The "Institutional Research Bulletin" is a collection of research summaries relating to Kapi'olani Community College (KCC) in Hawaii. Highlights from the 1994 volume (February-December) include: (1) the Health Science Entry survey; (2) learning from student writers in developmental English; (3) factors affecting academic performance in biology; (4) spring 1994 enrollment summary; (5) study of student overbooking of courses; (6) demand for social science offerings; (7) status of the KCC library collections; (8) units earned as a basis for registration priority; (9) program health indicator definitions; (10) resources for repeating math courses; (11) size and student performance in English; (12) completion rates in mathematics; (13) Group Instructional Feedback Technique; (14) KCC operating budget; (15) counseling effectiveness survey; (16) reading habits--faculty and student perception; (17) factors affecting academic performance in zoology; (18) fall 1994 enrollment summary; (19) liberal arts success rates after math and English; (20) fall 1994 registration trends; (21) mail-in registration trends; (22) performance of hospitality industry graduates; (23) smoking behavior among health majors; (24) where do KCC students come from?; (25) ability of KCC placement tests to predict academic status; (26) prerequisite status of English 100; (27) withdrawal patterns; and (28) index of "Institutional Research Bulletin," Volume 2 authors and titles. (RDG)
Return of the Health Science Entry Survey

Steve Wehrman
Respiratory Care

Survey information about how health science students find out about KCC programs and how they choose among them was reported in a previous IRB issue (Vol. 1, No. 1, Sept. 1993). In Fall 1993, the survey was administered again to 166 students from 7 health career programs to validate the previous findings. Students were asked to indicate the importance of 6 common methods for finding out about health careers and 5 common methods for deciding which career to choose.

*Personal/family experience in a health care setting* continues to be the most highly rated method for finding out about health programs. *Career Kokua* continues to be the least utilized method. The most commonly utilized methods for deciding which career to choose continue to be *Income potential* and *Program orientation*. Here too, program brochures and peer recruiting appear to be effective recruiting approaches, while career counselors are underutilized.

<table>
<thead>
<tr>
<th>Income potential</th>
<th>Program orientation</th>
<th>Friend outside KCC</th>
<th>Counselor</th>
<th>Friend at KCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

These results validate the previous findings even though the students are not from identical health programs.

Learning from Student Writers in English 22

Irena M. Levy
Language Arts

Longitudinal studies were conducted between 1991 and 1993 to investigate what English 22 students do when they compose essays to analyze texts. Studies included *composing aloud (CA) protocols*, standardized instruments that systematically capture what writers are thinking and doing when shaping an essay. Using an adaptation of Sondra Perl's 1979 model, CA protocols of English 22 students were analyzed for choice of writing subprocesses.

Four students completed all CA protocols. The results indicate that each writer displayed uniqueness in the use of various skills in the composing process. Of great interest was the fact that the writers' composing behaviors—as measured by the CA protocols—were far more sophisticated than their written products. It is postulated that the reason for this discrepancy is different expectations of college writing rather than linguistic limitations.

The results of the case studies have been used to:

- deemphasize developmental/remedial aspects of instruction and explore instead student and instructor expectations;
- confer with and assist students using CA as a method of conferencing;
- offer in class examples of success for getting started and for solving writing blocks; and
- incorporate CA protocols into further classroom research, observing students think and compose out loud in response to fiction.
Factors Affecting Academic Performance in Biology

Charles I. Daniels
Anatomy and Physiology

Two types of self-report instruments were given to 143 students taking Biology 130 during Spring and Fall 1992: a battery of three standardized imagery tests (IRB, Vol. 1, No. 2, Oct. 1993) during the initial orientation class, and an advising survey after the second exam, when study habits had been established. The relative influence of numerous variables on performance was investigated by comparing the answers to these instruments with final grades.

The following results were obtained.

- The single most important factor for success was study time.
- Full-time (over 12 credits) students who work for less than 10 hours per week are higher achievers than casual, part-time students.
- One or more prior College biology courses can substantially improve performance in this class. Prior courses in Chemistry or in other "hard sciences" can help but are not critically important. High-school biology, chemistry, and other hard science courses are irrelevant.
- Living closer to school and age maturity improve grades moderately. Gender or the number of dependents do not affect performance.
- English as a second language was found to be irrelevant for student success, as was prior work experience in the medical field.
- A positive and significant relationship was found between academic achievement and imagery control, but not image clarity. Preferred word learners scored no better than preferred picture learners.

Two regression models emerged as serious predictors of performance. These results can be used to advise students on withdrawal and changes needed to improve their grades.

Spring 1994 Enrollment At A Glance

Ralph Ohara
Student Services

As of the end of the registration period, the Spring 1994 total enrollment was 7,295, the highest for a spring semester, and constituting 27 percent of the total UH community college enrollment. Compared to last year, there were 3.3 percent more Lib Art students and 14.8 percent or 57 more FSHE majors.

<table>
<thead>
<tr>
<th>Student Count</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>Spring 1994</td>
<td>Percent Diff. from Spring '93</td>
</tr>
<tr>
<td>Liberal Arts</td>
<td>4,804</td>
<td>3.3</td>
</tr>
<tr>
<td>Business Educ.</td>
<td>657</td>
<td>-5.3</td>
</tr>
<tr>
<td>Food &amp; Hospitality Educ.</td>
<td>440</td>
<td>14.8</td>
</tr>
<tr>
<td>Health Educ.</td>
<td>543</td>
<td>-9.3</td>
</tr>
<tr>
<td>Legal Assisting</td>
<td>137</td>
<td>-2.1</td>
</tr>
<tr>
<td>Unclassified</td>
<td>701</td>
<td>11.2</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>4,376</td>
<td>-1.3</td>
</tr>
<tr>
<td>Males</td>
<td>2,906</td>
<td>1.3</td>
</tr>
<tr>
<td>Attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>2,439</td>
<td>-2.1</td>
</tr>
<tr>
<td>Part time</td>
<td>4,843</td>
<td>2.1</td>
</tr>
<tr>
<td>Tuition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>6,561</td>
<td>-0.3</td>
</tr>
<tr>
<td>Non-resident</td>
<td>721</td>
<td>0.3</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian-Pac. Islander</td>
<td>5,017</td>
<td>-0.3</td>
</tr>
<tr>
<td>Caucasian</td>
<td>1,354</td>
<td>-0.4</td>
</tr>
<tr>
<td>Mixed</td>
<td>669</td>
<td>0.3</td>
</tr>
<tr>
<td>Others</td>
<td>242</td>
<td>0.4</td>
</tr>
<tr>
<td>New,Transfer,Returning</td>
<td>1,808</td>
<td>-2.8</td>
</tr>
</tbody>
</table>

The proportion of registrants for mail-in, STAR, and regular registration remained relatively unchanged. However, there was an increase of 35 percent or 123 students who registered during the late registration period (the first week of instruction). The 470 late registrants represents a 102 percent increase over last year. The increasing unavailability of courses during the regular registration period seems to force more students to wait until class withdrawals are effected by earlier registrants.
Overbooking: Fact or Fiction

James A Jeffryes
Instructional Services

Data were collected from the Fall 1993 student registration file in an attempt to ascertain the magnitude of "overbooking," defined in this study as dropping a class during the first week of instruction and not replacing it with any other.

A total of 3,489 overbookings were counted, for an average of 1.75 overbookings per student. By discipline, the number of overbookings per slot available ranged from 3 percent to 47 percent.

Most and Least Overbooked Disciplines

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Percent per Slot</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMT/OTA/EE</td>
<td>3</td>
</tr>
<tr>
<td>ED</td>
<td>5</td>
</tr>
<tr>
<td>MGT/RAD/DENT</td>
<td>6</td>
</tr>
<tr>
<td>NURS</td>
<td>7</td>
</tr>
<tr>
<td>MLT</td>
<td>8</td>
</tr>
<tr>
<td>RUS/ENT</td>
<td>25</td>
</tr>
<tr>
<td>ICS/ASIAN</td>
<td>27</td>
</tr>
<tr>
<td>PTA/ASTR/HPER</td>
<td>30</td>
</tr>
<tr>
<td>OCEAN</td>
<td>32</td>
</tr>
<tr>
<td>BIOCH</td>
<td>47</td>
</tr>
</tbody>
</table>

The results confirm that a large number of students do overbook. As a consequence, many other students wait in line during the first week of instruction to register in those slots that are released. Possible action could include:

- counseling and advising with highly overbooked courses,
- developing registration and fee policies to discourage overbooking, and
- developing a registration scheme that would allow other students to register early in projected overbooked slots.

Demand for Social Science Offerings

B Michael Tagawa
Geography

The total number of social science slots in Fall 1993 was 2,465 (SS Cap). As shown in the graph, 84 percent of the slots were filled during continuing-student registration (to 8/13, SS Enr), climbing to 98 percent during new/returning student registration (to 8/17), then dropping again to 90 percent by 9/10.

There were 145 drops prior to, 328 drops during the add-drop period (SS Drop), and 111 during the erase period, for a total of 26 percent of the department's enrollment.

These findings suggest that, in Fall 1993, demand for social science classes was less than capacity. Perception of insufficient capacity stems from the temporary saturation observed on 8/17. The same situation would be expected during Fall 1994 given that:

- enrollment could increase to 7,600, raising the estimated demand on social science classes (historically at 30 percent of total enrollment, KCC Enr) to 2,280; and
- a 5-section cut would reduce the number of available slots to 2,290.

Strategies that selectively and temporarily increase class sizes during new student registration or which encourage earlier course dropping may eliminate the shortage expected during new/returning student registration in Fall 1994.
From a collection of about 32,000 volumes in 1988, the library collection has shown rapid, steady growth as a result of strong support at the campus, university, and legislative levels.

For the 1989-91 biennium, the legislature agreed to raise KCC's annual book budget by 50 percent, and appropriated a one-time "catch-up" fund of $500,000. Since then, through continued strong funding and an aggressive campaign to secure corporate and individual donations, the book collection has nearly doubled.

Likewise, periodical subscriptions have increased from about 350 in 1988 to 1,024 currently. This count includes periodicals in paper, microform, and CD-ROM format. In 1988, the library had 209 films and no videotape collection. Currently, the film collection numbers 309 (100 films were transferred to us from Manoa's Wong AV Center), and the video collection numbers 489.

Despite the accelerated growth, however, the collection is still below the Chancellor's minimum standards in some areas. For a college with KCC's enrollment, the standards state that the collection should contain 70,000 volumes and almost 900 videos.

Currently at KCC, there is no priority assigned to the early mail-in registration process for continuing students; registration forms are processed in the order received by the Records Office.

The most common method of assigning registration priority for continuing students at other UH schools is one based upon total credits earned. To obtain an idea of the impact of this arrangement at KCC, credits earned by all KCC students who were registered on 2/16/94 for one or more credit were collected.

The data do not necessarily indicate how close the student is toward earning a degree or certificate. They also do not include credits transferred from other institutions.

One-third of the students fall in the less-than-seven-credits category, while 53 percent have earned less than 16 credits. Thirty percent have 60 credits or more. The largest number of previous credits earned by any student was 164.

Changes in registration priority will neither increase the availability of classes nor satisfy all students and faculty. It is hoped that data such as these will stimulate further campus debate on the matter.
Program Health Indicator Definitions: A Nursing Perspective

Pat Olson
Nursing

A basic paradigm in using program health indicators is the uniformity of the indicator definition across disciplines. Due to the unique nature of the ADN program, this rule may be subject to deviations. Below is a list of indicators that could be defined differently for all of the ADN programs systemwide.

**Majors.** A student becomes a Nursing major upon acceptance to the Nursing program. Pre-nursing students are not to be considered nursing majors. Under the current definition majors are counted as students taking 12 or more credits per semester. In Spring 1994, 81 percent of KCC’s Nursing majors are taking less than 12 credits for a variety of legitimate reasons inherent to the Nursing program. For these students, financial assistance becomes a problem.

**Mission Date and Cohorts.** In the ADN program, for students transferring from another nursing program, the student becomes part of the cohort to which the majority of students in that class belong. Thus, a student transferring in during Fall 1993 to join the first semester of the second year of the ADN program would have an admission date of Fall 1993 but would be part of the Fall 1992 cohort.

**Graduates** A graduate is defined as anyone who completes the program within 1.5 times its length, or within three years of entrance to the ADN program. Because the program admits students twice a year, graduation rates should be computed per semester and not by academic year.

Resources for Repeating Math Courses

James A Jeffryes
Instructional Services

The table below lists the number of students who have enrolled 3 to 6 times in each of 9 mathematics courses during Spring 1994.

<table>
<thead>
<tr>
<th>Math</th>
<th>3 times</th>
<th>4 times</th>
<th>5 times</th>
<th>6 times</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>10</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>64</td>
<td>19</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>25</td>
<td>37</td>
<td>14</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>27</td>
<td>68</td>
<td>21</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>100</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>135</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>140</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>205</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>206</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>78</td>
<td>31</td>
<td>10</td>
</tr>
</tbody>
</table>

The data show that a total of 329 students were enrolled in the same math course for 3 to 6 times. Of these, 98 were enrolled in Math 27 for at least the third time. Multiple enrollments have been found to be typically graded with Fs, Ds, Cs, and Ws, the majority of grades being Ws. Some students enroll in a given course several times before finally attaining the required grade of C or higher.

Limiting multiple enrollment in general-funded courses may result in significant savings. For the case of limiting enrollment to 2 times, the net savings from math courses would be 329 slots or the equivalent of 11 sections. At the lecturer rate of $889 per credit, a total savings of over $25,000 would be realized per semester in math courses only. If enrollment were limited to 3 times, the savings from math courses would amount to over $10,000 per semester.
Class Size, Grade Distribution, and Composition in English Classes

Maureen Bogdanowicz, Meena Sachdeva and Guy Nishimoto
Language Arts

In Fall 1990, the size of ENG 22 and ENG 100 classes was reduced to 23. In Fall 1992, this size was further reduced to 20. A study of grade distribution during this period indicated the same pattern in both courses:

- After the initial reduction was made, the number of students completing ENG 22 and ENG 100 classes with grades C or higher increased steadily while the number of those receiving Fs or Ws decreased.

Completion Rates in Mathematics Courses

Andrew Pak
Mathematics

As of Spring 1991, the Math Department began a course prerequisite checking and enforcement policy. In Fall 1991, the class size for developmental courses was reduced from 35 students to 30 students. Beginning in Fall 1992, a new in-house placement test which addressed specific course competencies went into effect. A study of grade distribution during this period for those courses whose competencies are addressed on the new placement test revealed the completion rates shown below. As a point of reference, the national average for completion rates in mathematics courses at two-year colleges is below 55 percent.

The data is suggestive, but forging a causal link between changes in class size and completion/retention rates would be difficult to justify. A chronology of program changes that occurred during this time period indicates that any one or a combination of modifications, including class size reduction, could explain the improvement in these indices.
An Exchange of GIFTs

Louise Pagotto
Language Arts

Nancy Bushnell
Math/Science

As part of Teachers Talking To Teachers About Teaching, the authors decided to use the Group Instructional Feedback Technique (GIFT), described by Angelo and Cross in Classroom Assessment Techniques: A Handbook for College Teachers to obtain information and feedback about their teaching effectiveness.

On March 10, 1994, each author took over the other's class for the last 30 minutes of the session. Students were asked to (1) give a few examples of things that the teacher does that help them to learn, (2) give a few examples of things that the teacher does that make learning more difficult, and (3) suggest changes for improvement.

Students then shared their responses in small groups. Each group reported to the class the most frequently mentioned items, which were then recorded by the guest teacher on overhead transparencies. The teacher asked the class how many agreed with each item listed. The overheads were later given to the "home" teacher, along with anonymous written feedback that some students chose to submit.

In this particular exchange of GIFTs, students seemed to be giving thoughtful and honest responses about their teacher, since she was not there and would not be able to tell who said what. Teachers got reliable -- and sometimes surprising -- information. Teachers also enjoyed planning, conducting, and discussing the results of the GIFTs with each other. As a result, modifications were made by both teachers to accommodate students' concerns.

Where Does KCC's Money Come From and Go To?

Leslie I Tanaka
Administrative Services

The $22 million operating budget of the College comes from several sources, including:

- general funds from the State;
- special funds mostly from non-credit classes and the summer session;
- revolving funds from food services;
- federal funds mostly for Vocational Education and Special Services; and
- private funds from contributors.

Revenues

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>75%</td>
</tr>
<tr>
<td>Federal</td>
<td>4%</td>
</tr>
<tr>
<td>Special</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>11%</td>
</tr>
</tbody>
</table>

Nearly 60% of these funds are used in support of the instructional programs at the College including faculty salaries, supplies, and equipment. The other 40% are divided relatively equally among the other major program areas.

Expenditures

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>59%</td>
</tr>
<tr>
<td>Acad Support</td>
<td>10%</td>
</tr>
<tr>
<td>Comm. Serv.</td>
<td>9%</td>
</tr>
<tr>
<td>Stu. Serv.</td>
<td>9%</td>
</tr>
<tr>
<td>Instr Support</td>
<td>13%</td>
</tr>
</tbody>
</table>

As general funds become more and more scarce, the College will have to rely on other sources to provide for the continued development and operations of our programs.
Counseling Effectiveness Survey

Mona Lee and Sharoh Moore
Student Services

During Spring 1994, the Counseling Office in Ilima 103 was randomly evaluated by 75 students for quality and effectiveness. The survey consisted of 20 items covering 5 areas: career counseling, academic counseling, counseling services, reception desk, and overall general evaluation.

The overall mean rating was 1.64 on a 3-point scale, where 0 = does not meet expectations and 2 = more than meets expectations. Individual items which received the highest rating dealt with rapport (1.83), outcome (1.80), and confidentiality (1.77). These three criteria are basic and critical factors that determine counseling success.

Lowest ratings were reported with items dealing with resolving academic difficulty (1.46), flexible scheduling (1.49), and computerized career information (1.52).

These results raise a number of issues related to the impact of budget cuts on the ability of students to schedule convenient appointments with the counselors and to receive adequate computerized information services such as Kokua. The results also emphasize the importance of more research and investigation on issues relating to learner needs as KCC shifts its focus from teaching to learning.

OCS Directions

Carol Hoshiko
Community Services

OCS has had an impressive history, growing from a fledging operation serving a few hundred students to becoming the largest community services office in the UH system, serving a high of 40,000 students in 1990-1991.

A study of OCS's health indicator trends over time suggests that they are directly influenced by the condition of the state's economy: as shown above, the effect of the state's declining economy resulted in the discontinuation of major state contracts. The following directions will be taken to counter this effect:

- although public and state courses will continue, increased emphasis will be placed on customized contract training for business or industry;
- increased focus will be placed on international programs;
- aggressive efforts will be made to seek external funds;
- targeted marketing strategies will be developed; and
- increased efforts will be made to strengthen links with both the community and KCC credit programs.

Editor's Note

This is the last IRB issue of the academic year. Volume 2 No. 5 is scheduled for September 1994.
Editor's Forward

In its second year of publication, the Institutional Research Bulletin will be riding the information super-highway: starting with this issue, the Bulletin will be published on the Internet. This exciting development means that the Bulletin virtually will be available for reading by people all over the world.

The purpose, format, and publication requirements of the Bulletin remain unchanged, as stated in the first issue, dated September 1993.

I hope that all members of the College community --students, faculty, and staff-- will take advantage of our worldwide publication and submit articles dealing with current issues such as program review, classroom research, and advances in telecommunication. As previously, four articles will be published in each issue.

Frank Abou-Sayf

Reading Habits: Faculty and Student Perceptions

Shr Ward
Language Arts

A voluntary survey of students' reading habits and comprehension was taken by 236 students and their 7 instructors at the end of Spring 1994. Students and instructors were asked to assess students' abilities in a number of areas.

Differences in perception of students' abilities were found in students' reading level (Reading), comprehension level (Comprehension), and the ability to discern the difference between fact and opinion (Discerning). Invariably, students perceived their abilities more favorably than instructors.

Both students and instructors agreed that in-class explanations were most important for student comprehension of reading assignments. Also, both agreed that more study time was needed for improved performance.

This study suggests that students' performance in language arts might improve with a more realistic perception of their true competencies. It may also indicate a need for reading workshops for students.
Factors Affecting Academic Performance in Zoology

Charles I. Daniels, Nancy Bushnell, and Ron Dunn
Anatomy and Physiology

Two types of self-report instruments were given to 73 students in 4 different Zoology 142 sections taught by 2 different instructors: a battery of three standardized imagery tests (IRB, Vol. 1, No. 2, Oct. 1993) during the initial orientation class, and an advising survey after the second exam, when study habits had been established. The relative influence of numerous variables on performance was investigated by comparing the answers to these instruments with total test and final exam grades.

The following results were obtained.

- The single most important factor for success was total study time.
- Control of mental imagery was a significant predictor of success.
- One or more prior College biology courses substantially improve performance in this class. Prior courses in Chemistry or in other general sciences are weaker predictors. High-school general science courses are irrelevant.
- Other factors that did not significantly affect performance were prior work experience, distance to school, and total college credit enrollment.

These findings reveal several resemblances with those found when investigating factors affecting performance in Biology 130 (IRB, Vol. 2, No. 1, Feb. 1994). Significant differences in the distribution of independent variables were observed between the two studies.

Fall 1994 Enrollment At A Glance

Ralph Ohara
Student Services

As of the end of the registration period (August 26), the total headcount was a record 7,699, an increase of 3.3% over Fall 1993, and 5.5% over Spring 1994.

The number of new, transfer, and returning students continues to drop, and is now 38% of the current student population. Prior to 1992, about half of the continuing students who were enrolled during the previous Spring semester did not return in the Fall. The higher Spring-to-Fall retention rate leaves less opportunity for new students to register: only 2,930 of the new accepted applicants enrolled this Fall.

<table>
<thead>
<tr>
<th>Major</th>
<th>Fall 1994</th>
<th>Percent Diff. from Fall 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal Arts</td>
<td>5,122</td>
<td>2.5</td>
</tr>
<tr>
<td>Business Educ.</td>
<td>729</td>
<td>7.0</td>
</tr>
<tr>
<td>Food &amp; Hospitality Educ.</td>
<td>522</td>
<td>16.2</td>
</tr>
<tr>
<td>Health Educ.</td>
<td>618</td>
<td>17.2</td>
</tr>
<tr>
<td>Legal Assisting</td>
<td>162</td>
<td>8.7</td>
</tr>
<tr>
<td>Unclassified</td>
<td>546</td>
<td>-15.8</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Fall 1994</th>
<th>Percent Diff. from Fall 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>4,701</td>
<td>3.4</td>
</tr>
<tr>
<td>Males</td>
<td>2,998</td>
<td>3.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Fall 1994</th>
<th>Percent Diff. from Fall 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>2,873</td>
<td>-1.0</td>
</tr>
<tr>
<td>Part time</td>
<td>4,826</td>
<td>6.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tuition</th>
<th>Fall 1994</th>
<th>Percent Diff. from Fall 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>6,954</td>
<td>0.7</td>
</tr>
<tr>
<td>Non-resident</td>
<td>745</td>
<td>36.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Fall 1994</th>
<th>Percent Diff. from Fall 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian-Pac. Islander</td>
<td>5,448</td>
<td>5.7</td>
</tr>
<tr>
<td>Caucasian</td>
<td>1,316</td>
<td>-3.5</td>
</tr>
<tr>
<td>Mixed</td>
<td>709</td>
<td>-1.5</td>
</tr>
<tr>
<td>Others</td>
<td>226</td>
<td>5.1</td>
</tr>
</tbody>
</table>

The number of applicants who declare vocational programs has increased this year, while there are fewer unclassified students. The soaring number of non-resident students (37% over last year) is also noteworthy.
Liberal Arts Success Rates After Math and English

B Michael K Tagawa and Guy Nishimoto
Arts and Sciences

The performance of students who passed English and Math courses in Fall 1993 was compared to the performance of students who had not passed the same courses.

A positive correlation was observed between grades in English and Math and subsequent Liberal Arts courses. This relationship is stronger with students who have completed more than 15 credit hours. Students passing Eng 21/22 with a C or better perform better than those who do not (87% vs 56%). Students who pass Math 1 perform better than those who do not (80% vs 50%).

This information and further research may be useful in exploring the idea of prerequisites for the Liberal Arts program.

Pamantasan At KCC
Robert W Franco
Instructional Services

To effectively address the recommendations of the 1988 Pamantasan ("higher education" in Tagalog) Report, relevant information was gathered by a committee during the Summer 1994.

Filipino enrollment, both in absolute terms (below) and as a proportion of the total student population has been increasing steadily.

Other information collected about Filipino students includes:

- In the last three years there has been gradual improvement in the average GPA of Filipino students: 2.43 (Fall 1991), 2.47 (Fall 1992), and 2.52 (Fall 1993);

- In recent years, 178 Filipino students have graduated from the Nursing program, and many more are currently moving toward the completion of Nursing or Health Sciences degrees;

- From Fall 1991 through Fall 1993, approximately 3 out of 4 Filipino students who took English classes were taking English remedial or developmental courses. Similar proportions were found among Filipino students taking math.

These findings suggest that KCC build on its existing Tagalog language program and develop a stronger core curriculum focusing on Filipino history and culture.
Fall 1994 Registration Trends

James A Jeffreys
Instructional Services

Below are significant highlights for the Fall 1994 registration:

- Despite a record enrollment count, the total student credit hours (SCH) taken were 64,395, compared to 64,902 two years ago, a drop of almost 1 percent;

- The average SCH per student was 8.36, significantly lower than the average SCH of 9.1 for Fall 1992;

- Classes were filled on the average to the 90 percent level;

- The total number of SCHs translated to a full-time-equivalent student count of 4,293, about 1 percent lower than that for the Fall 1992.

Along with the record increase in part-time students (IRB, Vol. 2, No. 5, Oct. 1994) came a significant shift in credit-hour distribution by class time: as shown, evening SCHs increased substantially while daytime and weekend SCHs decreased. Evening SCHs now make up 13.1 percent of the total, compared to 11.1 percent two years ago. Conversely, weekend SCHs make up 2.5 percent of the total, dropping from 4.4 percent in Fall 1992.

The possibility of a trend in increased evening enrollment should be carefully monitored.

Mail-In Registration Trends

Judith Buffington
Registrar

Over the last two years, the total number, but not the percentage, of mail-in registrations has increased. About 62 percent of eligible students use early mail-in registration for Fall and 73 percent for Spring. These figures are consistent with the higher number of students continuing enrollment from Fall to Spring.

Over the same period, the percent of students submitting a registration form on the first day has jumped from 42 to 59, while A&S classes offered have decreased slightly. Apparently, the increasing scarcity of classes has prompted an increasingly competitive student response. As a result, the number of classes closing on the first day has increased.

Morning sections of popular classes and popular classes with a limited number of sections close first. Morning classes which have consistently closed on the first day include: any WI, CHEM, English Lit, FAMR, JPNSE (all levels), MATH25, REL15C SCI121 & 122, BIOL130 and ZOOL141C. Others are PHYS100, MICRO130 & 140 (day), and SPAN101.
Performance of Hospitality Industry Graduates

Lori Yonemori
Food Service & Hospitality Education

For several years, KCC's FSHE department has worked with its advisory committee to determine which skills need to be developed in the eyes of the employer. A 1994 study by the Office of the State Director of Vocational Education reported Hawaii's tourist/hospitality industry employer satisfaction in terms of employee education, thus providing some indication of KCC's FSHE attainment of its objective.

Employer satisfaction with employees having only a High School (HS) diploma was compared with that of employees with a community college (CC) education in this industry. CC graduates had statistically significantly higher ratings than HS graduates in the overall category and in work quality.

Conversely, HS graduates received significantly higher ratings than CC graduates in adaptability. No difference was found in technical knowledge, work attitude, oral and written skills, safety, dependability and motivation.

Smoking Behavior Among Health Majors

Steve Wehrman
Respiratory Care

A survey of 161 KCC Health majors was conducted to determine their smoking habits. The group included 104 females and 57 males. Age ranged from 19 to 51 years. The results are illustrated below.

There was no significant difference in smoking behavior by major, ethnic group, and gender. The average age of non-smokers was 26, compared to 33 and 31 for smokers and former smokers respectively. Other results are:

- Smokers and former smokers indicated an average consumption of 0.5 packs per day.
- These individuals smoke for an average of 11 years. Most former smokers quit at least 6 years ago, but 22 percent of them quit during the last year.
- Of the smokers, 79 percent indicated that they would like to quit.

As a result of this survey, the Respiratory Care Program is developing materials and instructional methods to train students in nicotine intervention counseling.
Where Do KCC Students Come From?

Darlene Forsythe
Provost's Office

Over one-third of the incoming students reside in communities closest to the college: Diamond Head, Waikiki, Kaimuki, and the rest of East O'ahu. Over the past four semesters each area continued to add a growing number of incoming students.

![Pie chart showing distribution of incoming students by area]

The growth in other parts of O'ahu, coupled with the additional inconvenience in commuting from the newly developed, distant areas to Diamond Head, might encourage students who do not live in the communities closest to Diamond Head to join other colleges.

![Graph showing enrollment numbers by area]

This does not seem to be the case during the last year. With the exception of the Leeward area, where the drop of students is insignificant, there has been an increase, albeit insignificant too, in the number of residents who apply to study at KCC.

Ability of KCC Placement Test Scores to Predict Academic Status

Anne Marie Velayo
Institutional Research

The academic status (probation, suspension, dismissal, and regular) as of Fall 1994 was obtained for 10,596 students. Their distribution was as follows.

![Pie chart showing distribution of academic status]

English and Math Placement Test scores were gathered for these students.

![Bar chart showing English and Math placement test scores]

As shown, neither test showed to be a good predictor of academic status.

The correlation coefficient between each test score and academic status was 0.058 for English and 0.053 for Math, providing further evidence of no predictive ability.
Are Students Really Taking ENG 100 Before HIST 151?

Meena Sachdeva
Language Arts

Conventional wisdom has it that first-year composition is a necessary prerequisite for success in academic courses. Thus, most courses numbered above 100 have English 100 as a recommended preparation.

A study of a sample of 280 students who took History 151 between Fall 1992 and Spring 1994 indicated that the majority did not meet the recommended prerequisite.

As shown (where Eng refers to English 100 and Hist refers to History 151), only a quarter of the students took the recommended prerequisite for History 151.

Additional information on those 88 (31%) students who did not take English 100 before or while taking History 151 is illustrated below.

Withdrawal Patterns

Anne Marie Velayo
Institutional Research

Out of a total of 131,257 grades awarded at KCC between Fall 1991 and Spring 1994, total withdrawals accounted for 12.71 percent.

Over the three academic years, there has been no significant change in the proportion of withdrawals. However, withdrawals during Summer terms were significantly lower than those during regular terms (8.68% versus 12.88%).

Analysis by major shows Liberal Arts and Business Education to have the highest proportion of withdrawals, while Health had a statistically significantly lower proportion.

Analysis by type of course indicates that there was a statistically significantly large proportion of Ws in developmental courses compared to other courses.
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