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ABSTRACT

Market analysis for new program development in the community college occurs in four phases. (1) An overall manpower needs survey involving a canvas of all the employers and community organizations in the district. This phase is difficult because of the magnitude of the task, and the difficulty of forecasting changes in the market, especially in regard to new and emerging fields. (2) Determination of the demand by students for specific programs. Possible methods include surveys of high school seniors with regard to career preference, surveys of employees in a specific field with regard to their training needs, and surveys of the adult community in general. (3) Determination of the market demand for graduates in a specific field. This phase involves sampling the population of employers and organizations in the district and then conducting follow-up studies. (4) Validation of market analysis surveys. This must be done primarily by actual student enrollment and follow-up studies of the graduates. Each of the four phases is described in detail and problem areas are discussed. Examples are drawn from sample studies conducted by William Rainey Harper College (Illinois). Survey results are organized into five tables. (NHM)

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In order for a growing college to make sound decisions regarding the initiation of new programs in the future, a well thought out comprehensive plan must exist. The quality of this plan regarding new program development will be dependent upon the market analysis performed as the foundation for the plan. Market analysis for new program development can be described in four phases including:

(a) Overall Manpower Need Survey
(both career and community needs in priority order)
(b) Specific demand by students for specific programs
(c) Specific demand for graduates of programs
(d) Follow-up validation of market analysis

In this paper each of these phases will be described in detail, some of the pitfalls and problem areas will be discussed and some actual experiences Harper and other colleges have had with these phases will be related.

I Overall Manpower Need Surveys

An overall manpower need survey would involve convassing all the employers and community organizations in the district which the college serves. This survey would rank in priority order all the personnel and training needs for the area. New programs then could be developed from this top priority list.

Howeyer, a project of this magnitude is so enormous, very few colleges would have the resources to carry out such a study. If the district happens also to be county, a cooperative venture can sometimes be worked out between the Department of Labor or the State Employment Bureau and the college for surveying career needs. This did happen in Prince George, Maryland. If the district contains few industries, sometimes the college can conduct the study themselves. The Appalachian Developing Institutions Consortium in North Carolina is in this situation and are considering conducting such a study.

Harper College's district is not a county and it contains too many industries and organizations to survey itself. Sampling cannot be done because of the sampling error being two large in comparison to the small size of the many sub-categories of demands. Even if another organization did a manpower study it is likely their target area would not be the same as Harper's.

There are, however, other problems with an overall manpower study even if it could be carried out. First, manpower studies only at best forecast employment needs in traditional, well established occupations but do not forecast the education needed by employees in that occupation. There may be a big demand for employees in a certain occupation but little occupational consequences associated with that job. On the other hand people already employed in an occupational field may have a great in-service educational need. Specific studies have to be conducted for each career area to determine the educational need whether it be for future employees or for existing employees.

Second, manpower studies are not able to deal with new and emerging fields where there are very few or no existing employees. For example, overall manpower studies would not reveal a forecast for the number of new legal aides, physician aides, park management degreed persons or two year material managers. Much of the community college's growth will occur in these new emerging fields and this requires relating to specialists and keeping on top of new trends.

Therefore, the only feasible way of identifying new career areas for further exploration seem to be the following:

(a) Maintaining various types of general citizens advisory committees.
(b) Having employees of the college involved in community civic organizations.
(c) Maintaining a broad communication pattern with residents of the community so that they feel free to bring education concerns of theirs to the college.

II Demand by Students for Specific Programs

The demand by students for specific programs can be estimated from a number of different sources. These sources are described as follows:

A. The most common source is to estimate the potential student body by surveying the high school seniors in area. Table 1 shows a high school survey conducted by Harper and the actual enrollments in career programs.

Table 1
Comparison of Highschool Survey
Forecasts with Actual Enrollments

1972-73 Program	Actual Enrolled Fall 1972	Highschool Forecast New F-T Under 21 for Fall 1972	% Forecast of Enrolled
Med. Lab Tech.	15	15	100%
Ind. & Ret. Sec.	8	6	75%
Gen. Off. Asst.	17	8	47%
Acct. Aide	55	25	45%
Fashion Design	103	40	39%
Med. Off. Asst.	17	8	35%
Med. Transcri.	6		
Baking	1	19	28%
Cooking	6		
Food Service	61		
Dent. Hygiene	82	20	24%
Interior Design	120	27	23%
Sec. Science	200	39	20%
Legal Tech.	52	9	17%
Journalism	120	20	17%
Child Care	209	34	16%
Num. Control	67	10	15%
Data Processing	294	40	14%
Market Mid Mgt.	121	15	10%
Supermarket Mgt.	32		
Electrical Tech.	182	18	10%
Mech. Eng.	156	15	10%
Nurse RN	187	19	8%
Nurse LPN	40		
Super & Adm. Mgt.	125	9	7%
Crim Justice	302	22	7%
Arch. Tech.	139	6	4%
Legal Sec.	72	27	4%
Real Estate	116	3	3%
Air Conditioning	69	1	1%
Fire Science	270	4	1%
Oper. RM Tech.	12	-	0%
Other		32	

As can be seen from the comparisons, there are many programs whose actual enrollment far exceeds the number of highschool seniors who indicated they would enroll in the program. The reason for this is that the highschool survey does not tap the continuing student, the older student, and the student who makes up his mind at the last minute (frequently the part time student).

For example in a highschool survey conducted by Harper College only 1 student in the district indicated he was interested in the Air Conditioning and Refrigeration Mechanics Program. However, 69 students were enrolled in the first semester. In looking at this enrollment however, 59 percent are over 21 and only 35 percent are full-time. Moreover, only 9 of these students are full-time just out of highschool and are the only type of student which would have been forecast by the highschool survey. Thus the bulk of the students for this program would come from non-highschool sources.

B. Another useful source is to interview employees in a specific field with regard to a specific program in their field. For example, at Harper College, Market Analysis Surveys are being conducted in the fields of Banking and Materials Management. In both of these proposed programs, almost the entire student population is expected to come from existing employees in these fields. Therefore, a survey made of employees in these fields would serve an estimate of the expected student population as well as an indication of the demand for graduates in these programs.

C. Still another source is to survey the adult community in general. However, unless the entire population is surveyed, it is almost impossible to estimate the demand for specific programs. This is a massive job to survey entire populations but is feasible in newspaper surveys which could estimate a minimum support level. Sampling is useful in identifying program interests and in determining demand for general areas of interests. Harper College has conducted several of these adult surveys using a sample. The last survey indicated 4 to 7 percent would be interested immediately in taking courses if the right subjects were offered at the right time. At present Harper reaches 2.3 percent of its adult population so its capacity would be double its present level of outreach. Similarly 12 percent indicated they have an immediate interest in one or two day seminars. Only .4 percent of adult population is presently reached for this function. Thus here, the surface is just being scratched.

Surveys can also be conducted among specific sub-catergories of the population. For example, Harper has hired a consulting firm through a State grant to survey the Spanish Speaking Community using bi-lingual, bi-cultural interviewers. This project will identify the educational needs of this segment of the population and will formulate programs which will meet these needs. In addition surveys have been conducted which measured the demand by women (both career & homemakers) for specific programs.

D. Another source of students which is almost impossible to forecast in advance is the student who is not majoring in the field and wants to take courses in the area for his own general interest. At Harper a program was designed in Real Estate for people who were already in the field. However, in practice 23 percent of the enrollment in these courses were comprised by students who had a general interest but would never enter the field of Real Estate.

E. In general though in growing institutions, student demand is not a controlling factor in the size of a new career or adult education program. At Harper there is only one or two career programs that suffer from a lack of students. The size of almost all of these programs is determined by demand for graduates or by availability of special facilities or work experiences.

III Demand for Graduates by Employers

There are two basic methods of conducting a Graduate Demand Survey. They can be described as follows:

A. One method is to sample (or in some low population situations take the entire population) the population of employers and organizations in the defined district and then conduct an intensive follow-up. This intensive follow-up would include post card reminders, telephone calls and finally even personal interviews if necessary to obtain a 80 to 90 percent response rate. From a survey standpoint this would be the most preferable method and would yield the best forecasting estimate of demand. Illinois Eastern Community College has conducted surveys in this manner. However, one of the problems besides being very time consuming is that such badgering over a number of surveys could severely strain college-community relationships.

B. To avoid this badgering another method is to survey the entire population and only use a minimal post-card follow-up. This would yield only a 20 to 30 percent response rate but would preserve the relationship between college and community. In analyzing this type of survey data, an assumption can be made that organizations and firms not responding are not interested. This yields a lower base line estimate. You know that the demand level will be at least at this lower level and might be higher. Thus if this lower limit demand level can justify a particular program, you can be assured of a viable effort. Several examples can be given of these type of surveys conducted at Harper College. The following table compares the original Market Analysis Study for a particular program with the actual enrollment data later on.

Table 2

Market Analysis Data Verses Actual Enrollment

Real Estate Study in February of 1971

Category of Enrollment	Need Forecast In 1971 Study	Actual Enrollment Fall 1972
Current F-T Real Estate Professionals	49	75
Students planning to enter field after graduation	72-101	77
Students taking courses for general interest - will never enter field	not considered	46
Accounting Aide Study in January of 1971		
Current employees who would enrol P-T	39	40
F-T students planning to enter field after graduation	16	15
Air Conditioning & Refrigeration Service Mechanics Survey - July 1971		
Current employees who would enroll P-T	12	47
F-T students planning to enter field after graduation	34	22

In each of these cases the preliminary estimates gave a fairly good base line estimate of the need. If the supply of students already employed in the field exceeds greatly the forecast, this is all gravy as they already have jobs. The same is true if students not planning to enter the field take program courses for general interest. However, if the number of students planning to enter the field after graduation exceeds the estimated demand for new employees, then there is the danger that the employment market may be flooded in the area in a few years.

Harper is planning a little different type of market survey when it will survey all organizations in the district using volunteer women. The survey will pinpoint the type of skills needed in volunteer positions and will estimate the demand for women volunteers. This survey will then serve as the basis for designing workshops and seminars for women.

IV Validation of Market Analysis Surveys

The validation of market analysis surveys is done primarily by actual student enrollment and follow-up studies of the graduates. For example tables 3, 4 and 5 show follow-up studies of graduates of various career programs. In examining them it will be noted that the first four careers in table 3 place half of their graduates in the exact occupation prepared for at Harper. At first glance Law Enforcement places a low percent in their field (11.3%) but closer examination shows 52 percent go on to college and table 4 indicates half of these major in the same identical field. However, fashion design places very few in their major field and it may be asked are there no positions for these graduates available or are these graduates not interested in getting a job in the field for which they prepared?

Table 5 shows where graduates are going and note that 29 percent of the dental hygiene alumni are going out of state. Again it may be asked are there not enough positions open in the area or are there other circumstances which account for so many graduates leaving the state? The follow-up study then is one tool which will monitor the demand for graduates in on-going programs. When the demand drastically shifts, a new study may be warranted and a change in the size of the program enrollment may be justified. The use of the advisory committee can also provide a more immediate but grosser measure of the demand for graduates of a particular program.

In conclusion when developing new programs, an overall manpower analysis is first needed before specific student preferences and specific demands for graduates are determined. There are several ways these studies can be conducted, each having their advantages and disadvantages. Finally demand must be constantly monitored by follow-up studies and advisory committees and where necessary programs altered or new market analysis initiated.

TABLE 3

Present Status	DENTAL HYGIENE	SECRETARIAL SCIENCE	NURSING	FOOD SERVICE	JOURNALISM	DATA PROCESSING	CHILD CARE	MARKETING	ACCOUNTING	ARCHITECTURE	ELECTRONICS	MISCELLANEOUS	LAW ENFORCEMENT	FASHION DESIGN	TOTAL PERCENT
Employed full-time - occupation prepared for	56.5%	56.5%	51.9%	44.5%	35.7%	30.4%	30.0%	25.0%	25.0%	20.0%	18.2%	16.7%	11.3%	8.3%	34.6%
Employed full-time related occupation	13.0	13.0	16.4	0	0	13.0	0	31.3	6.2	5.0	22.7	16.7	18.2	12.5	14.0
Employed full-time - not related to education	0	8.7	0	0	14.3	13.0	20.0	12.5	18.8	5.0	13.6	16.7	9.1	37.5	9.2
Enrolled in college full-time	17.4	13.0	11.4	22.2	28.6	43.6	20.0	18.8	31.3	35.0	27.3	33.3	40.9	33.3	24.8
Enrolled in college full-time and employed full-time	2.2	0	1.3	0	21.4	0	0	6.2	12.5	10.0	0	8.3	11.4	4.2	4.8
Employed part-time	8.7	0	8.9	22.2	0	0	0	0	0	20.0	13.6	0	6.8	4.2	6.7
Armed Services	0	0	0	11.1	0	0	0	0	0	0	0	0	0	0	.3
Unemployed but seeking employment	2.2	4.4	2.5	0	0	0	20.0	0	6.2	0	0	8.3	0	0	2.2
Not employed or enrolled in college full-time	0	4.4	7.6	0	0	0	10.0	6.2	0	5.0	4.6	0	2.3	0	3.4
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of respondents	46	23	79	9	14	23	10	16	16	20	22	12	44	24	358

TABLE 4

Relatedness of Present Major to Major at Harper		ACCOUNTING	DENTAL HYGIENE	NURSING	DATA PROCESSING	MARKETING	LAW ENFORCEMENT	MISCELLANEOUS	ARCHITECTURE	FOOD SERVICE	ELECTRONICS	JOURNALISM	FASHION DESIGN	SECRETARIAL SCIENCE	CHILD CARE	TOTAL PERCENT
Degree of Relatedness																
1	Identical	100%	100%	100%	66.7%	66.7%	45.4%	66.7%	33.4%	0%	33.4%	50.0%	0%	0%	NO DATA	52.2%
2	Closely related	0	0	0	33.3	33.3	36.4	33.3	33.3	100	33.3	0	66.7	50.0		32.6
3	Somewhat related	0	0	0	0	0	18.2	0	33.3	0	0	0	0	0		6.5
4	Not related	0	0	0	0	0	0	0	0	0	33.3	50.0	33.3	50.0		8.7
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%
	Number	3	4	4	3	3	11	4	3	1	3	2	3	2		46
	Mean Degree of Relatedness	1.00	1.00	1.00	1.33	1.33	1.73	1.75	2.00	2.00	2.33	2.50	2.67	3.00		1.72

TABLE 5

Job Location	SECRETARIAL SCIENCE	ARCHITECTURE	MISCELLANEOUS	MARKETING	CHILD CARE	JOURNALISM	ACCOUNTING	DATA PROCESSING	ELECTRONICS	FOOD SERVICE	LAW ENFORCEMENT	NURSING	DENTAL HYGIENE	FASHION DESIGN	TOTAL PERCENT
Downtown Chicago	0%	0%	0%	11.1%	0%	0%	0%	25.0%	0%	0%	0%	7.5%	4.2%	25.0%	6.2%
Outer fringes of Chicago	7.2	25.0	0	0	0	0	12.5	0	0	0	7.2	7.5	4.2	8.3	5.5
Northwest suburbs	85.7	75.0	75.0	66.7	66.6	66.6	62.5	62.5	55.6	50.0	50.0	37.5	25.0	25.0	49.4
Other Chicago suburbs	7.1	0	25.0	11.1	0	16.7	12.5	12.5	22.2	25.0	28.6	35.0	20.8	33.4	22.2
40 to 100 miles from Chicago	0	0	0	11.1	0	0	12.5	0	11.1	0	7.1	5.0	16.7	0	6.2
Illinois - more than 100 miles away	0	0	0	0	16.7	0	0	0	0	0	0	0	0	8.3	1.2
Outside Illinois	0	0	0	0	16.7	16.7	0	0	11.1	25.0	7.1	7.5	29.1	0	9.3
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number	14	4	4	9	6	6	8	8	9	4	14	40	24	12	162