clear that the teachers' beliefs about math competence are comparable.

Combined "Strongly Disagree" and "Disagree" responses to positively worded items (e.g., "Morale is high among program students") never showed a 10% difference between program teachers. Similarly, differences in "Strongly Agree" and "Agree" responses to negatively worded items were all less than ten percent except for one item: "Program students are subjected to high levels of program-induced stress." Thirty-seven percent of IB teachers and 19% of AICE teachers either strongly agreed or agreed with that item, indicating that there is probably a real difference in this aspect of the two programs.

Teacher Suggestions. AICE and IB teachers were asked to describe changes that would make the programs stronger. Comments given by AICE teachers are given first, followed by those obtained from IB teachers. All comments are direct quotes; no corrections have been made for spelling or grammar. To avoid repetition, some responses are followed by the number of responses on a particular issue.

AICE TEACHERS

State Level

- *I strongly believe that once the program is on equal footing with IB, morale will be better, though it's good now. We try to make sure to do things as a group to foster a feeling of community + team spirit. Once we get the same benefits as IB (i.e., automatic Bright Futures Scholarship recipient), parents will also be more at ease. In general people are happy + we have lots of applicants.*
- *A clear picture of acceptance of qualified AICE students by Florida University system is needed for full acceptance by teachers + students + parents.*
- *Work diligently to educate American Universities about giving credit (academic as Dual Enrollment or AP) to AICE programs!*
- *Support from Florida DOE that is the same as that for the IB programs.*
- *More contact with other AICE teachers at other schools. Addition of AICE courses to FL Course Code Directory. Permanent legislative funding for AICE programs in Florida.*

District/School Level

- *In mathematics, I need the textbook recommended by AICE for the courses.*
- *My situation dictates that I teach my course combining AICE, AP, and Dual Enrollment Freshman Comp. It would be more beneficial to separate these courses.*

- *These students who are not AICE do not see the need for extra work when they feel that the rewards are not great enough.*
- *AICE students should be in an AICE class for all subjects—it isn't fair that some subjects get their AICE students in a special section. It is very difficult to juggle two sets of standards in a class of 36 when only 12 are AICE.*
- *AICE students should have their own classes.*
- *Smaller classes—less than 30, for an advanced class—and more integration of AICE students into the regular, student body.*
- *I think that planned AICE meetings of staff would also help the program by encouraging more interdisciplinary units.*
- *Our program is too young for me to answer many of these questions with certainty, but I feel that if students are really going to be in an AICE program, then #1) they should have to "place" into the program—pass IGS or some rigorous placement test. AICE want-to-be's greatly deter the progress of an accelerated class.*
- *The AICE program could be made stronger by the addition of electives available to AICE students. AICE students should have more options and room in their schedule to participate in a variety of electives.*
- *Some more emphasis on international aspects—student-to-student work.*
- *More examples of test questions. More examples of specific labs.*

IB TEACHERS

State Level

- *A study is needed on the indicators for success in IB of eighth grade students. Our loss rate is much too high.*

- *If a new IB program is started in Florida it would be great to have a mentor program between a successful program and a new one. My trepidation the first year was almost overwhelming.*

District /School Level

- *In addition, I feel that State Funds earmarked for the salaries of teachers who teach in academically accelerated courses would help attract qualified and motivated teachers who would be more willing to put forth the additional effort that is required to meet the needs of students. As it is, I am expected to set a higher standard of achievement for both myself and my students, however, I am not compensated for the extra time that it requires to meet these expectations.*
- *My school needs to provide a place on campus to exhibit students' work so the exams can take place on campus in a venue that is positive for the students!! I invite IB kids on 2-3 fts per year with Dr/Pnt III and AP classes. However, they can never go on meaningful art trips for fear of missing math!!! Kids are terrified to miss their classes.*
- *Some way that students in Art can display work for Oral Exam. It is very difficult to find a quiet space on campus.*
- *I don't think there are many changes that could be made in the program itself to make it stronger. However, I do feel that changes made at the District and State level would enhance our abilities to meet the needs of our students. For example, I teach an IB sixth subject course (Psychology) at the subsidiary level and really need an additional class period to meet with my students in order to prepare them for the program requirements. Unfortunately, if I add an additional class of IB Psychology, the impact will be felt in the*

English department because someone would have to absorb my Honors English class. If the District would give us additional instructional units this would not be a problem.

- *A summer program abroad.*
- *Diversity is critical for a functional IB student body. This should be remembered in the recruiting effort . . . It takes several years to develop a TOK instructor. Some means of shortening this cycle needs to be found. Bottom line? There's not much here that needs to be strengthened.*
- *More support from administration, Better incentives for students to stay in program (more value in the diploma , Better adherence to course time requirements. Some courses are not given sufficient time to teach required material.*
- *Seeing successful course outlines from other teachers teaching same topic, See more sample exams, less writing requirements in 6th subject courses.*
- *More time for increased writing loads and meetings. Teacher planning—IB/Pre-IB teachers are often school leaders as well. We also meet more regularly than many others (beyond our school day). A specific world history course geared for IB (pre). Being able to schedule back to back classes (but it gets too hard) —meaning my 1st period to the English teacher's 2nd period so we could block out interdisciplinary units. Other items that would strengthen are school-wide considerations—interruptions, priorities, etc.—that would strengthen the entire academic program, not just IB.*
- *Decrease the amt. of course content. With all the other school activities, I really do not have enough time to cover all of the testable material. High school students have a lot of other things going on and a times I think they miss out on extra curricular experiences because of the tremendous amount of material, writing, CAS, extended essays . . . . However, the IB*

students are very well prepared for college and have had to learn superior time management and study skills. By the end of their senior year they have also developed advanced critical thinking and writing skills. They are far better prepared for college than I was.

- *I would like to see more standard students apply. This program is great for turning average students into extremely competent and outstanding students. It would be wonderful to be able to do more of the IB options such as technology, drama, or band.*
- *This is an excellent program because it requires the student show mastery of all areas not just the ones the students excell in. This serves the students well when they attend college. The writing component is integrated in all classes and the results are students who can write well!*
- *I have no specific suggestion. We have a great program . . . as is. My son is a Junior in the IB program presently and I am pleased from that perspective also.*

Other Suggestions

- *Separate Pre-IB training sessions. The FLIBS (Florida League of IB Schools) have begun offering upper level training for teachers. As many IB schools as Florida has, I think we could justify Pre-IB training.*
- *Don't change paperwork between training years, foreign language info was very helpful, More explanation of Internal Assessment and predicted grades would be helpful especially in foreign language (Language B).*

Objective Two Summary

Similar to the findings reported in Thomas' (1987) study of the IB program, in this study students from both IB and AICE programs appear to be generally satisfied with their program

experiences. A great majority (over 75%) of students in IB and AICE felt that they were challenged by their participation in the programs, more prepared for college, and had a better chance of receiving college scholarship. Both groups believed their course work was more demanding than regular classes and reported experiencing high levels of program induced stress. However, more IB respondents (96%) than AICE respondents (80%) believed that their courses were more demanding than regular classes and reported experiencing higher levels of stress.

The findings of the student surveys failed to support dissatisfaction with CAS and TOK among IB students reported in Thomas' (1987) study. Thomas found that close to one-third of subjects found these requirements to be of little or no value. However, less than 15% of students in this study viewed CAS and EE requirements as not a beneficial and valuable part of the IB program, and only 2% disagreed with the statement concerning the value of TOK.

Students in both programs noted that they had improved their skills in areas such as leadership and time management during their participation in the program. The most common criticisms of the programs concerned lack of course options, lack of sufficient teacher-student communication, and lack of interaction with other students. Although many students criticized the workload required of them, we found a high rate of involvement in extracurricular activities among students.

In addition to the issues noted above, students from both programs suggested a number of program changes. The following suggestions were made by AICE respondents regarding the program: more benefits and acceptance by colleges and universities, exemption from basic courses (such as physical education, life management skills, health, etc.), decreasing the workload for the summer session, decreasing exam requirements (AP and AICE), and revising the math curriculum to avoid requiring two math classes simultaneously. Several IB respondents

felt that better guidance was needed regarding CAS, TOK, and EE requirements, and that more punishments for cheating were needed.

The responses from parents were also generally supportive of the experience of their children in either the IB or the AICE program. Numerous parents reported that their children are challenged by their participation in the programs, are more prepared for college, and are receiving high-quality instruction from faculty. Some IB parents also praised the IB curriculum and grading system, while several AICE parents felt that student-counselor relationships were a strength of the AICE program. Common criticisms of parents regarding the programs concerned student stress levels and lack of course options. Additionally, a few (less than 9) IB parents criticized the qualifications of teaching and counseling staff, the administration of CAS requirement, and interaction with other students, while AICE parents (less than 5) questioned the expense of field trips, the double math requirement, and an atmosphere of elitism within the program.

Although only a small number of responses were received for the AICE and IB graduate student surveys, the results did indicate some interesting differences between the programs. Similar percentages of IB (62%) and AICE (55%) graduate students reported receiving the IB diploma and the AICE certificate, respectively. However, 81% of IB graduates received credit for high school course work (for up to 11 or more classes), while only 55% of AICE graduates received credit (up to 8). Most of the college credits received by AICE graduates was not for their AICE course work, but rather for any AP credits or dual enrollment that they had. About two-thirds (67%) of AICE graduates complained of experiencing difficulty in obtaining college credit for their AICE course work, but only 35% of IB graduates did. Moreover, many IB students who had not received an IB diploma also had difficulty obtaining credit for their IB

course work. Graduates from both programs seemed generally satisfied. Some IB graduates were concerned with the value of the TOK class, and a few AICE graduates felt that the program's emphasis on foreign language and mathematics was not valuable. The majority of graduates from both programs found the overall benefits of participation worth the effort of participating in the program. Comments from parents of graduated students in general were also complimentary to both programs.

Results from teacher surveys (Bay and St. Johns Counties only) showed that teachers were generally well prepared for AICE and IB program participation and enthusiastic about their respective programs. Although few differences were found between the two groups of teachers, more AICE than IB teachers had graduate degrees or graduate training. AICE teachers had also attended fewer teacher training workshops and were less satisfied with them than were IB teachers. The fewer teacher-training workshops may be due to the newness of the AICE program in both Bay and St. Johns Counties.

In general, AICE teachers suggested that their program should receive from the Florida Department of Education and from American Universities recognition and treatment equal to those accorded the IB program. They asked for smaller classes and for separate AICE classes. IB teachers offered a variety of suggestions that were specific to their schools and subjects. General suggestions included salary supplements for teachers in "academically accelerated programs," development of ways to retain students in the program, and more interaction among IB programs and teachers within the state.

Because many AICE teachers indicated uncertainty about program aspects they were asked to rate, responses positive to the program could not be meaningfully interpreted. Therefore, teacher responses negative to the programs were analyzed. Differences smaller than 10% were

found except for one item: “Program students are subjected to high levels of program-induced stress.” Thirty-seven percent of IB teachers and 19% of AICE teachers either strongly agreed or agreed with that item, indicating that there is probably a real difference in this aspect of the two programs. In general, teachers in both programs believe them to be functioning well and to be preparing students for successful academic careers.

OBJECTIVE THREE: STUDENT OUTCOMES

The third objective of this study was to determine whether there were important differences between the AICE and IB programs in terms of academic outcomes for students during and following their progress through the high school years. Data necessary for reaching this goal include comparisons of the academic abilities of students at the time of their selection into the programs as well as comparisons of achievement measures for students who entered the programs in the same academic year and progressed through them simultaneously.

For a variety of reasons, the conditions outlined above could not be entirely satisfied for this study. The AICE program in Bay County began in the fall of 1995; the program in St. Johns County began in 1998 with one senior English class of 14 students; and the Lake County program started in 1999 with one English and one mathematics teacher. IB programs began in Bay County in 1991 and in St. Johns County in 1994. Lake County does not have an IB program.

Both AICE and IB students prepare for 11th and 12th grade program course work by taking specified prerequisite Honors or Pre-IB course work in grades 9 and 10. Thus, students who enter either program in the 11th or 12th grade without taking these prerequisites may be handicapped in their program courses. The only participating AICE students who had had four full years of preprogram and program studies were those in Bay County who graduated in 1999 or 2000. In both St. Johns and Lake Counties, AICE students who graduated in those years had had less than four years of program participation. All IB students who graduated in 1999 or 2000 had been in the program for a full four years.

Strict AICE/IB outcome comparisons are inappropriate for seniors in St. Johns County and Lake County who graduated in 1999. St. Johns County AICE students who graduated in 1999 had been in the program only one year and had taken only one AICE course, English, during that year. IB students in that county had, however, been in the program for a full four years. AICE students graduating in Lake County in 2000 had also been in the program only one year. Despite the problems involved in analysis of incomplete data sets, available outcome data from St. Johns and Lake Counties are reported. Related results must be interpreted with caution, but they can serve to support or question results obtained from the more complete set.

The most valid comparisons of student outcomes were, therefore, those made between AICE and IB groups in Bay County. Both programs enrolled classes in the fall semesters of 1995 and 1996 and graduated these students in the spring semesters of 1999 and 2000. Relevant comparisons between AICE and IB students could be made for all comparable students during that time period because cumulative program effects had equal possibilities of occurring in both programs. Unfortunately, many of the data important for this study were not available because Bay County had recently changed computer hardware and operating systems and could not retrieve them. Most of the data used in this study to determine student outcomes were provided by IB and AICE program coordinators in these counties, and at times even these data were incomplete.

A review of literature was conducted to assess prior evidence of program effectiveness.

Previous Studies of IB and AICE Student Outcomes

Several brief conference reports on IB student academic outcomes were identified and are reported here. No studies of AICE outcomes were located. The following is a summary of research on the IB program.

Kolb (1999) studied 3,000 IB, Advanced Placement (AP), and standard students enrolled at the University of Florida to determine the extent of the drop in grade point average (GPA) from senior high school to the end of the first college semester. The numbers of students in the three groups was not reported but elsewhere he indicated that the number of IB students was small. Table 34 shows average SAT scores, high school GPAs, University of Florida (UF) GPAs, and the change in the two averages for the three groups.

Table 34: Average SAT Scores, High School and College GPAs, and GPA Decrease for Former IB, AP, and Standard Students at the University of Florida

Students	SAT Average	High School GPA	University of Florida GPA	Decrease in GPA
Standard	1158	3.6	2.6	-1.0
AP	1177	3.9	3.1	-0.8
IB	1213	3.8	3.3	-0.5

Kolb (1999) attributed the smaller decrease in the average GPA of IB students to the fact that IB students arrive at UF prepared for college work (presumably as indicated by their higher SAT average). However, it should be noted that the Kolb study failed to address whether the higher average was due to the experiences of students in the program or to the student selection policies of the IB program.

Carson (1990) compared the first year GPAs of three groups of students at Virginia Tech: (1) All students not granted AP credit and not from IB schools (n=3688), (2) all students who were granted AP credit (n=647), and (3) all students from high schools that offered an IB program but who did not necessarily participate in the program (n=100). He hypothesized that ". . . schools offering IB programs were clearly committed to quality education and . . . that even students who did not directly participate in IB classes would nonetheless be positively influenced" (p. 1). He found that 33% of students in the first group (no IB—no AP) made average GPAs of B or better. Forty percent of students in group two (AP credit) and 88% of

students in group three (IB school attendance) had average GPAs of B or better. In a separate analysis he found 18 pairs of IB school attendance and non-IB school attendance students who could be matched on six variables related to GPA. The IB school students had average GPAs that were 0.4 points greater than the other group. Carson concluded that "These data did not place the cause of the superior performance directly on the IB program but did support that the IB offering schools were doing something right" (p. 1).

Jesse (1998) reported that the number of IB diploma and certificate holders at William and Mary increased from 6 in 1990 to 42 in 1997. During that time 64% of diploma holders who applied for admission were accepted compared to 45% who were accepted from the total applicant pool. The 42 IB students who completed their freshman year in 1998 had a cumulative GPA of 2.87 compared to the overall average at William and Mary of 2.80. Jesse reported that

> The Extended Essay echoes William & Mary's belief in the value of original research as well as the College's emphasis on strong writing skills and the Theory of Knowledge course fosters active and critical learning and is philosophically very akin to the goals of our freshman seminar program. The CAS (creativity, action, service) component answers our call for students who have been exposed to community service and creative endeavors and who understand the importance of developing the whole person. (p. 1)

Various other studies of high school and college IB students have been presented at IB conferences. Reports of these studies have been very brief and are not summarized here. In general, all of those studies as well as the ones reported here—with the exception of Carson's (1990) 18 pairs of students—failed to consider the preprogram status of the students involved. Most acceleration programs such as IB admit students with superior academic records. When

comparisons are made with students-in-general, it is impossible to unequivocally attribute the success of these students to the program without controlling for student characteristics at the time of admission.

Student Outcome Measures

Eighth-grade *Florida Writes*! (FW!) scores and standardized test scores used in selection of AICE and IB students were compared to determine prior achievement levels of the two groups. Interpretation of differences in preprogram and program measures between AICE and IB students must take into account prior achievement levels of the two groups of students before attributing differences to the programs alone. That is, if the eighth-grade achievement level of one group were to be considerably higher than that of the other, preprogram and program differences might be due only or mostly to the initial ability levels of the students and not to program practices.

Student outcomes of the AICE and IB programs of interest for this report include measures of achievement in the preprogram high school years (9th and 10th grades) as well as in the 11th and 12th grade program years. The following measures and the grade levels at which they were obtained are shown below:

- High school grade point average and weighted grade point average—9th grade
- FCAT reading and mathematics scale scores—10th grade
- SAT and/or ACT total scale score—11th or 12th grades
- AICE and IB course grades from externally scored examinations and externally scored AP course grades for AICE only—11th and 12th grades

AICE and IB Selection Test Results

Table 35 shows eighth-grade means, standard deviations, and sample sizes of students who applied and were selected for the AICE or IB program in 1998–99. The same data for nonprogram students for the same time period are also given for comparison. The standardized achievement test was the California Achievement Test (CAT-5).

Table 35: Reading and Math CAT-5 Scale Scores and *Florida Writes*! (FW!) Scores

County	Outcome	AICE			IB			Nonprogram		
		N	Mean	SD	N	Mean	SD	N	Mean	SD
Bay	Reading	37	804.22	19.74	73	802.44	27.43	650	753.55	33.41
	Mathematics	37	834.97	24.32	73	830.93	27.60	651	770.28	37.11
	Florida Writes!	17	42.65	7.10	37	41.35	8.30	346	31.00	8.50
St. Johns	*Florida Writes*!	16	41.88	9.46	74	40.68	6.58	2651	32.59	8.96

These results show that the AICE and IB groups were highly comparable in terms of academic achievement and that both had much higher mean scores than nonprogram students. Indeed, both AICE and IB means were greater than the scores of more than 85% of nonprogram students. AICE and IB students can be presumed to have similar educational motivations and aspirations because students in both groups volunteered to enroll in their respective programs. Thus, any substantial outcome differences between the AICE and IB groups are highly likely to be due to program effects. Nonprogram students are not volunteers for any program so their educational aspirations cannot be inferred. Their data are included in this and other analyses only to show the marked academic superiority of both AICE and IB students.

Eighth-grade test scores were not available for other years of the study. However, the student selection procedures employed by both AICE and IB are stringent enough to ensure that program students are highly qualified and comparable in academic capabilities.

AICE/IB Comparisons of High School Grade Point and Weighted High School Grade Point Averages

Table 36 shows sample sizes, means, and standard deviations of ninth-grade high school grade point and weighted grade point averages for AICE and IB students in Bay County for 1998.

Table 36: High School Grade Point (GPA) and Weighted Grade Point Averages (WGPA) for Ninth-Grade AICE and IB Students in Bay County in 1998–99

	AICE			IB			Nonprogram		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
GPA	44	3.75	.27	78	3.28	.47	1063	2.15	1.11
WGPA	44	4.03	.29	78	3.61	.47	1063	2.18	1.15

Interpretation of the substantial differences between AICE and IB programs for both GPA and WGPA is unclear. Differences in academic ability or motivation can probably be ruled out as an explanation because the two groups are essentially equivalent on these variables as shown in Table 34. Although there are several possible explanations for the higher means of the AICE group (higher instructional quality, better teaching staff, easier courses, etc.), no single reason or combination of reasons can be shown to be causal in this situation.

AICE/IB Comparisons of FCAT Results

Table 37 shows results of the *Florida Comprehensive Assessment Test* (FCAT) administered to 10th-grade students in 2000 to AICE, IB, and nonprogram students in Bay and St. Johns Counties. AICE and IB students in Bay County and IB students in St. Johns County were selected for their programs in 1998 and began preprogram 9th-grade classes in 1999. St. Johns County AICE students began preprogram classes in the 10th grade.

Table 37: Year 2000 FCAT Norm-Referenced (NRT) and Criterion-Referenced (CRT) Reading and Mathematics Scale Scores

County	Outcome	AICE			IB			NONPROGRAM		
		N	Mean	SD	N	Mean	SD	N	Mean	SD
Bay	NRT Math	43	744.90	30.55	71	742.87	37.17	711	696.00	23.94
	NRT Reading	43	724.58	20.55	71	727.39	24.86	701	686.12	32.73
	CRT Math	43	375.56	33.39	70	372.27	24.73	760	311.48	37.08
	CRT Reading	43	347.02	23.28	70	351.11	27.80	755	298.82	39.94
St. Johns	NRT Math	23	753.39	35.23	77	770.36	31.05	965	705.42	30.53
	NRT Reading	22	723.18	21.64	77	736.13	28.89	949	692.21	35.65
	CRT Math	25	360.48	21.25	78	381.83	32.19	1048	316.32	41.80
	CRT Reading	25	345.36	28.99	78	356.41	23.57	1044	308.98	41.85

In Bay County, differences between the AICE and IB groups on all four measures were negligible. In St. Johns County IB means were considerably higher than those of AICE. These differences are most likely due to the fact that AICE students in St. Johns had been in the preprogram for one year less than the IB students.

AICE/IB Comparisons of SAT/ACT Results

Table 38 gives comparisons between AICE and IB students who were juniors or seniors in 1999 or 2000. When interpreting this table, please note that students could have taken the tests in either the 11th or 12th grade. AICE students in St. Johns County who graduated in 1999 had been in the program only during their senior year, while those who graduated in 2000 had been in the program as both juniors and seniors. Lake County AICE students had been in the program only one year.

Table 38: SAT and ACT Scores of AICE and IB Students Who Graduated from High School in 1999 and 2000

	1998–1999			1999–2000		
SAT						
Bay	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
AICE	29	1258.62	92.18	22	1292.27	118.72
IB	43	1144.42	130.72	12	1119.17	90.60
St. Johns						
AICE	11	1190.91	96.48	10	1277.00	51.22
IB	26	1331.54	104.98	20	1281.50	100.48
Lake						
AICE	–	–	–	4	1162.50	140.09
ACT						
Bay						
AICE	12	26.91	2.96	18	28.22	3.35
IB	103	24.57	2.93	21	26.05	2.94
St. Johns						
AICE	9	24.89	2.75	9	27.78	2.58
IB	6	29.17	1.83	19	27.43	2.71
Lake						
AICE	–	–	–	5	27.00	3.54

In Bay County AICE means for SAT and ACT were considerably higher than IB means for both 1998–99 and 1999–2000. The results for IB students in Bay County may not be completely accurate since the numbers of students reported are lower than expected for SAT in 1998–99 and 1999–2000 and for ACT in 1999–2000. St. Johns County IB students in 1999 had considerably higher means on both SAT and ACT than those of AICE students. In 2000, differences for AICE and IB students on both tests were negligible. These results support the notion that program effects are cumulative over time. It is of interest to note that the SAT means for AICE in Bay County and IB in St. Johns County are higher than the SAT mean reported by Kolb (1999) for IB students at the University of Florida.

AICE/IB Comparisons of Externally Scored Program Exam Grades

IB Grade Distributions. Sixty-one IB seniors who were diploma candidates sat for the external exams in 1998–99. Eighteen of these students (30%) received the IB Diploma. In addition, 63 juniors sat for the geography exam (subject group #3) at the same time. In

1999–2000, 47 IB seniors who were diploma candidates took external exams. Twenty-seven of the candidates (57%) received the IB Diploma. Table 39 shows the distribution of grades for all of the subject groups for both years and Table 40 gives the distributions for the EE and TOK.

Table 39: Distribution of Bay County IB Grades by Subject Group for 1998–99 and 1999–2000

N=108

	Subject Group*					
Exam Grade	I	II	III**	IV	V	VI
7	1	1	–	–	–	1
6	20	5	10	-	11	2
5	42	11	31	5	19	10
4	38	30	62	22	35	4
3	6	51	47	56	30	2
2	1	10	2	24	12	1
1	–	–	–	1	1	–

*Note: I Language A1 IV Experimental Sciences
II Language A2, B, ab initio V Mathematics
III Individuals and Societies VI Arts and Electives

**Note: Subject Group III includes scores for geography exam for juniors.

Table 40: Distribution of Bay County Extended Essay and Theory of Knowledge Grades for 1998–99 and 1999–2000

N=108

Exam Grade	Extended Essay	Theory of Knowledge
A	3	–
B	10	4
C	42	36
D	43	64
E	10	4

Table 41 gives the distribution of St. Johns County IB grades by subject group for 1998–99 and 1999–2000. Fifty-six IB diploma candidates sat for external exams in 1998–99, and 22 sat for external exams in 1999–2000. The number of awarded IB diplomas for 1998–99 is unknown. Of the 22 examinees in 1999–2000, 13 (59%) were awarded the IB Diploma.

Table 41: Distribution of St. Johns County IB Grades by Subject Group for 1998–99 and 1999–2000

N=78

	Subject Group*					
Exam Grade	I	II	III	IV	V	VI
7	1	–	–	2	3	–
6	6	3	3	4	7	3
5	15	6	24	6	13	6
4	13	11	24	11	7	16
3	2	4	19	10	2	4
2	–	–	2	3	–	–
1	–	–	–	–	–	–

*Note: I Language A1
II Language A2, B, ab initio
III Individuals and Societies
IV Experimental Sciences
V Mathematics
VI Arts and Electives

In Bay County, IB students passed 59% of the exams they took (grade of 4 or better) while in St. Johns, 81% received passing scores. Table 42 shows the distribution of St. Johns County EE and TOK grades for 1998–99.

Table 42: Distribution of St. Johns County Extended Essay and Theory of Knowledge Grades for 1998–99

N=22

Exam Grade	Extended Essay	Theory of Knowledge
A	1	3
B	4	6
C	8	10
D	8	3
E	1	–

AICE Grade Distributions. Out of 85 AICE students enrolled in the AICE program in Bay County, 63 seniors sat for external exams in 1998–99 and 1999–2000. In addition, 33 juniors took the external exam in 1999–2000. Twenty-one of the 63 seniors were candidates for the AICE Certificate; it was awarded to 14 of them. Seven of the candidates received the AICE Certificate with merit and seven received a certificate at the pass level. All of these 14 students received Bright Futures Scholarships. Table 43 shows the distribution of grades for each of the three groups of courses in the AICE curriculum.

Table 43: Distribution of Bay County AICE Grades by Subject Group for 1998–99 and 1999–2000

N=96

Exam Grade	Mathematics and Sciences	Languages	Arts and Humanities
A	26	7	5
B	18	17	5
C	18	20	10
D	19	20	17
E	27	12	24
U	63	9	18

In Bay County (1998–99 and 1999–2000), 63% of the AICE students made passing scores of "E" or better on external exams. In Lake County (1999–2000), four students took AICE Math. Three passed and one failed. In 1999–2000, 10 St. Johns County students sat for a total of 17 external exams. Nine of these students took the AICE English external exam. One student made a passing grade of "E"; the other 8 passed with grades of "A" or "B." Five students took the mathematics exam. One had a failing grade of "U"; the others made passing grades of "D" or better. Two students took and passed the Spanish exam and one student failed biology. In short, 88% of external exams taken by St. Johns County AICE were passed with a grade of E or better.

Within counties, both programs had similar passing grades for external exams. Passing rates for both programs in St. Johns County were higher than Bay County.

Correspondence of AICE and Advanced Placement (AP) Grades

Studies conducted by the College Board indicate that an AP grade of 3 is generally comparable to a college grade of B. Most colleges and universities in the U.S. award credit for AP grades of 3 or higher. At present, of Florida colleges and universities, only the University of Florida awards credit for AICE courses. Therefore, students who want to obtain college credit for their work in AICE must take AP examinations in comparable courses in addition to external AICE exams. IB students have no need to take AP exams for courses in which IB external

exams are available. Most colleges and universities in the U.S. award credit for IB grades of 4 or higher.

Advanced Placement examinations are graded on a five-point scale:

5 - Extremely Well Qualified
4 - Well Qualified
3 - Qualified
2 - Possibly Qualified
1 - No Recommendation

The state of Florida presently awards additional funds per student to AICE programs on the basis of AICE course grades and receipt of the AICE Certificate as follows:

- Enrollment in a full-credit AICE course with a grade of 2 (E) or higher —.24 additional FTE
- Enrollment in a half-credit AICE course with a grade of 1 (E) or higher —.12 additional FTE
- Receipt of the AICE Certificate —.30 additional FTE

(Mosrie, 1998)

The grades necessary to obtain awards for additional funding are subject to modification based on the outcomes of the present study.

In the tables and discussion that follow, AICE grades of "E" or greater are referred to as "pass"; grades of "U" (0 points) are termed "fail." AP grades of "3" or greater are termed "pass" while grades of "2" or "1" are referred to as "fail." Cell entries in Tables 43 and 44 show the numbers of students with particular grade combinations.

Tables 44 and 45 are divided by dark lines into four sections. The upper right section contains the number of students who received pass grades for both AICE and AP. The upper left section shows the number of students who received pass grades for AICE but failed AP. The

bottom left section shows the number who failed both courses, and the section on the bottom right shows the number of students who failed AICE but passed AP.

In school years 1998–99 and 1999–2000, 96 AICE junior and senior students in Bay County took one or more pairs of AICE and AP examinations in given subjects for a total of 318 pairs of grades. Table 44 shows a scatter plot of student grades for AP Calculus AB compared to AICE Mathematics and/or AICE Further Mathematics. For students who took three exams in the same subject area (2 AICE and 1 AP or vice versa), both pairs of grades are included in the scatter plot.

A substantial correlation between the AP and AICE math exam grades is shown. Seventy-three students passed both the AP and AICE courses, 9 students passed AICE but not AP, 2 students passed AP but not AICE, and 2 students did not pass either exam. Four AICE students in St. Johns County took and passed both AICE and AP math exams. These results indicate a high level of concurrent validity for the AICE math grades. In Lake County, four students took AICE math and both AP AB Calculus and BC Calculus. There were four pairs of passing grades for both AICE and AP, two pairs passed AICE but not AP, one pair passed AP but not AICE, and one pair passed neither exam.

Table 44: Scatter Plot of Bay County Student Grades for AP Calculus AB Compared to AICE Mathematics and AICE Further Mathematics for 1998–99 and 1999–2000

	AP Calculus AB				
AICE Math and Further Math	1	2	3	4	5
A	–	–	1	10	14
B	–	1	1	10	5
C	–	–	12	4	3
D	–	6	4	2	–
E	1	1	2	3	2
U	2	–	1	1	–

Forty-four Bay County students passed both the AICE English and AP English exams, 24 students passed AICE but not AP, and 5 students did not pass either exam. The relationship

between AICE and AP grades is positive but not as high as that for math grades. Table 45 shows a scatter plot of student grades for AP English Language and AP English Literature compared to AICE English.

Table 45: Scatter Plot of Bay County Student Grades for AICE English Compared to AP English Language and Composition and AP English Literature and Composition for 1998–99 and 1999–2000

	AP English Language and AP English Literature				
AICE English	1	2	3	4	5a
A	–	1	3	–	1
B	–	4	10	1	–
C	–	8	7	3	–
D	2	5	11	1	–
E		4	6	1	–
U	4	1	–	–	–

The reason for the difference is probably that the AICE and AP English course content is dissimilar, while the content of the math courses for the two exams is much the same. Six AICE students in St. Johns County sat for and passed both AICE and AP English exams. AICE scores were either A or B and AP scores were all 4 or 5.

In other subject areas, results were as follows:

- Fourteen Bay County students took both AICE Economics and/or AP Macroeconomics and Microeconomics. Eleven student pairs had passing grades for AP but only one of them received a passing grade for AICE. Two student pairs did not pass either course.
- Twenty-four Bay County students took both AICE and AP Biology. Nine passed AP but not AICE and 15 passed neither course.
- Twenty-nine Bay County students took both AICE and AP Physics. Eighteen passed both courses, 7 passed AP but not AICE, 2 passed AICE but not AP, and two passed neither course.
- Only 2 of 28 Bay County students who took both AICE and AP Chemistry passed both courses. One student passed AICE but not AP; the remainder did not pass either one.

- Twenty-nine Bay County students took both AP Latin (Virgil) and AICE Latin Literature or AICE Latin Language. Sixteen students passed AICE but not AP, and 13 passed both AICE and AP.

Overall, the data show a reasonably close correspondence between AICE and AP examination grades. Of the 318 pairs of AICE and AP grades in Bay County, 43 contained an AICE grade of "E." Twenty-nine of the 43 (67%) passed the corresponding AP exam with a grade of 3 or better, 14 of the "E" grades were associated with failing AP grades of "1" or "2."

At present, AICE students are overburdened by having to take AP exams for college credit and AICE exams for certification and program funding. While the amount of overlap between AICE and AP varies among courses, students are generally required to study for both with perhaps a consequent reduction in optimal performance on both exams. In addition, the students whose records were used here were enrolled in AICE courses being offered for the first or second time by teachers who were certified but had limited experience in teaching the AICE content.

Although the data are sparse, the AICE grade of "E" does indicate that student performance level is generally commensurate with passing AP scores. Continued additional FTE funding of "E" grades appears to be warranted. In several years, when AICE students no longer have to sit for both sets of exams, it might be desirable to conduct studies in which the performance of AICE graduates is compared to that of nonprogram college students in related courses.

Comparison of AICE and IB Self-Reported College Grades

Self-reported college GPAs were obtained from AICE and IB students who graduated from high school in 1999 and 2000 through the Graduated Student survey. Details of the survey and

its dissemination are given in section two of this report. Table 46 shows the numbers of AICE and IB respondents to the survey and their GPA means and standard deviations.

Table 46: Numbers of Respondents and Self-Reported College GPA Means and Standard Deviations of AICE and IB Students in Bay and St. Johns Counties

PROGRAM	N	Mean	SD
AICE	14	3.33	.55
IB	18	3.18	.69

Differences between the two programs do not appear to be meaningful. The GPAs of the two groups are also similar to the mean (3.33) reported by Kolb (1999) for first semester students at the University of Florida. These similarities lend credence to the self-reported grades since Kolb's data were taken from official student records.

Objective Three Summary

The goal of this objective was to determine whether there were important differences between students in the AICE and IB programs in terms of academic outcomes as they progressed through high school and, to the extent possible, to determine whether such differences persisted or manifested themselves after high school. In order to achieve this goal, it was necessary to determine whether the two groups of students were equal in academic achievement when they entered high school.

It was also important that comparisons between groups that had been in the programs for the same length of time be made. The most relevant comparisons that could be made were between AICE and IB programs in Bay County since the first class of AICE students completed four years of AICE in 1999. Comparisons based on grades of students in St. Johns and Lake Counties are less relevant because these students will not complete four years in the program until 2002

and 2003, respectively. Unfortunately, many of the Bay County data pertinent to this study were not available because changes in computer and operating systems made them irretrievable.

In 1997, Bay County AICE and IB eighth-grade means were available for the reading and math scores of the California Achievement Test and for *Florida Writes!* In St. Johns County, only *Florida Writes!* means were available for that year. Differences between means were negligible and it was concluded that AICE and IB groups were highly similar on entrance to the ninth grade. Data for other years were not available but because of the stringent admission requirements of both programs, it is highly likely that there were never important systematic differences between the two groups when they entered the ninth grade.

Outcome differences between AICE and IB groups were studied for grade point and weighted averages for 9th-grade students, for 10th-grade FCAT scores, for 11th–12th-grade SAT and ACT scores, and for self-reported college GPAs. It was concluded that no interpretable important systematic differences were found when AICE and IB students had been in the program for the same length of time. Some evidence for cumulative program effects was noted.

Student performance on AICE and IB externally administered exams could not be directly compared. IB students in Bay County were least successful in curriculum groups Language A2, B, ab initio (Spanish), and Experimental Sciences where more than 50% of the students failed to make passing scores. In St. Johns County, a large majority of IB students passed exams in all curriculum groups. Few IB students in either county took courses in the Arts and Electives curriculum group. In Bay County, a large majority of AICE students passed courses in all three curriculum groups. Their poorest performances were in the math and science areas. In St. Johns and Lake Counties, almost all AICE students passed all of the exams they took.

At present only the University of Florida gives credit for AICE exam grades. Students take AP exams to obtain college credit and AICE exams for AICE certification. A grade of 3 or above on a five-point scale is usually a passing score for AP exams. Scores of 1 or 2 are failing grades. AICE exams are graded on a five-point scale (A to E) with "E" being the lowest passing grade. A sixth category "U" (ungraded) is awarded to failing exams. Relationships between AICE and AP grades in comparable courses were studied to determine the extent of agreement between passing AP and AICE grades. A strong correlation between AICE and AP grades in math and moderate relationships in English and Physics were found. Relationships for other courses tended to be less obvious because of low numbers of pairs of grades or because of high failure rates in one or both of the exams. Forty-three of 318 pairs of grades contained an AICE grade of "E." Sixty-seven percent (29) contained an AP grade of 3 or better. It was concluded that overall there is a reasonably close correspondence between AICE and AP grades and that an AICE grade of "E" is most comparable to an AP grade of 3 or better.

OBJECTIVE FOUR: CONCLUSIONS AND RECOMMENDATIONS

The AICE and the IB are rigorous preuniversity curriculum and examination programs designed for academically able students. Both are two-year programs for junior and senior high school students and both offer preprogram curricula for freshman and sophomore students as preparation for the programs themselves. No differences were found in the selection criteria between the two programs. Students' applications for both programs require (1) math and reading standardized achievement test scores, (2) grade point averages, (3) recommendations from three teachers, (4) admissions agreement signed by both students and parents, and (5) personal data.

Both IB and AICE offer well-balanced curricula, high academic standards, practical real-world applications, and international perspectives. Both emphasize the development of higher order thinking skills, including problem solving and creativity. IB presents a broad general education for students who can function well across the curriculum while providing for specialization in accord with students' interests and plans. AICE also provides a broad program but emphasizes an extremely flexible curriculum that can be tailored to the abilities, interests, and plans of students.

Both programs rely on internal and external grading procedures to ensure fairness in the quantification of the challenges of the two programs. In addition to fulfilling auxiliary requirements (CAS, TOK, EE), IB students must make 24 out of 45 possible points to garner a diploma. The AICE Certificate is awarded at three levels: (1) Distinction, 46 points or more (out of 50); (2) Merit, 30 to 45 points; and (3) Pass, 10–29 points. AICE students must pass all exams and gain at least 10 out of 50 points to obtain a certificate.

A difference between the two programs at the present time is that AICE students must take both AICE and AP exams or dual enrollment in order to garner college credit. IB graduates can receive college credit throughout the United States by virtue of their IB diploma or IB course certificates. AICE students, however, must take AP exams or dual enrollment in order to obtain any college credit since the AICE program is still generally unrecognized by colleges and universities. At the present time of the pilot AICE program, the only college accepting AICE course work is the University of Florida.

A comparison of the programs by cost is challenging, as AICE is only a pilot program. That is, a cost per student analysis in any given school factors in only approximately 80 students in an AICE program, compared to an estimated 200 in an IB program. Note that only AICE and IB programs in Bay, St. Johns, and Lake Counties were studied in this evaluation. Data on costs were only available from Bay and St. Johns Counties. Program costs, including affiliation, annual subscription, and student per capita fees, are considerably higher for IB than for AICE. Costs for affiliation per school are $2,000 for IB (AICE does not charge an affiliation fee); annual subscription fees per school are $7,300 for IB and $600 for AICE; and per capita full-time student costs to the district and school are approximately $500 and $250 for IB and AICE, respectively. However, overall school and district costs per student presently are higher for AICE than for IB; this is primarily due to the small size of the AICE program in Florida.

In general, student, parent, and teacher satisfaction with both programs was positive. Students in both programs felt that they were challenged by their participation in the programs, were well prepared for college, and had improved their skills in such areas as leadership and time management. Parent statements agreed with those of students and in addition expressed the belief that students were receiving high-quality instruction from the faculties. Students from

both groups believed that their course work was more demanding than regular course work and reported higher levels of stress. Common criticisms of parents from both programs also concerned program-induced stress and high workloads. However, although many students criticized high workloads, we found a high rate of student involvement in extracurricular activities (an average of three activities per respondent). Suggestions for program improvement among AICE students centered around acceptance by colleges and universities and exemptions from basic courses (such as physical education, life management skills, and health). A few IB students felt that better guidance was needed concerning CAS, TOK, and EE requirements and criticized these activities, although not to the extent found in Thomas' 1987 study.

Although only a small number of responses were received for the AICE and IB graduate student surveys, the results did indicate some interesting differences between the programs. While the majority of IB graduates (81%) received credit for high school course work (for up to 11 or more classes), only 55% of AICE graduates received credit (up to 8 classes). As noted above, most of the college credits received by AICE graduates was not for their AICE course work, but rather for any AP credits or dual enrollment that they had. About two-thirds (67%) of AICE graduates complained of experiencing difficulty in obtaining college credit for their AICE course work, compared to only 35% of IB graduates. However, the majority of graduates from both programs found the overall benefits of participation worth the effort of participating in the program, and comments from parents of graduated students in general were also complimentary to both programs.

Teachers in both programs were well prepared and enthusiastic about their work. Although few differences were found between the two groups of teachers, more AICE than IB teachers had graduate degrees or graduate training. AICE teachers had attended fewer teacher-training

workshops and were less satisfied with them than were IB teachers. The fewer teacher-training workshops among AICE teachers may be due to the newness of the AICE program in the counties under study. AICE teachers suggested that their program should receive from the Florida Department of Education and from American Universities recognition and treatment equal to those accorded the IB program. Several IB and AICE teachers felt that IB and AICE students are subjected to high levels of program-induced stress. A greater percentage of IB teachers than AICE teachers, however, felt that participating students experience high levels of program-induced stress, indicating that there is probably a real difference in this aspect of the two programs.

In order to determine whether there were important differences between students in AICE and IB programs in terms of academic outcomes as the students progressed through high school, it was important to determine whether the two groups of students were equal in academic achievement when they entered the two programs. No systematic differences were found between AICE and IB groups upon entrance into the ninth grade in 1998. It was also important that the comparisons between groups that had been in the programs for the same length of time be made. Thus, the most relevant comparisons that could be made in the present study were between AICE and IB programs in Bay County in which students had completed four years in their respective programs in 1999 and 2000. Comparisons based on student outcomes in St. Johns and Lake Counties are less relevant because their students will not complete four years in the program until 2002 or 2003, respectively. Unfortunately, many of the Bay County data pertinent to this study were irretrievable due to changes in Bay County's data storage systems.

No major systematic differences in outcomes were noted when AICE and IB groups had been in their programs the same length of time. IB standardized test means were higher than

AICE means when IB students had been in the program longer than AICE students. In one instance, IB means were greater than AICE means when AICE students had been in the program for only one year, but these differences disappeared when AICE students had been in the program for two years. In one year, ninth-grade AICE students had substantially higher mean grade point averages than IB students. This difference was uninterpretable because many factors or combinations of them could have produced these results.

In addition, a comparison of self-reported college GPAs from the graduates of the two programs did not reveal any meaningful differences. The reported GPAs of the two groups were also similar to the IB results reported by Kolb (1999) for first semester students at the University of Florida. These similarities lend credence to the self-reported grades in this study since Kolb's data were taken from official student records.

Recommendations

No major differences were found between the two programs among the comparisons made in this study, such as program prerequisites; grading procedures; student, parent, and teacher satisfaction; and student outcomes. The most important differences to be found were the difficulty that AICE graduates presently face in obtaining college credit compared to IB graduates, the higher program costs of IB, and the greater flexibility in the AICE curriculum.

A general recommendation for the Florida Legislature and the Florida Commissioner of Education is that the AICE program be given recognition and treatment equal to that given to the IB program. The pilot program designation should be removed and full status should be accorded the program.

The following specific recommendations are made:

1. Enrollment restrictions for AICE should be removed.

2. The AICE program should continue to receive the funding for supplemental FTE that it now enjoys:

   Enrollment in a full-credit AICE course with a grade of 2 (E) or higher—.24 additional FTE

   Enrollment in a half-credit AICE course with a grade of 1 (E) or higher —.12 additional FTE

   Receipt of the AICE Certificate —.30 additional FTE

   (Mosrie, 1998)

3. Bright Futures Scholarships should be guaranteed to AICE certificate holders when they apply for them.
4. The AICE program should be described in the *Course Code Directory*. Pre-AICE and AICE courses should be given their own numbers in the *Course Code Directory* and in the *Counseling for Future Education Handbook.*
5. Florida universities and colleges should be encouraged to accept AICE exam results based on the AICE scale for passing scores for credit in the same way that AP and IB exam results are accepted.
6. Course forgiveness policies (no requirement for personal fitness, etc.) for AICE should be the same as for IB in schools in which these programs are located.
7. The AICE program's progress in gaining acceptance of AICE certificates for college credit from American universities and colleges should be monitored.

A final recommendation to the Legislature and Commissioner of Education is that a statewide study be made comparing AICE, IB, and other acceleration programs; for example, the

AP program. This study should examine the costs of these programs compared with student outcomes at the college level.

It is recommended that schools considering implementation of either AICE or IB take into account the following differences between the two programs:

1. At present, except for the University of Florida, the AICE certificate or supplementary GCE certificates are not automatically accepted for course credit at colleges and universities in the United States. IB students can obtain college credit at many universities with their diplomas or exam certificates.
2. Direct program costs (affiliation, annual, and student per capita costs) are considerably higher for IB than AICE. This could be of major importance in small counties that do not anticipate large enrollments in IB and, hence, do not generate large amounts of supplementary FTE.
3. Educational philosophies of the programs are somewhat different. Both AICE and IB emphasize broad preparation for all students, but AICE allows more flexibility in individual student programs.

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APPENDIX A:

COMPARISON OF IB AND AICE SYLLABUS CONTENT

IN SAMPLE SUBJECTS

Key Words in Sample Language A1 and English/First Language Spanish Syllabus Materials

IB	**AICE**
LANGUAGE A1	ENGLISH/FIRST LANGUAGE SPANISH
Notes from aims: • appreciate literature and literary criticism • develop oral and written expression • know works of different periods, genres, styles, contexts, cultures, and languages • study literature to appreciate and understand relationships between different works • engage in close, detailed analysis of written text • develop joyful and lifelong interest in literature Notes from objectives: • engage in independent literary criticism • express ideas with clarity, coherence, conciseness, precision, and fluency • discriminate effective register (vocabulary, tone, sentence structure, and idiom) and style • know individual works, interrelationships, similarities and differences between literary works of different ages/cultures • engage in independent textual commentary for familiar and unfamiliar works • appreciate structure, technique, style of different authors and their effects • structure ideas and arguments, orally and in writing, with support of precise and relevant examples Notes from assessment criteria: • understand thought and feeling in text • interpret ideas and illustrate claims • identify literary features such as diction, imagery, tone, structure, style, and technique • organize ideas, examples, and references • express relevant personal response • observe conventions such as paragraphing, grammar, spelling, citation of references • express critical thinking and originality	Notes from aims: • express sensitivity to one's own language and the language of others • express an appreciative and informed imaginative response to literature, prose, poetry, and drama • express appropriate communication in speech and writing Notes from assessment objectives: • write lucidly and coherently • comment on effectiveness of writing of others and self • recognize and comment on themes and literary techniques • respond to previously unseen written material • know structure of language; language as a means of communication; relationship of language to society, thought, and experience; know content of literary texts and contexts Notes from curriculum content: • summarize, explain, compare and contrast, and evaluate complex material • appreciate, explore, and respond to underlying meaning and implications • recognize author's stated and implicit attitude • structure thought with language and argumentative links • develop and exemplify ideas • clearly state own opinions • recall and select events and descriptive detail • make links between ideas not immediately considered comparable • imagine events, setting and character in a convincing way • use simple and complex sentence structures • use short and longer words, figurative language, and associative language • use appropriate language styles for genre, context, and audience • spell and punctuate with awareness of grammatical conventions

Key Words in Language B/Foreign Language Syllabus

IB	**AICE**
LANGUAGE B	LANGUAGE
Aims and objectives: • communicate accurately and effectively in speech and in writing within a range of contexts • understand and respond to the language demands of transactional and social contacts • develop a sound linguistic base for further study, work, and leisure • develop insights into the culture of the countries where the language is spoken • express joy, creativity, and intellectual stimulation in study of the target language • respond to day-to-day communication demands: obtaining, processing, and evaluating information from written and oral sources; communicating in formal and informal situations; making social and professional contacts with the people of the country where the language is spoken; expressing views, opinions, feelings; recognizing implicit meanings and attitudes • speak and write with accuracy, variety, understanding, and sensitivity • respond appropriately in the target language at lectures, seminars, tutorials, practical work, or when reading literary and on-literary texts or writing notes, essays, and reports • demonstrate awareness and appreciation of perspectives from other cultures through study of various texts and social interactions • demonstrate how language embodies cultural differences	Aims and assessment objectives: • understand the spoken and written forms of the language from a variety of registers • communicate confidently and clearly in the language • develop skills, language, and attitudes to use in further study, work, and leisure • develop insights into the culture of countries where the target language is spoken and contact with the culture • express enjoyment, positive attitudes, and intellectual stimulation with foreign language learning • understand written texts in contemporary language, drawn from sources such as magazines, newspapers, official documents, and imaginative writing • understand spoken language in a range of contexts such as radio news items, broadcast short stories, announcements, studio discussions, and recorded talks • understand native and non-native speakers of the target language when in conversation, when interviewed, or when reacting to argument and debate • choose appropriate examples of lexis and forms of expression in the target language • exchange views and opinions in the language and sustain a conversation • compose ideas in a coherent sequence in the target language
Notes from assessment criteria: • express clear and meaningful messages/arguments relevant to the task • develop and link ideas cohesively in logical and well-developed structures • accurately and fluently use vocabulary, idiom, spelling/writing with authentic expression (not labored, inaccurate, or incorrect) • express perspectives of a message/argument with appropriate examples in a convincing style • clearly structure ideas, with linkages, cohesive devices, and register and style appropriate for the task (not haphazard or undeveloped) • express vocabulary, idioms, grammar, and phrases with accurate spelling/writing • express message/ideas with factual support in comprehensive, relevant, convincing, and imaginative style • engage in conversation/dialogue with coherent flow and reflection of detail/nuance	Notes from curriculum content: • express ideas, opinions and factual points, in a full, lively, articulate, fluent, accurate, and well-organized presentation of a topic • engage in conversation to discuss topics of current or special interest with comprehension, responsiveness, accuracy, fluent expression of concepts, appropriate and confident use of vocabulary and structures to express ideas and to offer and seek opinions as appropriate

Situations and sources for communication in the syllabus materials vary somewhat and appear in the following table.

Communication Demands

IB Communication Sources and Situations	AICE Communication Sources and Situations
Obtain, process, and evaluate information from written and oral sources in formal and informal situations	Respond to magazines, newspapers, official documents, and imaginative writing
Make social and professional contacts with people of the country where the language is spoken	Respond to radio news items, broadcast short stories, announcements, studio discussions, and recorded talks
Express views, opinions, and feelings, and recognize implicit meanings and attitudes	Respond to native and non-native speakers in conversation, interviews, arguments, and debates
Respond appropriately when attending lectures, seminars, tutorials, practical work, or when reading literary and non-literary texts or writing notes, essays, and reports	Exchange views and opinions to sustain a conversation
Study a variety of texts and social interactions	Compose ideas in the target language in an organized presentation
Express message and argument	Discuss topics of current or special interest

Key Words in Sample History Syllabus

IB	AICE
HISTORY	HISTORY
Notes from aims: • acquire and understand historical knowledge in breadth and depth across different cultures • appreciate and understand history as a discipline, including nature and diversity of sources, methods, and interpretations • express awareness, understanding, and empathy of people in diverse places and times • develop a better understanding of the present through an understanding of the past • appreciate the historical dimension of the human condition • use and communicate historical knowledge • develop a lasting interest in history Notes from objectives: • acquire, select, and use historical knowledge • present clear, concise, relevant, and substantiated arguments • evaluate, interpret, and use source material critically as historical evidence • identify and evaluate approaches to, and interpretations of, historical events and topics • explain causes and effects of historical continuity and change Notes from syllabus and assessment details: • analyze and describe: – causes, practices, and effects of war (origins of twentieth-century war, nature	Notes from aims: • express interest and enthusiasm in the past • acquire and understand knowledge of the past • express awareness of nature of historical sources and understand their uses as evidence • understand cause and consequence, continuity and change, similarity and difference • develop a sound basis for further study and pursuit of personal interest in History • develop international understanding • develop linguistic and communication skills Notes from assessment objectives: • construct explanations of historical phenomena, developments, and events • express cause and consequence, change and continuity, similarity and difference • express intentions, motives and beliefs of people • express relationship of present events to historical roots • use critically a range of books and/or other relevant materials to construct explanations of historical phenomena, developments, and events • interpret and evaluate historical source materials as evidence Notes from curriculum content: • analyze and describe: – conflict (superpowers, regional conflicts, and terrorism) – economic development

of war, combatants and war; political, social, and economic effects) – nationalist and independence movements, decolonization, challenges facing new states – rise and rule of single-party states (origins; ideologies; organization; leadership; successes; failures; role of education, arts, and media; treatment of social and religious groups, impact on world affairs) – establishment and work of international organizations – Cold War (origins, nature, ideology, spheres of influence, political and economic responses, worldwide developments, social and cultural consequences) – state and its relationship with religion and minorities (religion as a political factor, interaction with social, economic, cultural, and gender issues, minorities; conflicts; self-determination)	– independence movements and decolonization – race relations – ideology and belief (communism, capitalism, religion, nationalism) – international cooperation (world organizations, regional organizations)

Key Words in Sample Biology Syllabus

IB and AICE materials contain content specifications of much greater detail than in the following summary.

IB	**AICE**
BIOLOGY	BIOLOGY
Notes from aims: • accomplish scientific study and creativity within global contexts • know, apply, and use science and technology methods and techniques • analyze, evaluate, and synthesize scientific information • collaborate and communicate during scientific activities • develop experimental and investigative skills • consider moral/ethical, social, economic, and environmental implications • understand relationships between scientific disciplines and scientific method Notes from objectives: • understand, apply, and use scientific facts, concepts, methods/techniques, terminology, methods of presenting scientific information • construct, analyze, and evaluate hypotheses, research questions, predictions, methods/techniques, procedures, explanations • cooperate, persevere, and demonstrate responsibility for effective scientific investigation	Notes from aims: • understand biological facts and principles • appreciate contribution of Biology to society • develop awareness of need for long-term conservation of species and habitats • understand scientific method and its application • recognize beneficial and detrimental effects of applications of Biology on the individual, community, and environment • appreciate transcendence of biological science across national boundaries Notes from assessment objectives: • know and understand— scientific phenomena, facts, laws, definitions, concepts, theories; vocabulary, terminology, conventions (symbols, quantities, units); instruments and apparatus; techniques of operation and aspects of safety; quantities and their determination; scientific and technological applications • use words or other written forms of presentation to: – locate, select, organize, and present information from a variety of sources – translate information from one form to another

and problem solving • demonstrate manipulative skills to do scientific investigation with precision and safety • accomplish various investigations	– manipulate numerical and other data – identify patterns, report trends, and draw inferences – present reasoned explanations of phenomena, patterns, and relationships – make predictions and hypotheses – solve problems including some of a qualitative nature • demonstrate skills to: – carry out experiments with appropriate techniques, following instructions, handling apparatus competently with due regard for safety – record observations, readings, measurements in appropriate form (drawings, diagrams, charts, tables, graphs) – evaluate data generated by their own practical work – design and carry out experiments (based on concepts familiar to the student) and suggest alternative procedures/equipment and/or modifications in the light of experience

Key Words in Sample Syllabus Materials for Mathematics

IB	**AICE**
MATHEMATICS	MATHEMATICS, FURTHER MATHEMATICS, STATISTICS
Notes from aims for standard and higher levels (aims are identical for each level): • appreciate the international dimensions of mathematics and the multiplicity of its cultural and historical perspectives • develop enjoyment from engaging in mathematical pursuits; appreciate the beauty, power, and usefulness of mathematics • develop logical, critical, and creative thinking in mathematics • develop mathematical knowledge, concepts, and principles • use and refine the powers of abstraction and generalization • develop patience and persistence in problem solving • develop awareness of and use the potential of technological developments in a variety of mathematical contexts • communicate mathematically, both clearly and confidently, in a variety of contexts Notes from objectives for standard and higher level Mathematics: • know and use mathematical concepts and	Notes from aims for Mathematics and Further Mathematics (aims are identical for each course): • develop mathematical knowledge and skills to a level of confidence, satisfaction, and enjoyment • understand mathematical principles; appreciate mathematics as a logical and coherent subject • apply mathematical skills in the context of everyday situations and other subjects • analyze problems logically; recognize when and how to represent a situation mathematically; identify and interpret relevant factors and select methods to solve them • use mathematics for communication with emphasis on clear expression • reason logically to generalize and to prove • acquire mathematical background necessary for further study in this and related subjects Notes from aims for Statistics: • develop statistical knowledge to a level of confidence, satisfaction, and enjoyment • understand the processes involved in collecting, analyzing, and presenting data, based on the practical use of real data • acquire knowledge of elementary statistical ideas,

principles • read and interpret a given problem in appropriate mathematical terms • organize and present information/data in tabular, graphical, and/or diagrammatic forms • use appropriate notation and terminology • formulate and communicate a mathematical argument clearly • select and use appropriate mathematical techniques • understand the significance and reasonableness of results • recognize patterns and structures in various situations; draw inductive generalizations • demonstrate understanding of and competence in practical applications • use appropriate technological devices	methods and terminology, especially as applied to everyday life and in world issues • recognize that statistical data may be subject to errors or uncertainties and develop a critical approach to drawing conclusions • use statistical terminology for communication with emphasis on clear expression • use appropriate problem-solving techniques • present mathematical work and communicate conclusions in a clear and logical way

The IB program includes the topics listed in the following chart. In the syllabus materials, the higher level booklet contains content identical to the standard level materials, with the addition of content for the topics designated as higher level only. For example, the only unique content contained in the higher level syllabus for the core topics concerns the topics of *Probability* and *Matrices and Transformations*. The rest of the material duplicates the content from the standard level syllabus.

Core	**Options**
Standard and Higher Levels Numbers and Algebra Functions and Equations Circular Functions and Trigonometry Vector Geometry Statistics Calculus Higher Level Probability Matrices and Transformations	Standard Level Statistical Methods Furthur Calculus Further Geometry Higher Level Statistics Sets, Relations, and Groups Discrete Mathematics Analysis and Approximation Euclidean Geometry and Conic Sections
Portfolio	
Standard and Higher Levels Mathematical Investigation Extended Closed-Problem Solving Mathematical Modeling Higher Level Mathematical Research	

The AICE program organizes the curriculum sections into parts with the following specific themes. The syllabus details in the AICE program are organized to correspond to each theme and do not duplicate the content presented in other sections.

<table>
<tr><td colspan="3">Mathematics</td></tr>
<tr><td colspan="2"><u>Part 1</u>
Polynomials
Identities, equations, and inequalities
Indices and proportionality
Sequences
Graphs and coordinate geometry
Vectors
Functions
Logarithmic and exponential functions
Circular measure
Trigonometrical functions</td><td><u>Part 2</u>
Differentiation
Integration
Applications of calculus
First order differential equations
Numerical methods
Probability</td></tr>
<tr><td colspan="3">Further Mathematics</td></tr>
<tr><td><u>Part 1</u>
Sequences and series
The modulus function
Rational functions and graphs
Trigonometrical functions
Complex numbers
Vectors
Differentiation and integration</td><td><u>Part 2</u>
Discrete probability distributions
The normal distribution
Sampling
Hypothesis tests</td><td><u>Part 3</u>
Forces and equilibrium
Rectilinear motion
Motion of a projectile
Newton’s laws of motion
Momentum and impulse
Energy, work, and power</td></tr>
<tr><td colspan="3">Mathematics: Statistics</td></tr>
<tr><td colspan="3">Collection of data
Data representation
Measures of central tendency and dispersion
Index numbers and time series
Bivariate data
Probability</td></tr>
</table>

APPENDIX B:

COMPARISON OF SAMPLE IB AND AICE EXAMINATIONS

Sample Language A1 and English/First Language Spanish Examination Requirements

IB	AICE
STANDARD LEVEL EXAMINATION TIME: 3 HOURS	FULL CREDIT PAPER 1 EXAMINATION TIME: 2 HOURS
SECTION A: Write a commentary on ONE: one and two-thirds pages of narrative or one page of poetry. Each text passage includes four questions to guide development of the commentary. The task requires interpretation of meaning and analysis of information and concepts.	PART ONE: Answer one of six questions about the importance or value of different social concepts.
SECTION B: Write an essay on ONE, choosing from two questions each about twentieth-century theatre, art of the novel, the novel and society, art of drama, contemporary writing, lives (autobiographical writing). The task requires interpretation of meaning and analysis of information and concepts. The essay must be based on at least TWO of the works studied and references to other works are allowed. The students must be able to *recall the references from memory* since they are not listed as part of the questions.	PART TWO: Answer ONE set: choose from three questions that concern about a page and a half of a narrative, or from two questions that concern two passages expressing somewhat different perspectives, each taking about a half a page. The task requires comparison and contrast of ideas and analysis of language style. This part is *identical* to PART ONE of the HALF-CREDIT EXAMINATION.
HIGHER LEVEL EXAMINATION TIME: 4 HOURS	PAPER 2 EXAMINATION TIME: 3 HOURS
SECTION A: Write a commentary on ONE: a page of narrative, or a page of poetry, and a paragraph from a story. Number of words for the commentary is not specified.	PART ONE: Write a commentary on ONE: a page and a half of narrative or a page of poetry. This task requires interpretation of meaning and analysis of writing style.
HIGHER LEVEL SAMPLE EXAM: Write an essay on ONE: two questions each about twentieth-century theatre, art of the novel, the novel and society, art of drama, contemporary writing, lives (autobiographical writing). (These questions require references to at least two of the works studied, and allows references to other works.)	PART TWO: Answer any TWO questions from two different sections: eight each about prose, poetry, and drama titles and authors. This examination gives the names of authors and titles followed by questions that relate to the references. The questions require analysis and judgement. In this format, examinees *do not need to recall the references* from memory. This part is *identical* to PART TWO of the HALF CREDIT 2 EXAMINATION.
	HALF CREDIT PAPER 1 EXAMINATION: 2 ½ HOURS PART ONE: This part is *identical* to PART TWO of the FULL CREDIT PAPER 1 EXAMINATION. PART TWO: This part is *identical* to PART TWO of the FULL CREDIT PAPER 2 EXAMINATION.

Language A1, English/First Language Spanish. For the subject of English, both the IB and AICE examinations provide sample text passages about which questions are asked. These questions require reflection on concepts, application of rules, recall of information, and critical thinking or evaluation. Both require essay and short-answer constructed responses. Both give examinees choices about which questions to answer.

The IB and AICE examinations for English both require judgements with explanations, commentary on use of language in sample passages, reflection on imagery and diction, use of

reference notations, reflection on contrasting imagery, analysis of development and importance of characters, and comparison of writing styles. Both sets of examinations require citation of examples or reference notations.

Content for sample AICE and IB examinations includes comprehension of information and ideas conveyed in different narrative selections, character analysis, analysis of text and themes, classification of types of literary works, comparison and contrast of writing styles, composition, and commentary. The IB and AICE examinations have somewhat different formats. The IB examination contains sections on "Twentieth Century Theatre," "Art of the Novel," "The Novel and Society," "Art of Drama," "Contemporary Writing," "Lives (Autobiographical Writing)". The AICE examination contains sections on "Prose," "Poetry," and "Drama."

Sample Language B/Foreign Language Examination Requirements

IB	**AICE**
STANDARD LEVEL EXAMINATION TIME: 1HOUR 30 MINUTES	PAPER 2 EXAMINATION TIME: 45 MINUTES
Write a 250-word essay on one of six issues. The task requires demonstration of writing skills and analysis of concepts.	FIRST SECTION: Listen to three announcements and answer all questions. Answers require comprehension of meaning from each announcement. Questions are short answer, true-false, and matching.
STANDARD LEVEL EXAMINATION TIME: 1 HOUR 30 MINUTES: Read sample narrative selections and answer all questions. Answers require search and classification of information, comprehension of meaning, and some critical thinking. The questions are short answer, matching, and multiple choice.	SECOND SECTION: Answer questions about a written conversation. Answers require comprehension of meaning and analysis of some of the information in the conversation. Questions are short answer.
HIGHER LEVEL EXAMINATION TIME: 1 HOUR 30 MINUTES	PAPER 3 EXAMINATION TIME: 1 HOUR 30 MINUTES
Read sample narrative selections and answer all questions. Answers require search and classification of information, comprehension of meaning, and some critical thinking. The questions are short answer, matching, and multiple choice. The content is more complex and difficult than the standard-level examination.	Read two different sample texts and answer all questions. Answers require comprehension of information and concepts and analysis of issues presented in the sample text materials. The questions are true-false, multiple choice, short answer, and essay. The essay question requires 100–130 words.
HIGHER LEVEL EXAMINATION TIME: 1 HOUR 30 MINUTES	
Write a 400-word essay on one of six issues. The task requires demonstration of writing skills, analysis and arrangement of ideas and concepts.	

Notes: (1) AICE "First Language Spanish" examinations correspond to the examination format for English as a first language. (2) IB examinations for French (Standard and Higher Levels) include questions that require analysis of writing styles and literary forms, as well as comprehension of themes and information. Format includes sample texts about which questions are asked. Content for sample texts include literary and poetry forms, environmental issues, mountain climbing, a social-political appeal, issues related to sports, a political cartoon, and a commentary on work and salaries. Questions also cover forms of poetry, novels, men and women writers, narrative techniques, and evolution of theatre. AICE sample examinations for French (Papers 2 and 3) include a *listening* section, as well as a reading and writing section. Answers require comprehension of meaning by completing charts, true-false questions, multiple-choice items, and short-answer items. Both sets of examinations include an essay question for composition skills. Content includes listening comprehension of a television report, horoscope, publicity appeal, and news report. Content for reading and writing includes a commentary on changes through the year 2000 and on work and salary conditions. (3) The IB examinations (Standard and Higher Levels) contain a greater variety of sample texts about which questions are asked. Questions appear in a variety of formats to assess comprehension, including charts and advertisements, and include essay questions that also require analysis of concepts. The IB essay questions (250–400

words) tend to be longer than the AICE essay questions (150 words). AICE sample examinations for German (Papers 2 and 3) include a *listening* section, as well as a section on reading and writing. Questions include true-false, matching, and short answer. Sample texts also are included about which questions are asked. Answers to questions require comprehension of meaning. An essay question requires analysis of ideas and concepts, too. (4) AICE sample examinations for Mandarin Chinese and Portuguese had no comparable counterparts in the sample examinations for IB.

Language B/Foreign Languages. For the second language subjects, both the IB and AICE examinations provide written passages about which questions are asked. The IB sample examinations for Spanish (Language B) include longer essay passages (e.g., a 400-word essay for IB and a 100–130-word essay for AICE). The AICE examination also includes assessment of listening skills. The AICE sample examinations contain a greater variety of questions. Regardless of format, most of the questions focus on recall and comprehension of meaning. A few questions engage the examinees in reflective analysis of simple concepts contained in selected passages.

Sample History Examination Requirements

IB	AICE
HIGHER AND STANDARD LEVEL, PAPER 1 EXAMINATION TIME: 1 HOUR	PAPER 1, THE WORLD SINCE 1945 EXAMINATION TIME: 2 HOURS 30 MINUTES
Answer all four questions on either Section A, or B, or C. Each section covers a different set of historical events related to different geographical regions spanning the years from 1917 through the end of 1946. Each contains several source documents about which questions are asked. Answers to questions require analysis of concepts, critical thinking, and evaluation of issues.	Answer THREE questions, each from a different theme. Choose from two questions for each theme (conflict, economic development, independence movements and decolonization, race relations, ideology and belief, and international cooperation). The questions require brief essay responses. The answers require analysis of issues and judgement.
HIGHER AND STANDARD LEVEL, PAPER 2 EXAMINATION TIME: 1 HOUR 30 MINUTES	
Answer 30 questions, 5 on each of 6 Twentieth Century World History Topics (causes, practices and effects of war; nationalist and independence movements, decolonization and challenges facing new states; the rise and rule of single-party states; the establishment and work of international organizations; the Cold War; the state and its relationship with religion and with minorities). The questions are short answer. The answers require analysis of issues and judgement.	
HISTORY-AMERICAS, HIGHER LEVEL, PAPER 3, EXAMINATION TIME: 2 HOURS 30 MINUTES	PAPER 2, THE WORLD SINCE 1945 EXAMINATION TIME: 2 HOURS

Answer 25 questions. The questions are short-answer. The answers require fast recall of information as well as analysis of issues and judgement.	Answer all SIX questions using the sources specifically cited with the question. The background information and any of the 9 source documents provided with the examination also may be referenced. Each source document, such as sample news releases, takes from about a third to a half of a page (total of 4 pages). The questions require analysis of issue and judgement.
HIGHER LEVEL, HISTORY-AFRICA, HISTORY-SOUTH ASIA AND THE MIDDLE EAST (INCLUDING NORTH AFRICA), HISTORY-EAST AND SOUTHEAST ASIA AND OCEANIA, AND HISTORY-EUROPE (EACH AS PAPER 3)	
Follow the same format and have the same number of questions requiring analysis of issues and judgement. The time for each is 2 HOURS 30 MINUTES.	

History. For the subject of History, both the IB and AICE examinations provide *source documents* related to major historical events or news reports about which questions are asked. The examinees must read the source documents and questions, then analyze and form judgements to explain specific ideas contained in the documents. The IB examination format includes excerpts from source documents along with the questions, whereas the AICE examination format provides source documents separately. Both sets of sample examinations include questions organized around major themes.

The topics of the sample examinations reviewed from the IB and AICE are not directly comparable. For example the AICE sample examinations cover "The World since 1945" while the IB examinations cover the same time period plus the history of specific countries.

The IB and AICE examinations seem to focus equally on analysis and judgement. The IB format requires fast recall of information in addition to analysis and judgement and requires coverage of more specific issues. The AICE format requires greater synthesis of ideas, longer responses to fewer questions, and use of source documents.

Content for IB examinations includes events of political and economic acts of revolution; foreign policy and origins of the Second World War; the Cold War; causes, practices, and effects of war; the rise and rule of single-party states; the establishment and work of international organizations; and factors affecting colonization. Content for the AICE examinations includes events of historical conflict, economic development, independence movements and decolonization, race relations, ideology and belief, international cooperation, and political actions—terrorism, resistance, hijackings.

Sample Biology Examination Requirements

IB	**AICE**
STANDARD LEVEL, PAPER 1, EXAMINATION TIME: 43 MINUTES	BIOLOGY, PAPER 1, CORE, EXAMINATION TIME: 2 HOURS
Answer EACH of 30 multiple-choice questions. Answers require fast recall of information and procedural knowledge, interpretation of graphs, application of concepts and rules, and analysis of data.	SECTION A: Answer FIVE questions, each spanning 1–2 pages and containing multiple parts. Responses require analysis of data, recall of procedural knowledge, recall of other verbal information, classification of concepts, analysis of experimental procedures and result, and analysis of chemical processes. Questions are short answer format.
STANDARD LEVEL, PAPER 2, EXAMINATION TIME: 1 HOUR	

SECTION A: Answer THREE multipart short-answer questions. Answers require analysis of data and graphs, recall and application of concepts and rules, and analysis of biological processes.	SECTION B: Answer TWO of four 2-part questions. Answers require recall of verbal information and some analysis of concepts and rules. Questions are short-answer/brief essay format.
SECTION B: Answer ONE of three multipart essay questions. Answers require recall of information. STANDARD LEVEL, PAPER 3, EXAMINATION TIME: 1 HOUR 15 MINUTES	PAPER 2, EXAMINATION TIME: 1 HOUR 30 MINUTES
Answer THREE multipart short-answer questions for THREE of seven options: A—Diet and Human Nutrition; B—Physiology of Exercise; C—Cells and Energy; D—Evolution; E—Neurobiology and Behaviour; F—Applied Plant and Animal Science; G—Ecology and Conservation. Answers require recall of information, analysis of concepts and data, application of rules, and formation of judgements.	Answer THREE multipart short-answer questions in Section A, ONE of two multipart short-answer/brief essay questions in Section B, and ONE experimental design essay question in Section C for ONE of three options: 1—Microbiology and Biotechnology; 2—Human Health and Disease; 3—Applied Plant and Animal Biology. Section A answers require interpretation of data, recall of information, application of concepts and rules. Section B answers require recall of information, recall of procedural knowledge, and analysis of various biological processes. Section C requires design of a laboratory experiment including analysis of method, apparatus, observations, and how to draw conclusions.
HIGHER LEVEL, PAPER 1, EXAMINATION TIME: 1 HOUR	
Answer 40 multiple-choice questions. Answers require fast recall of information, application of concepts and rules, and interpretation of data and graphs.	
HIGHER LEVEL, PAPER 2, EXAMINATION TIME: 2 HOURS 15 MINUTES	
Answer THREE multipart short-answer questions in Section A and TWO of four multipart short-answer questions in Section B. Section A answers require analysis of data, analysis and classification of concepts, analysis of judgements, and experimental design. Section B answers require recall of information.	PAPER 4, PRACTICAL TEST, EXAMINATION TIME: 1 HOUR 30 MINUTES Answer TWO multipart short-answer questions. Answers require compliance with experimental procedures, recording of observations and procedures, analysis of observations and conclusions, calculation of results, plotting of data, and classification of concepts. The last section of this sample examination includes a report form to be completed by the teacher describing any substitutions or physical limitations in use of equipment and materials along with any other related comments.
HIGHER LEVEL, PAPER 3, EXAMINATION TIME: 1 HOURS 15 MINUTES	
Answer THREE multipart short-answer questions for TWO of 5 options: D—Evolution; E—Neurobiology and Behaviour; F—Applied Plant and Animal Science; G—Ecology and Conservation; H—Further Human Physiology. Answers require recall of information, analysis of concepts and data, application of rules, and formation of judgements.	

Notes: (1) The AICE sample examinations did not include a Paper 3. (2) The IB includes an examination with sections on Higher Organic Chemistry, Higher Physical Chemistry, Human Biochemistry, Environmental

Chemistry, Chemical Industries, Fuels and Energy, and Further Organic Chemistry. AICE sample examinations for Chemistry include a practical test. AICE includes an examination with sections on Phase Equilibria, Biochemistry, Spectroscopy, and Environmental Chemistry. Both the AICE and IB sample examinations require recall of information and application of concepts and rules, including interpretation of formulae and equations. IB examination topics include acid-base, aqueous solutions, boiling point, boiling points, bonding, bonds, buffer solution, calculations, catalyst, chemical reactions, coefficient, decomposition, electrical conductors, electron configuration, electronic structure, elements, enthalpy, enzymes, equations, equilibrium, formulae, gas reactions, global warming, hormones, intermolecular form, isomers, isotope, justification, minerals, molecule, molecules, nuclear reactions, organic compounds, oxidation, periodic table, photosynthesis, pollutants, protein structure, reactants, spectroscopic analysis, thermal, catalytic, and hydrocracking, thermodynamics, and water solubility. AICE examination topics include absorption, acids, allotropes, amino acids, anions, aqueous cations, atomic mass, bonding, catalyst, CFCs, chemical reactions, chemical tests, chromatography, coefficients, compounds, concentrations, distillation, electrons, energy, enzymes, equations, experimental procedure, formulae, gases, homologous series, ionization, isotopes, laboratory procedures, macromolecules, mass, mass spectrum, minerals, molecule, neutrons, NMR spectra, oxidation, polymers, protein structure, protons, qualitative analysis, reagent, sampling, solids, solvent, solvent extraction, synthetic drugs, and volume.

Biology. For the subject of Biology, IB includes two sample examinations requiring responses for three of seven options: Diet and Human Nutrition, Physiology of Exercise, Cells and Energy, Evolution, Neurobiology and Behaviour, Applied Plant and Animal Science, Ecology and Conservation, and Further Human Physiology. The IB sample examinations include multiple themes from which to choose. The AICE examinations include a *practical test* of laboratory procedures. The AICE program includes an examination requiring responses for one of three options: Microbiology and Biotechnology, Human Health and Disease, or Applied Plant and Animal Biology.

Both the IB and AICE examinations contain questions that require reflection on concepts, application of rules, recall of information, and critical thinking or evaluation. Both require short-answer constructed responses. The IB examination includes extensive multiple-choice questions, too, for both Standard and Higher Level examinations. Both programs give examinees choices about which questions to answer.

Sample Mathematics Examination Requirements

IB	AICE
MATHEMATICAL METHODS, SUBSIDIARY LEVEL, PAPER 1 EXAMINATION TIME: 1 HOUR 30 MINUTES	MATHEMATICS, PAPER 1, EXAMINATION TIME: 2 HOURS
PAPER 1: Answer 20 questions, including several multipart questions. Answers require application of concepts and rules to perform calculations.	Answer 12 questions, most containing two or three parts. Answers require application of concepts and rules to perform calculations and solve equations.
MATHEMATICAL METHODS, SUBSIDIARY LEVEL, PAPER 2 EXAMINATION TIME: 1 HOUR 30 MINUTES	MATHEMATICS, PAPER 2, EXAMINATION TIME: 2 HOURS
SECTION A: Answer 4 questions, each with three or four parts. Answers require application of concepts and rules to perform calculations and solve equations.	Answer 9 questions, most containing three or four parts. Answers require application of concepts and rules to perform calculations and solve equations.
SECTION B: Answer ONE of 2 questions, each with nine or ten parts. Answers require application of concepts and rules to perform calculations and to solve equations.	FURTHER MATHEMATICS, PAPER 1, EXAMINATION TIME: Answer 9 questions, most with two or three parts. Answers require application of concepts and rules to perform calculations and solve equations.

MATHEMATICAL STUDIES, SUBSIDIARY LEVEL, PAPER 1 EXAMINATION TIME: 1 HOUR 30 MINUTES	FURTHER MATHEMATICS, PAPER 2, STATISTICS, EXAMINATION TIME: 2 HOURS
Answer 20 questions, most with two to four parts. Answers require application of concepts and rules to perform calculations and solve problems.	Answer 8 questions, most with two or three parts. Answers require application of concepts and rules to perform calculations and solve problems.
MATHEMATICAL STUDIES, SUBSIDIARY LEVEL, PAPER 2 EXAMINATION TIME: 1 HOUR 30 MINUTES	FURTHER MATHEMATICS, PAPER 3, MECHANICS: 2 HOURS
SECTION A: Answer 4 questions, each with three or four parts. Answers require application of concepts and rules to perform calculations and solve problems.	Answer 9 questions, most with two or three parts. Answers require application of concepts and rules to perform calculations and to solve problems.
SECTION B: Answer ONE of 3 questions, each with four to five parts. Answers require application of concepts and rules to perform calculations and solve equations and problems.	MATHEMATICS, STATISTICS, PAPER 1: 1 HOUR 30 MINUTES
	Answer 8 questions, each with one to five parts. Answers require application of concepts and rules to perform calculations and solve problems.
ADVANCED MATHEMATICS, SUBSIDIARY LEVEL, PAPER 1 EXAMINATION TIME: 1 HOUR	MATHEMATICS, STATISTICS, PAPER 2: 1 HOUR 30 MINUTES
Answer 10 questions, most with two to four parts. Answers require application of concepts and rules to perform calculations.	Answer 5 questions, each with two to seven parts. Answers require application of concepts and rules to perform calculations and solve problems.
ADVANCED MATHEMATICS, SUBSIDIARY LEVEL, PAPER 2 EXAMINATION TIME: 2 HOURS 30 MINUTES	
Answer 5 questions, each with two or three parts. Answers require application of concepts and rules to perform calculations and solve equations.	
MATHEMATICS, HIGHER LEVEL, PAPER 1 EXAMINATION TIME: 2 HOURS	
PAPER 1: Answer 20, including several multipart questions. Answers require application of concepts and rules to perform calculations and solve equations and problems.	
MATHEMATICS, HIGHER LEVEL, PAPER 2 EXAMINATION TIME: 2 HOURS 30 MINUTES	
SECTION A: Answer 4 questions, each with three to five parts. Answers require application of concepts and rules to perform calculations and solve equations and problems.	
SECTION B: Answer ONE of 4 questions. Questions contain from five to fourteen parts. Themes include Abstract Algebra, Graphs and Trees, Statistics, and Analysis and Approximation. Answers require recall of information, and the application of concepts and rules to perform calculations and solve equations and problems.	

Note: IB program examination questions include questions about population distribution and age, dependency ratio, geographical hazards, rank correlation coefficients of geographic factors, growth of suburbs and cities, factors and impact of population changes, local and global responses to geographic hazards, topographic mapping, analysis of natural environments, and analysis of resources. AICE examination questions include questions about natural ecosystems, environmental interventions, natural environments, maps, diagrams, environmental data, relationships affecting production and world population, impact of population size and movements, energy consumption, location and change of industries, and weather prediction and climatic variation.

Mathematics. For the subject of Mathematics, both the IB and AICE examinations provide questions that require the use of rules to compete calculations, the analysis of concepts and application of rules to solve practical problems, and the formation and justification of judgements and conclusions. Both sets of sample examinations provide examinees with formulae and other supporting information such as graph paper and statistical tables. Very few options are provided for examinees for sample examinations in this subject area—only two of the eight sample IB examinations included any options and none of the AICE examinations included options.

The IB curriculum titles are Mathematics, Mathematical Methods, Mathematical Studies, and Advanced Mathematics. The AICE curriculum titles are Math Studies, Math Methods, Mathematics, and Advanced Mathematics, all of which belong to Group A.

APPENDIX C: IB FEES

Scale of fees		Currency			
		CHF*	USD*	GBP*	CAD*
AFFILIATION FEE		2500	2000	1250	2600
ANNUAL SUBSCRIPTION					
1	**Basic fee**	10200	7300	4500	9600
2	***Per capita fees***				
2.1	Per diploma (D) candidate	175	125	78	165
	All six subjects in a single session				
2.3	Per diploma (D) candidate	80	55	34	75
	Anticipated subject(s) in previous session				
2.2	Per anticipated (A) candidate	95	70	44	90
2.4	Per retake (R) candidate	95	70	44	90
2.5	Per certificate (C) candidate	95	70	44	90
EXAMINATION FEES					
3	**Registration fees**				
3.1	Per diploma (D) candidate	90	65	45	85
	All six subjects in a single session				
3.3	Per diploma (D) candidate	26	20	15	22
	Anticipated subject(s) in previous session				
3.2	Per anticipated (A) candidate	64	45	30	63
3.4	Per retake (R) candidate	64	45	30	63
3.5	Per certificate (C) candidate	64	45	30	63
4	**Subject fees per candidate**				
4.1	Per HL or SL subject	68	48	34	62
	Including School-based Syllabuses				
4.2	Per extended essay	44	30	20	40
5	**Subject fees per school**				
	Only for schools with diploma candidates				
	For Theory of Knowledge	440	300	200	400
6	**Amendments to registration data between the first and final registration deadlines**				
6.1	Fee per subject, level and response language	32	22	15	31
6.2	Fee per extended essay	32	22	15	31
6.3	Amendments to personal details (non-IBNET schools)	21	15	10	20

*CHF = Swiss Francs
USD = United States Dollars
GBP = Great Britain Pounds
CAD = Canadian Dollars

		CHF	USD	GBP	CAD
7	**Registration of new candidates after the first registration deadline**				
7.1	*Per capita* fees				
	Per diploma (D) candidate	175	125	78	165
	All six subjects in a single session				
	Per diploma (D) candidate	80	55	34	75
	Anticipated (A) subject in previous session				
	Per anticipated (A) candidate	95	70	44	90
	Per retake (R) candidate	95	70	44	90
	Per certificate (C) candidate	95	70	44	90
7.2	Registration fee per candidate	133	95	64	125
	No fee for extra certificate (E) candidates				
7.3	Subject fee per HL or SL subject	83	60	40	78
7.4	Fee per extended essay	53	38	25	50
8	**Amendments to registration data after the final registration deadline**				
	Only accepted in exceptional circumstances				
8.1	Fee for each amendment to personal details	21	15	10	20
8.2	Fee for each amendment to a subject, level and response language	117	84	58	110
8.3	Fee for each amendment to an extended essay	117	84	58	110
9	**Replacement diploma or certificates**				
	Fee per copy	64	45	30	63
10	**Issue of certificates**				
	Requested change of category from anticipated subject to certificate				
	Fee per certificate	90	70	50	80
ADDITIONAL SERVICES					
11	**Early results service**				
	Fee per candidate	160	114	80	150
12	**Individual school reports**				
	Fee per subject and level	213	152	105	200
13	**Enquiry on results**				
13.1	Category 1: per candidate/subject/level	90	70	50	100
13.2	Late request for a report per candidate/subject/level in addition to category 1	90	70	50	100
13.2	Category 2: per candidate/subject/level	135	105	75	150
13.3	Category 3: per subject/level up to 10 candidates	426	305	210	400
13.4	Category 3: for each additional candidate over 10 candidates	22	15	10	20
14	**Legalization fees**				
	Details available upon request from IBHQ and in April issue of *Coordinator Notes.*	-	-	-	-
15	**Issue of results**				
	By courier	30	25	15	35

Source: IBO, 1998b, p. H6–7.

APPENDIX D: SURVEY INSTRUMENTS

International Baccalaureate Program

Student Survey

We need your help.

In 1997, the Florida Legislature mandated an evaluation to compare the International Baccalaureate (IB) and Advanced International Certificate of Education (AICE) programs. The Florida Department of Education contracted with Educational Services Program at Florida State University to conduct this evaluation.

As part of the study, we are surveying students who are participating in the IB Program. Please take a few minutes to answer the following questions about the program's performance.

Your response will be treated with strict confidence. All information will be seen and reviewed only by the evaluation team at Florida State University.

When you have completed the survey, fold and place it in the postage-paid, pre-addressed envelope provided and drop it in the mail. If your parents have completed the Parent's Comments page, include it in the same envelope with your survey form. Thank you for your participation.

Directions: Please check (4) the best answer or write your answer in the space provided. If you need more space for the open-ended questions, please use the back of the page where the question appears.

1. The IB Program conveys a friendly, helpful atmosphere.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

2. The IB coordinator has helped me understand the program and how it can help me reach my goals.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

3. Teachers in the IB Program are skillful and knowledgeable in their subject areas.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

4. Guidance counselors in the program are well qualified.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

5. My guidance counselor has helped me select my courses and plan for college.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

6. The program should provide IB students more time for conferences with teachers and guidance counselors.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

7. Courses in the IB Program are harder and more demanding than regular courses.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

8. There are not enough course options in the IB Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

9. The content of some IB courses is of no value to me.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

10. The Creativity, Action, Service (CAS) requirement is a beneficial part of the IB Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

11. CAS hours take up too much time.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

12. I find the Theory of Knowledge (TOK) course to be of great value.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

13. I find the extended essay requirement to be of great value.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

14. Students in the IB Program all obey the honor code.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

15. The IB Program should have better discipline and safeguards against cheating.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

16. Participation in the IB Program lets me challenge myself to do my best work.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

17. Participation in the IB Program is good preparation for college.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

18. Participation in the IB Program should help me get a college scholarship.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

19. I expect to get the International Baccalaureate Diploma when I graduate.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

20. I expect to get college credit for some of the IB Program courses.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

21. My family is happy about my participation in the IB Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

22. Too much work is expected from students in the IB Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

23. I sometimes find participation in the IB Program very stressful.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

24. There are not enough group activities for IB students.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

25. I am exposed to new people and ideas in the IB Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

26. Participation in the program makes it difficult for IB students to mingle with students outside the program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

27. Participation in the IB Program has not interfered with my taking part in extracurricular activities.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

28. I have participated in the following extracurricular activities while in the IB Program:

a. _____

b. _____

c. _____

d. _____

29. Check the reasons, if any, that the IB Program has interfered with your participation in extracurricular activities.

- ❑ I have too little time left after homework.
- ❑ The IB Program schedule conflicts with activity schedules.
- ❑ The IB Program administrators discourage participation in most nonprogram activities.
- ❑ Other. Please explain.

_____

_____

30. Participation in the IB Program has not interfered with my having a job.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

31. Some students do not participate in the IB Program due to the high cost of field trips, projects that require special books, a computer, etc.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

32. Check the ways, if any, that participation in the IB Program has helped you improve.

- ❑ My study skills are better.
- ❑ I organize and manage my time better.
- ❑ I am interested in things I didn't know about before I entered the program.
- ❑ I am better able to separate factual information from material designed to persuade me.
- ❑ Other. Please explain.

_____

_____

33. Please list changes to the program you would like to see.

_____

_____

_____

_____

_____

_____

_____

_____

Advanced International Certificate of Education Program

Student Survey

We need your help.

In 1997, the Florida Legislature mandated an evaluation to compare the Advanced International Certificate of Education (AICE) and International Baccalaureate (IB) programs. The Florida Department of Education contracted with Educational Services Program at Florida State University to conduct this evaluation.

As part of the study, we are surveying students who are participating in the AICE Program. Please take a few minutes to answer the following questions about the program's performance.

Your response will be treated with strict confidence. All information will be seen and reviewed only by the evaluation team at Florida State University.

When you have completed the survey, fold and place it in the postage-paid, pre-addressed envelope provided and drop it in the mail. If your parents have completed the Parent's Comments page, include it in the same envelope with your survey form. Thank you for your participation.

Directions: Please check (4) the best answer or write your answer in the space provided. If you need more space for the open-ended questions, please use the back of the page where the question appears.

1. The AICE Program conveys a friendly, helpful atmosphere.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

2. The AICE coordinator has helped me understand the program and how it can help me reach my goals.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

3. Teachers in the AICE Program are skillful and knowledgeable in their subject areas.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

4. Guidance counselors in the program are well qualified.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

5. My guidance counselor has helped me select my courses and plan for college.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

6. The program should provide AICE students more time for conferences with teachers and guidance counselors.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

7. Courses in the AICE Program are harder and more demanding than regular courses.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

8. There are not enough course options in the AICE Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

9. The content of some AICE courses is of no value to me.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

10. Students in the AICE Program all obey the rules in the student handbook and the county code of conduct.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

11. The AICE Program should have better discipline and safeguards against cheating.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

12. Participation in the AICE Program lets me challenge myself to do my best work.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

13. Participation in the AICE Program is good preparation for college.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

14. Participation in the AICE Program should help me get a college scholarship.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

15. I expect to get the AICE Certificate when I graduate.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

16. I expect to get college credit for some of the AICE Program courses.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

17. My family is happy about my participation in the AICE Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

18. Too much work is expected from students in the AICE Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

19. I sometimes find participation in the AICE Program very stressful.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

20. There are not enough group activities for AICE students.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

21. I am exposed to new people and ideas in the AICE Program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

22. Participation in the program makes it difficult for AICE students to mingle with students outside the program.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

23. Participation in the AICE Program has not interfered with my taking part in extracurricular activities.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

24. I have participated in the following extracurricular activities while in the AICE Program:

a. _____

b. _____

c. _____

d. _____

25. Check the reasons, if any, that the AICE Program has interfered with your participation in extracurricular activities:

- ❑ I have too little time left after homework.
- ❑ The AICE Program schedule conflicts with activity schedules.
- ❑ The AICE Program administrators discourage participation in most nonprogram activities.
- ❑ Other. Please explain.

_____

_____

26. Participation in the AICE Program has not interfered with me having a job.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

27. Some students do not participate in the AICE Program due to the high cost of field trips, projects that require special books, a computer, etc.

- ❑ 1 = strongly agree
- ❑ 2 = agree
- ❑ 3 = undecided
- ❑ 4 = disagree
- ❑ 5 = strongly disagree
- ❑ 6 = don't know

28. Check the ways, if any, that participation in the AICE Program has helped you improve.

- ❑ My study skills are better.
- ❑ I organize and manage my time better.
- ❑ I am interested in things I didn't know about before I entered the program.
- ❑ I am better able to separate factual information from material designed to persuade me.
- ❑ Other. Please explain.

_____

_____

29. Please list changes to the program you would like to see.

_____

_____

_____

_____

_____

_____

_____

International Baccalaureate Program

Graduate Survey

We need your help.

In 1997, the Florida Legislature mandated an evaluation to compare the International Baccalaureate (IB) and Advanced International Certificate of Education (AICE) programs. The Florida Department of Education contracted with Educational Services Program at Florida State University to conduct this evaluation.

As part of this study we would like to know how the IB program has contributed to your post-high school experiences. Please take a few minutes to answer the following questions about the program.

Your responses will be treated with strict confidence. All information will be seen and reviewed only by the evaluation team at Florida State University.

When you have completed the survey, fold and place it in the postage paid, preaddressed envelope provided and **mail it by August 31, 2000.** If your parents have completed the parents' comments page, include it in the same envelope with your survey form. Thank you for your participation in this study.

Directions: Please check (4) the best answer or write your answer in the space provided. If you need more space for the open-ended questions, please use the back of the page where the question appears.

1. What is your gender?

Male ____
Female ____

2. What was your age when you graduated from high school?

Below 17____
17 ____
18 ____
Over 18____

3. Did you receive an IB Diploma when you graduated?

Yes ____
No ____

4. What college or university did you attend in the FALL OF 1999?

_____

5. If you did not attend a college or university, check the item below that best describes what you did.

Attended vocational-technical school _____
Joined a military service _____
Worked _____
Traveled _____
Attended to family responsibilities _____
Other _____

6. What was your grade point average for the FALL OF 1999? _____

7. What is your major at the college or university?

Major _____ Undecided ____

8. What is your minor?

Minor _____ Undecided ____

9. For which high school courses did you receive college credit? Please list the high school and college course names and course numbers below. If you took college courses in high school, write Dual Enrollment in the space provided for college. If you need more space, please use the back of this page.

High School	College

10. How often did you interact with other IB students in the FALL OF 1999?

Never or rarely ____
Seldom ____
Occasionally ____
Often ____

11. Would you have liked more interaction with other IB students during that time?

Yes ____
No ____

12. Please rate the following features of the IB program according to their value as preparation for your college studies.

Program Feature	Excellent	Good	Useful	Little Value	No Value
Program as general preparation for college					
Program as preparation for your special field of study					
Program emphasis on foreign language					
Program emphasis on mathematics					
Extended essay component					
Theory of knowledge component					
Course work					
Difficulty level of IB tests					
CAS activities					
Program emphasis on internationalism					

13. Would you recommend the IB program to high school students?

Yes, with enthusiasm ____
Strongly yes ____
Yes, with reservations ____
Not for this college ____

14. Do you think that your participation in the IB program has been of benefit to you or your parents financially (decreasing the cost of college tuition)?

_____

_____

_____

15. Do you think that the overall benefits you have obtained as a result of your participation in the IB program are worth the effort you put into the program?

_____

_____

_____

16. Do you feel that being a part of the IB program interfered with or enhanced your social experiences in high school?

_____

_____

_____

17. Have you had any difficulty in obtaining college credit for your IB course work?

Yes ____
No ____

If yes, please explain: _____

_____

_____

18. Please comment on any aspect of your post-high school experiences as they relate to the IB program. Use the remainder of this page for your comments.

Advanced International Certificate of Education (AICE) Program

Graduate Survey

We need your help.

In 1997, the Florida Legislature mandated an evaluation to compare the Advanced International Certificate of Education (AICE) and International Baccalaureate (IB) programs. The Florida Department of Education contracted with Educational Services Program at Florida State University to conduct this evaluation.

As part of this study we would like to know how the AICE program has contributed to your post-high school experiences. Please take a few minutes to answer the following questions about the program.

Your responses will be treated with strict confidence. All information will be seen and reviewed only by the evaluation team at Florida State University.

When you have completed the survey, fold and place it in the postage paid, preaddressed envelope provided and **mail it by August 31, 2000.** If your parents have completed the parents' comments page, include it in the same envelope with your survey form. Thank you for your participation in this study.

Directions: Please check (4) the best answer or write your answer in the space provided. If you need more space for the open-ended questions, please use the back of the page where the question appears.

1. What is your gender?

Male ____
Female ____

2. What was your age when you graduated from high school?

Below 17 ____
17 ____
18 ____
Over 18 ____

3. Did you receive an AICE Certificate when you graduated?

Yes ____
No ____

4. What college or university did you attend in the FALL OF 1999?

_____

5. If you did not attend a college or university, check the item below that best describes what you did.

Attended vocational-technical school _____
Joined a military service _____
Worked _____
Traveled _____
Attended to family responsibilities _____
Other _____

6. What was your grade point average for the FALL OF 1999? _____

7. What is your major at the college or university?

Major _____Undecided____

8. What is your minor?

Minor _____Undecided____

9. For which high school courses did you receive college credit? Please list the high school and college course names and course numbers below. If you took college courses in high school, write Dual Enrollment in the space provided for college.

High School	College

10. How often did you interact with other AICE students in the FALL OF 1999?

Never or rarely____
Seldom ____
Occasionally ____
Often ____

11. Would you have liked more interaction with other AICE students during that time?

Yes ____
No ____

12. Please rate the following features of the AICE program according to their value as preparation for your college studies.

Program Feature	Excellent	Good	Useful	Little Value	No Value
Program as general preparation for college					
Program as preparation for your special field of study					
Program emphasis on foreign language					
Program emphasis on mathematics					
Course work					
Difficulty level of AICE tests					
Program emphasis on internationalism					

13. Would you recommend the AICE program to high school students?

Yes, with enthusiasm ____
Strongly yes ____
Yes, with reservations ____
Not for this college ____

14. Do you think that your participation in the AICE program has been of benefit to you or your parents financially (decreasing the cost of college tuition)?

_____

_____

_____

15. Do you think that the overall benefits you have obtained as a result of your participation in the AICE program are worth the effort you put into the program?

_____

_____

_____

16. Do you feel that being a part of the AICE program interfered with or enhanced your social experiences in high school?

_____

_____

_____

17. Have you had any difficulty in obtaining college credit for your AICE course work?

Yes ____
No ____

If yes, please explain:_____

_____

18. Please comment on any aspect of your post-high school experiences as they relate to the AICE program. Use the remainder of this page for your comments.

International Baccalaureate Program

Teacher Survey

In 1997 the Florida Legislature mandated an evaluation to compare the International Baccalaureate (IB) and Advanced International Certificate of Education (AICE) programs. The Florida Department of Education contracted with the Educational Services Program of Florida State University to conduct this evaluation.

As part of the study, we are surveying teachers who are participating in the IB Program. Could you please provide the information requested below. When you have completed the survey, place it in the postage-paid, pre-addressed envelope provided and mail it. All of your responses will be held in strict confidence and will be seen only by the evaluation team at Florida State University. Thank you for your help with this study.

Directions: Please check (3) the best answer or write your response on the lines provided.

1. County in which you teach:

- ❑ Bay
- ❑ St. Johns

2. Your major areas of study:

Undergraduate major(s) _____

Undergraduate minor(s) _____

Graduate major(s) _____

Graduate minor(s) _____

3. Number of years teaching experience: _____

4. Number of years teaching IB and IB-related courses (i.e., Honors, AP): _____

5. IB and IB-related courses that you have taught since the program began at your school:

a. _____

b. _____

c. _____

d. _____

e. _____

6. Average number of students in your current IB or IB-related classes? _____

7. Non-IB courses that you currently teach:

a. _____

b. _____

c. _____

d. _____

e. _____

8. Non-teaching IB responsibilities you perform in an academic year:

a. _____

b. _____

c. _____

d. _____

e. _____

9. Number of IB teacher-training workshops attended: _____

10. How satisfied were you with the workshop(s)? Please check (3) one.

- ❑ 1 = very unsatisfied
- ❑ 2 = unsatisfied
- ❑ 3 = uncertain
- ❑ 4 = satisfied
- ❑ 5 = very satisfied

Please explain your rating below:

_____

_____

_____

11. Please respond to the following items by placing a check (3) under the category that most closely reflects your feelings about the IB Program.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. The IB Program fosters a high level of competence in the following skills:					
a. Research					
b. Writing					
c. Math					
d. Oral expression					
e. Citizenship					
2. The IB Program does a good job of preparing students for college.					
3. IB students are better prepared for college than similar students who are not part of the program.					
4. The IB Program provides appropriate educational environment for individual students with varying abilities.					
5. Instructional materials for IB courses are adequate.					

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
6. IB exams are fair.					
7. Morale is high among IB students.					
8. Some classes taken by IB students are too large.					
9. IB students are well integrated into the whole student body.					
10. IB students do not have enough time for extra-curricular activities or jobs.					
11. IB students are subjected to high level of program-induced stress.					
12. Too many students drop out of the IB Program.					
13. Minority students are encouraged to apply to the IB Program.					
14. IB Program requirements are sometimes modified to meet the needs of exceptional (ESE) students.					
15. The IB Program has the reputation of being an elitist program.					
16. Creativity, Action, Service (CAS) hours take up too much time.					
17. The Theory of Knowledge (TOK) course is of great value to students.					
18. The IB parent organization is well organized.					
19. The IB parent organization is very productive and supportive.					

12. Please describe changes in the IB Program that you believe would make it stronger.

Advanced International Certificate of Education

Teacher Survey

In 1997, the Florida Legislature mandated an evaluation to compare the Advanced International Certificate of Education (AICE) and International Baccalaureate (IB) programs. The Florida Department of Education contracted with the Educational Services Program of Florida State University to conduct this evaluation.

As part of the study, we are surveying teachers who are participating in the AICE Program. Could you please provide the information requested below. When you have completed the survey, place it in the postage-paid, pre-addressed envelope provided and mail it. All of your responses will be held in strict confidence and will be seen only by the evaluation team at Florida State University. Thank you for your help with this study.

Directions: Please check (**3**) the best answer or write your response on the lines provided.

1. County in which you teach:

- ❑ Bay
- ❑ Lake
- ❑ St. Johns

2. Your major areas of study:

Undergraduate major(s) _____

Undergraduate minor(s) _____

Graduate major(s) _____

Graduate minor(s) _____

3. Number of years teaching experience: _____

4. Number of years teaching AICE and AICE-related courses (i.e., Honors, AP): _____

5. AICE and AICE-related courses that you have taught since the program began at your school:

a. _____

b. _____

c. _____

d. _____

e. _____

6. Average number of students in your current AICE or AICE-related classes? _____

7. Non-AICE courses that you currently teach:

a. _____

b. _____

c. _____

d. _____

e. _____

8. Non-teaching AICE responsibilities you perform in an academic year:

a. _____

b. _____

c. _____

d. _____

e. _____

9. Number of AICE course workshops attended: _____

10. How satisfied were you with the workshop(s)? Please check (3) one.

- ❑ 1 = very unsatisfied
- ❑ 2 = unsatisfied
- ❑ 3 = uncertain
- ❑ 4 = satisfied
- ❑ 5 = very satisfied

Please explain your rating below:

_____

_____

_____

11. Have you participated in AICE distance training?

- ❑ yes
- ❑ no

If yes, how satisfied were you with the training?

- ❑ 1 = very unsatisfied
- ❑ 2 = unsatisfied
- ❑ 3 = uncertain
- ❑ 4 = satisfied
- ❑ 5 = very satisfied

Please explain your rating below:

_____

_____

_____

12. Please respond to the following items by placing a check (3) under the category that most closely reflects your feelings about the AICE Program.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. The AICE Program fosters a high level of competence in the following skills:					
a. Research					
b. Writing					
c. Math					
d. Oral expression					
e. Citizenship					
2. The AICE Program does a good job of preparing students for college.					
3. AICE students are better prepared for college than similar students who are not part of the program.					
4. The AICE Program provides appropriate educational environment for individual students with varying abilities.					
5. Instructional materials for AICE courses are adequate.					
6. AICE exams are fair.					
7. Morale is high among AICE students.					
8. Some classes taken by AICE students are too large.					

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
9. AICE students are well integrated into the whole student body.					
10. AICE students do not have enough time for extracurricular activities or jobs.					
11. AICE students are subjected to high level of program-induced stress.					
12. Too many students drop out of the AICE Program.					
13. Minority students are encouraged to apply to the AICE Program.					
14. The AICE Program requirements are sometimes modified to meet the needs of exceptional (ESE) students.					
15. The AICE parent organization is well organized.					
16. The AICE parent organization is very productive and supportive.					

On the remainder of this page, please describe changes in the AICE Program that you believe would make it stronger. Use the back of this page if you need more space.