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Community College Enrollment Action Research Project

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Abstract

This action research was designed to identify causes and potential solutions for low enrollment in new technical programs at Laramie County Community College's (LCCC) Albany County Campus (ACC). Pearce and Robinson's (1989) action research model was used for this project. The collaborative team consisted of various faculty and staff members from LCCC. Questionnaires, interviews, and document collection were used to gather data required to complete this project. The data collected was then statistically analyzed, interpreted, and used to plan interventions. The changes were evaluated for effectiveness and it was proposed that LCCC should develop a marketing strategy which incorporates developing new programs, marketing specific programs, and using the local newspaper as the main advertising focus to increase enrollment.

Community College Enrollment Action Research Project

Action research was used to identify causes of and potential solutions for low enrollment in Laramie County Community College (LCCC) Albany County Campus' (ACC) technical programs. The Albany County Campus of LCCC recently developed a new technical degree program, Microsoft Networking, which experienced low enrollment. An appropriate research model was selected based on the needs of this project. A collaborative team was formed and approval was gained from the dean of ACC for this action research project. A timeline was developed and utilized to structure the activities of the research. Data-gathering methods were selected and developed to collect information for this project. Team members assisted in the collection and analysis of data. Once the data was compiled and analyzed, the team helped to develop interventions to address problems identified in the research. A solution was then selected and proposed to management as an action to address LCCC's enrollment issue.

LCCC ACC Background

LCCC's Albany County Campus is a branch of a junior college which is located in Laramie, Wyoming. LCCC's main campus is located in Cheyenne, Wyoming. ACC has existed for over 20 years and currently enrolls over 1,000 students. The faculty and staff of ACC work together to provide quality programs. ACC has a friendly culture with small class sizes and instructors who are willing to spend extra time helping students in need. This campus has become a respected member of the Laramie community.

The Albany County Campus of LCCC is a community college in Wyoming's educational hub, the town of Laramie. Within a radius of 25 miles, which includes less than 20,000 people, there is the University of Wyoming (UW) and a major automotive school, Wyoming Technical College (Wyo Tec). These two institutions attract over 15,000 additional people to Albany

County. Whereas, UW and Wyo Tec. compete with LCCC for the same students, they also attract many students who also attend the Albany County Campus of LCCC.

Problem

History of the problem. The Albany County Campus of LCCC created and is continuing to develop a new technical program called Microsoft Networking, which incorporates computer repair, information systems, servers, and networking. The program started in the fall of 2003 and only three students declared it as their major with only seven students enrolled in each class.

Problem statement. LCCC's Albany County Campus is experiencing low enrollment in a new technical degree program. The purpose of this action research is to identify causes and potential solutions for low enrollment in LCCC's technical programs.

Literature Review

Program development. Ayers (2002) stressed the importance of colleges developing new programs to serve the community such as those directed at training employees for business needs. To meet the learning needs of people in the post-industrial age and sustain relevance in the 21st century, community colleges must adapt their programs to the global environment around them. Ayers stressed the importance for community colleges to respond quickly to the dynamic world in which they exist. He warned that if colleges fail to evolve with their surrounding environment, it may lead to their extinction. For example, if a community college fails to develop a program which is needed by local employers, those businesses would be forced to leave the community or to seek training elsewhere in order to get employees with the required skills (Ayers).

Another business-related consideration which Phillips (2004) discussed, when designing and marketing adult educational programs, was to recognize education as a career quest. Fifty

percent of all programs studied by Phillips which provided majors related to post-graduation licensing or certifications, failed to mention whether these degrees would qualify learners for post-graduation employment needs. Only two degree-granting colleges offered a career course in their curriculum (Phillips).

Phillips (2004) also discussed providing a preparatory academy with courses in pre-college mathematics, English, and study skills. Over half of the 50 adult learners enrolled in the Electronic University expressed fear about taking a course in higher college mathematics. However, less than one quarter of the programs Phillips reviewed offered college preparation courses in any of the three areas mentioned above (Phillips).

Similarly, Evelyn (2003) discussed a community college in North Carolina which provided retraining services for displaced workers. There were people with limited education who had been laid off from a manufacturing plant. This was a prime example that program development and modifications need to be dynamic. The community college provided educational services designed to help students find employment opportunities. They worked on developing needed programs and communicating with people who required educational services. This college helped take the fear out of going to college for many displaced workers. (Evelyn)

Marketing higher education. Phillips (2004) identified five essential considerations for designing adult education programs and marketing those programs by using surveys of 84 colleges throughout the United States. These rules included adopting an attitude, assuming that money matters, recognizing education as a career quest, providing easy and responsive access, and providing a preparatory academy. The display of real-life role models was recommended to encourage non-traditional students to develop a positive attitude. For example, the Pennsylvania State University successfully implemented outreach materials including a snapshot of a

grandmother in tennis shoes. This college also included photos of faculty members with quotations promising easy access to them and practical approaches to course topics (Phillips).

Phillips (2004) also noted that, although many colleges were excellent at reassuring their students that they could succeed, most did very poorly when it came to informing non-traditional, working students about financial aid. More specifically, seven of the 84 colleges surveyed made no mention of tuition rates or fees for their programs in their marketing materials. One noteworthy exception was the Southwestern Assemblies of God College, in Waxahachie, Texas. This college included a financial brochure in their outreach materials which stressed their affordability. This brochure was, clear, concise, and encouraged middle class, working adults to seek financial aid (Phillips).

In addition to tying adult educational programs to specific career opportunities, Phillips (2004) recommended providing easy and responsive access to information. She sent letters to 16 of the 84 colleges asking for additional information on unclear items in their initial materials. Of these 16, only 4 answered the questions while four did not reply, and 8 sent the same standard information (Phillips).

Beder (1986) discussed the four P's of marketing continuing education. These were: (a) promotion, (b) product, (c) place, and (d) price, which together create an effective marketing mix. *Promotion* involved a persuasive form of communication used to promote a service or product. *Product* was the service being marketed, such as education. *Place*, the location where the service could be obtained, must be accessible by the target market. The final P was *price* which must be set within the target market's capability (Beder). This form of marketing strategy has been successfully implemented. For example, Traynor (2003) used this strategy at Sydney Community College.

Sydney Community College experienced low enrollment as a result of losing touch with potential students. There was a lack of awareness about the college and its programs within the local community. A marketing strategy was developed using the four P's of marketing, which promoted the college as a new product. The product was designed to meet the needs of Sydney and the people who live there (Traynor, 2003).

In addition, this college changed perceptions of what the Princeton Review (2004) would argue are the important aspects of what students consider when choosing a college. These aspects included location, college size, average class size, and physical image. *Location* includes city or country, temperature or climate, and where the student would like to live. *Size* identifies benefits of larger and smaller schools such as course and student diversity. *Class size* relates to the amount of time an instructor can give to each student. Finally, a *physical image* acquired by visiting the campus can allow a student to view the quality of the campus, the types of students, the quality of the computer labs and library (Princeton Review). Sydney Community College reshaped its image to meet these criteria and marketed adult education appropriately (Traynor).

Sefl & Snell (2003) discussed how effective marketing can help increase enrollment and improve community relations. They also discussed how a quality marketing strategy can contribute to a community college's success. It was found that when educational facilities develop a marketing department, conduct customer research, develop advertisements and other promotional materials that are organized in a marketing plan, and are supported by that college, the probability for success was improved. This will result in refined programs which meet the public's needs and increases awareness of the college. By developing better programs and public awareness, community colleges can increase enrollment and attract community and business leaders (Sefl and Snell).

Simerly (1989) covered many aspects of marketing higher education including the best marketing mix, marketing research, developing marketing plans, location, and integrating marketing into a strategic plan. Marketing should be integrated with the organization's mission, goals, and objectives. Researching the target market was also identified as an important aspect of marketing continuing education as a way to determine potential customers and the types of programs they would want. A college needs to learn about its market, including its competitors, its clients, and other environmental variables. Once market research is completed and analyzed, a marketing and advertising plan should be developed (Simerly).

A marketing and advertising plan should contain data on sales and other market data in addition to promotional events and advertisements. It is also imperative to identify a need in the area where the service will be provided and ensure that it is accessible. Elements of the marketing mix should include product planning, pricing, branding, selling, advertising, distribution, promotion, packaging, servicing, and research. Other factors that should affect this mix include customer attitudes and habits, competition, and government regulations (Simerly, 1989).

Botstein's (2003) work is a prime example of finding a market niche. He identified an emerging population of college applicants who are still in high school which need to be addressed. Simon's Rock was a college that specialized in providing higher education to high school students. This college had success using the early college model to recruit students who found high school unchallenging and time consuming. This program helped the students who participated become more successful in their academic education (Botstein).

Method

An action research project requires an understanding of action research methodology and the selection of an appropriate action research model. Different action research models work

better in varying project environments. This action research project benefited from the selection of an action research model that fit the needs of this project.

Action Research Methodology

Action research involves a collaborative team identifying a problem, researching the problem's inherent characteristics and other potential contributing factors, designing possible solutions, and selecting an appropriate intervention. Action research creates synergy by promoting active collaboration among team members, clients, and other stakeholders. It involves a systematic approach to collecting and analyzing data required to efficiently plan interventions needed to solve a real problem (Sagor, 1992).

Action research methods were used for this community college enrollment project for various reasons. This situation involves many stakeholders. The group of stakeholders with the strongest interest and ability to resolve this situation are LCCC employees from the ACC campus. For this reason, the collaborative team consisted of these individuals and of LCCC's public relations director, who is from LCCC's main campus. Action research is an efficient method for a collaborative team to design, research, and propose action for an organizational problem where time is of the essence (Gill & Johnson, 2002).

Action Research Model

Pearce and Robinson's (1989) six-step model of organizational development was most effective for this action research project. "The Organization Development (OD) process can be viewed as a series of six steps" (Pearce & Robinson, p. 386). This six-step model works well with teams consisting of educated professionals because it involves assigning tasks to individuals, thus allowing them to take ownership (see Table 1).

Table 1.

Pearce and Robinson's Six-Step Model (1989)

Steps	Activity
1	Recognize the problem
2	Diagnose the situation
3	Involve members, gather data, confirm the problem, gain ownership
4	Involved members select solution
5	Plan the intervention and implement
6	Evaluate the change

The six steps of this action research model were used in this community college enrollment research project. I first identified the problem as low enrollment in courses of a new technical program. I then involved my collaborative team in diagnosing the situation, selecting data collection methods, and developing data-gathering instruments. The data was then collected and potential causes of low enrollment were identified. With an understanding of the main issues influencing low enrollment, interventions were developed to address them. The interventions were then reviewed to identify an optimal solution.

Entering and Contracting

The action research project identified causes and potential solutions for low enrollment in LCCC's technical programs. The collaborative team worked together throughout this project in an effort to identify issues causing low enrollment and to propose a solution. The dean of Albany County Campus approved this action research project and the involvement of the collaborative team.

The collaborative team included ACC's dean, three ACC faculty members, and LCCC's public relations director. Action research meetings were held every other week. At these meetings, the collaborative team discussed the project's progress, individual roles, completed goals, new problems, and other pertinent information. This team structure and schedule allowed each member to contribute to the success of this project.

The collaborative team worked effectively to identify an appropriate data collection method and populations of interest for this project. The members had experience with college programs, research, and the community. This was beneficial to designing the data-gathering instruments, collection of data, and evaluating the findings. As the leader for this team, I coordinated efforts to gain meaningful information from this action research project and a desirable solution to community college enrollment issues.

Population and Participant Selection

Participants and populations for this action research project were identified and selected based on secondary data found in Albany County Campus' marketing plan. The marketing plan identified Laramie High School students, UW students, and Laramie businesses as the primary target markets affecting enrollment. LCCC students, UW students, local high schools, and Laramie businesses were surveyed for this project.

The sample population of LCCC Albany County Campus' technical programs was chosen. This population was chosen because the collaborative team believed they would have valuable information concerning how they learned of the program, why they decided to enroll, and what funding sources were used to finance their education.

University of Wyoming students were also surveyed. I chose this population because UW is LCCC's largest competitor for students. Also, their answers concerning awareness of the

community college and of the Microsoft Networking program would give us valuable information concerning program awareness. To accomplish this, permission was acquired from public relations at the University of Wyoming

Local high school students also completed questionnaires. Students in junior and senior level computer classes were surveyed because they were viewed as the most likely to be interested in technical college programs. Permission was obtained from the principle of the high school and teachers distributed the questionnaires during class. Surveys were completed on a voluntary basis.

Finally, businesses and community stakeholders within Laramie, Wyoming completed questionnaires through the Chamber of Commerce. This population was chosen because we thought area businessmen could be potential students in the networking program if they were aware of its existence. Also, they could have important input concerning the content of the program, because these businessmen would have ideas related to current employment opportunities and needs in the community.

Data-gathering Methods

Three data-gathering methods which included interviews, questionnaires, and document research were used to meet the objectives of this project. The collaborative team thought that these collection methods would serve the needs of this research well. Utilization of multiple data collection methods also provided data triangulation. Gill and Johnson (2002) defined *triangulation* as the collection of diverse data upon the same experience to validate findings. Evaluating the initial questionnaires, interviews, and data collection for accuracy and consistency contributed to data validity and triangulation of the findings.

When data-gathering instruments were developed, it was important to define the population being tested, the sampling method, and how and when surveys were distributed and collected. It was also important to evaluate the initial results of the questionnaire to verify the data collected met the objectives of the research project. By developing the collection methods in this fashion, greater value and validity was derived from the data-gathering instruments.

Interviews. The interviews were conducted with all three students who enrolled in the Microsoft networking program during the fall 2003 semester. Questions were open-ended, allowing interviewees to expand on them (see Appendix A). I conducted the interviews at the Albany County Campus in Laramie. The interviews were recorded with a tape recorder and notes were taken. Information collected from the interviews was entered into an information system, grouped, and analyzed. The open-ended style of interviews provided data, which was used to help develop questionnaires and identify other enrollment issues.

Questionnaires. Questionnaires were designed and implemented in order to provide the most accurate results. Two questionnaires were developed, one for LCCC students and another for all other populations. Using the same questionnaire for all other populations allowed relational analysis to be performed between data from different groups.

This survey was tested in the highest level course of the Microsoft Networking program. The preliminary results were then reviewed to verify that the needs of the research were being met and provide data validity prior to being delivered to other populations. The LCCC questionnaire (see Appendix B) was further tested on the ACC technical student population. This questionnaire asked how the students found out about the program, their funding sources, their expectations, and whether their expectations were being met. This survey helped verify that the

questions retrieved the information needed for the study and helped us develop a questionnaire for the remaining populations.

A questionnaire was created, distributed, and collected from the remaining populations by members of the collaborative team. The same questionnaire (see Appendix C) was used for all of these groups so comparative analysis could be performed. These sample populations included local high school students, local businesses, and UW students.

The survey queried whether different community members were aware of LCCC's campus in Laramie and if they knew its name. This was designed to determine the percentage of people in the community who were aware of the college and if there was a lack of awareness about the institution. The questionnaire also asked if these members knew about the Microsoft programs offered through ACC. This was designed to determine if community members were aware of new programs offered by the college. People were asked what type of media they use to learn about local information, which provided data on how best to advertise to the community.

The questionnaire queried individuals' in the target market regarding their intention of attending college. This question was designed to identify the local interest in higher education. The participants were asked what college they planned to attend, attended, or were currently attending, providing information on the percentage of community members who planned to start their education at the junior college. People were also questioned about how their education was or would be financed, which helped identify the importance of marketing financial aid to potential students.

The survey queried whether the person had an interest in a technical major or a non-technical major. This question helped to verify if there was a demand for the program in the local population by identifying the percentage of people interested in technology.

Participants were also asked what they considered the most important aspect about attending college. This question was designed to identify whether students were more interested in gaining a college education for employment and if they planned to continue their education beyond an Associate degree

Finally, participants were questioned about whether they planned to stay in Laramie upon completing their education. This helped determine the percentage of students who planned on filling local employment needs versus those who intended to leave the community. This questionnaire gathered information, which helped identify the main factor influencing low enrollment in addition to aiding in the selection of a solution.

Secondary data. Internal and external secondary data was collected to provide information needed to accurately develop data collection tools in addition to contributing to the results. The internal secondary data collected was contained within the Albany County Campus of LCCC's marketing plan (LCCC, date). This plan identified that local high school students, UW students, and businesses as the main target audiences, and therefore, were the best populations to be sampled for this research.

The employment forecast of the United States Bureau of Labor Statistics (2004a, 2004b) and a marketing package of a professional marketing firm Paskill, Stapleton, and Lord (2004) comprised the external secondary data. These sources helped identify the likelihood of the causes of low enrollment in college technical programs and contributed to data source triangulation.

Findings and Recommendations

Three data-gathering instruments including interviews, questionnaires, and document research were used for this project. Data from these methods were collected, compiled, and results were interpreted. The collaborative team collected and compiled the data. The team then

derived conclusions from the data as to what factors contributed to low enrollment in LCCC's technical programs.

Interviews

Interviews were conducted with all the students enrolled in ACC's Microsoft program (n=3). It was found that LCCC had a Microsoft program in the local news paper, The Laramie Boomerang. They all started the program to increase their employment opportunities. The participants all planned to finish the Microsoft program at LCCC, and remain in Laramie when their education is complete. Finally, newspapers and radio were the two forms of local news used by these students as sources for local information.

Questionnaires

Surveys were distributed and collected from four groups of people. The groups included the LCCC technical students, Laramie high school students, local businesses, and UW students. This data was graphed in Excel to enable a comparison between groups and thus to derive meaningful information. I then performed a two-proportion z-test on selected populations in order to determine the significance of differences in these target markets.

There were 28 technical students at the Albany County Campus at the time. Twenty- four students returned the survey providing an 86% response rate. This information was helpful in identifying why students enrolled in this program, how they discovered this program, and what funding sources were used for their education. These questionnaires were given out and collected during class.

University of Wyoming students were also surveyed. Because this was a large population of over 11,000 students, a random sample of students was given the questionnaire to complete. The UW sample was taken over a four-day period. This was considered a random sample

because the students were not selected from a specific class or department and all students had access to the student union. In order to accomplish this, permission was acquired from public relations at the University of Wyoming. Out of 110 students which were asked to complete the questionnaire, 40 completed the survey providing a response rate of 40%.

Laramie High School junior and senior-level students who were taking computer classes had the option of completing the survey. Out of 93 junior and senior computer students surveyed, 53 completed the questionnaire providing a 53% response rate.

Questionnaires were e-mailed to 256 members of the local Chamber of Commerce, and 46 responded providing an 18% response rate.

The first question identified whether the members of each population were aware of a local community college in Laramie, Wyoming (see Table 2). The results showed that 92%, or most of those surveyed were aware of LCCC's Albany County Campus.

The next question identified whether members of the different groups were aware of the name of the local community college (see Table 2). Eighty-three percent of those surveyed were knowledgeable of ACC by name.

The next question queried the population's knowledge of the new Microsoft program (see Table 2). The majority of those who completed the questionnaire and who were not currently enrolled at LCCC, were unaware of the Microsoft program. This table shows that while 40% of the local high schools students were aware of LCCC's Microsoft program, only 15% of the University students knew it existed.

The following question was designed to identify what media individuals use to obtain local information in Laramie (see Table 2). This showed that local newspapers were the single specific resource used by the largest percentage of the population for information. Radio was the

second most commonly used source of local information but it was spread out among many radio stations compared to a single newspaper. This table shows that 40% of the people surveyed used the newspaper for local information.

The participant's interest in attending college was identified next (see Table 2). This data shows that most of the participants attended college or plan to attend college. This table shows that 92% of the participants were attending or planned on going to college.

The next question identified participants' interest in attending UW and LCCC (see Table 2). This data shows that most of the people either already attend UW or planned to attend UW. Sixty-one percent of the participants currently attend or plan to attend UW.

While querying methods of educational finance, it was found that most of those surveyed utilized financial aid as their primary source of funding for higher education (see Table 2). Forty-seven percent of the participants use financial aid to help them finance their education.

The next question identified whether participants were interested in a technical degree program. Although most of the people queried indicated they planned to pursue non-technical degrees, a large percentage of the populations showed that they were interested in receiving a technology-based education (see Table 2). Thirty percent of all those surveyed intend on pursuing a technology-based education.

Most of the populations showed that their main focus in education was for the purpose of gaining employment (see Table 2). Sixty percent of those surveyed indicated that employment was the primary factor in their quest for higher education.

Table 2

Questionnaire Results

Questions	Groups	High School	Business	UW	Total
Awareness of LCCC	Yes	48	46	34	128
	No	5	0	6	11
	% Yes	91%	100%	85%	92%
Awareness of LCCC's name	Yes	43	40	33	116
	No	10	6	7	23
	% Yes	81%	87%	83%	83%
Awareness of LCCC's Microsoft program	Yes	21	22	6	49
	No	32	24	34	90
	% Yes	40%	48%	15%	35%
Media used for local information	Radio	16	9	9	34
	News Paper	10	30	17	57
	Other	31	7	14	52
Plan to or already attend college	Yes	49	39	40	128
	No	4	7	0	11
	% Yes	92%	85%	100%	92%
Plan on attending or attended what college	UW	18	28	40	86
	LCCC	6	5	0	11
	Other	29	13	0	42
Financing college education	Personal	15	14	13	42
	Gov. Aid	27	26	20	73
	Other	17	6	12	35
Interest in technology-based education and career	Technical	17	11	14	42
	Non-Tech	36	35	26	97
	% Tech	32%	24%	35%	30%
Reason for education	Employment	29	36	22	87
	Bachelor's	16	0	13	29
	Other	13	10	5	28
	%Emp	50%	78%	55%	60%

Most of the local population represented by the business members and LCCC students indicated that they wanted to stay in Laramie while most of the University of Wyoming and high school students indicated that they would be leaving upon completion of their degree (see Table 3). Fifty percent of those surveyed planned on leaving Laramie upon completion of their degree.

Table 3

Questionnaire Results

Questions	Groups	LCCC	High School	Business	UW	Total
Desire to Stay in Laramie after College	Yes	17	15	42	6	80
	No	3	38	4	34	79
	% Yes	85%	28%	91%	15%	50%

A statistical analysis of focal points within this data was then performed to identify the implications. High school and University of Wyoming students were identified in LCCC's marketing plan to be the two main focal groups having the greatest probability of attending LCCC. The students who were interested in a technical area of study were then separated out as having the highest probability of pursuing LCCC's Microsoft Networking program. This subsection of questionnaires was then evaluated against how many knew LCCC offered a Microsoft Networking program and how many plan to stay in Laramie. Two-proportion z-tests were completed to determine which population is the primary target market or if both UW and high school students should be pursued equally.

Two-proportion z-tests involve making statistical comparisons between the probabilities associated with two populations. they compare two population proportions using the difference between the observed proportions, $p_1' - p_2'$, of independent samples. They are used to identify

whether a significant difference exists between the two populations (Johnson & Kuby, 2000).

Two-proportional z-tests provide effective comparison of high school students and UW students.

The first two-proportion z-test was performed on high school students and UW students who were interested in a technology field of study. Using an alpha value of .05, the P-value of .9997 indicated that there was not a significant difference in the two populations' desire to study technology. Therefore, LCCC should market UW students and local high school students equally.

The second two-proportion z-test was performed on the students who were interested in technology and who were aware of LCCC's Microsoft program. This is important because it indicates what proportion of people in college or who will be attending college are aware of ACC's technical program. Using an alpha value of .05, the P-value of .4602 indicates that there was not a significant difference in these two sub-populations. This indicated that UW students who are interested in technical studies are just as unlikely to know about LCCC's Microsoft program as high school students.

The final two-proportion z-test was performed on the students who were interested in technology and who wanted to stay in Laramie. This is important because it identifies the necessity to address the needs of students who do not plan on remaining in Laramie. Using an alpha value of .05, the P-value of .1003 indicated that there was no significant difference between the proportion of high school students who want to study technology and stay in Laramie and the proportion of UW students who also want to study technology and stay in Laramie. This shows that only 10% of UW and Laramie High School students who want to study technology plan on staying in Laramie after graduation.

Secondary data. Internal and external secondary data contributed to this action research project. LCCC's marketing plan was used for internal secondary data while data from a marketing firm and the United States Bureau of Labor provided external secondary data.

LCCC's marketing plan identified LCCC's major target markets. This population includes people seeking degrees, vocational programs, workforce training, distance education, and adult basic education. Local and vocational programs usually include primarily local and regional high school, international, minority, and career-seeking students. Workforce training focuses on local and regional businesses, and non-traditional students seeking job skills. Distance learning targets individuals who are not able to attend classroom-based courses due to location or time issues. Finally, the marketing plan identified LCCC's main competition. These included the University of Wyoming, Wyoming Technical Institute, and online colleges (LCCC, 2003).

A marketing brochure used by the educational marketing firm Paskill, Stapleton, and Lord (2004), provided valuable information for this project. While this information is not specific to educational programs, it provides many important components of marketing which relate to higher educational institutions. Paskill et al. identified the characteristics of a college's market as geographical area, size, demographic profile, social characteristics, academic characteristics, and socio-economic profile. They also listed the main components of marketing which were imaging, positioning, differentiating, segmenting, branding, and communication. They listed six marketing strategies in higher education, which are relationship marketing, direct marketing, permission marketing, network marketing, driving the brand, and advertising. The most important aspect of marketing higher education successfully was to know the college and to sell it with integrity. They point out that the stakeholders must believe in the mission of the

institution to represent it successfully. These are all important factors presented in this secondary data that can be used to develop solutions for LCCC's low enrollment.

United States Department of Labor Bureau of Labor Statistics provided two important tables, which identified the forecast of technical jobs related to the Microsoft Networking program from 2002 until 2012. The *Table of Occupations with the Largest Job Growth 2002-2012* projected computer specialist as having the twentieth largest growing occupations with a growth of 39% (US Bureau of Labor Statistics, 2004b). The *Table of Fastest Growing Occupations 2002-2012* also identified technical careers as one with the greatest predicted growth ranging from 57% to 39%. Network systems and data communications analysts were found to be the second largest growth with a projected 57% increase (US Bureau of Labor Statistics, 2004a).

Discussion

This action research project studied enrollment problems for community college technical programs. The collaborative team gained valuable data from a review of the literature, questionnaires, and secondary data. This study helped identify factors that influence low enrollment and potential methods of addressing them. With the support from a collaborative team and organizational leadership, potential causes and solutions of technical program enrollment issues were identified.

Data Collection Process

Most of the sample populations cooperated and completed the survey correctly. Some of the participants were hesitant to complete the survey despite the cover letter stating that it was confidential and would be used for research (see Appendix D). More specifically, only two out of fifty Wyoming Technical students asked completed the questionnaire. The Laramie Kiwanis

and Rotary Clubs were also surveyed with limited responses. Due to the lack of responses, these groups were removed from the study.

Collaboration

A collaborative team was essential to the success of this action research project. The team assisted me in identifying potential causes for low enrollment in addition to selecting and implementing data gathering methods. The team met every two weeks during the regular school year. I also met with them individually for assistance on specific issues. In addition to this group, other faculty members of Albany County Campus were supportive in distributing surveys and helping with statistical analysis. The efforts of the collaborative team contributed to the success of this research.

Organizational Feedback

I received organizational feedback from two main sources throughout this project. My main contact was the dean of the Albany County Campus. She attended most of the collaborative team meetings, in addition to having an open door policy in which case I stopped by her office and discussed issues or concerns when they arose. She was very supportive in my research, realizing how it would benefit the college.

My second organizational contact was the Director of Public Relations for LCCC. She also attended most of the collaborative team meetings. She was instrumental in verifying that my questionnaires and research complied with LCCC policies.

Factors Influencing Low Enrollment

Multiple factors that influenced low enrollment of LCCC's technical programs were identified and assessed. All of the factors relating to low enrollment fell under two main

categories. These included a limited demand for the program and a lack of awareness about the program.

Demand for program. Through a review of the literature, secondary data, and questionnaires, it was determined that a lack of demand for the program was not a reasonable cause for low enrollment in the technical programs given the projected employment growth in technical areas and the interest in pursuing technological careers in the high school and business populations. Considering this information, students interested in employment-based education should be interested in the Microsoft Networking program as well as other technical programs.

Data collected from questionnaires also identified reasons why the local population would be interested in a technical program. First, 92% of those surveyed were attending or planned to attend college. Second, 30 % of the participants were interested in a technical educational program and 60 % were interested in attending college specifically for job placement. Because most of the respondents planned on attending college for the purpose of job placement and a large percentage of them were interested in the technology arena, it is only reasonable to conclude that low enrollment is not due to a limited demand for the program in the community.

Program awareness. This research identified the local awareness of the Microsoft program and various methods for addressing this issue. In case there was a lack of awareness, I also collected more specific information that could be used in the development of interventions to address community awareness issues. The review of the literature was also used as an additional source of information for developing potential actions to resolve limited public awareness.

The questionnaires identified more specific information regarding public awareness of the Microsoft program. Whereas nearly all of the participants were aware of LCCC, only one-third knew LCCC's Microsoft program existed. This indicated a failure to communicate information regarding new programs to members of the community.

Having collected and reviewed information relating to demand for the Microsoft program and community awareness of the program, inferences can now be made. Due to the strong employment forecast for technical jobs and the desire of community members to study education, it can be concluded that there is a local demand for the program. Sixty-five percent of those likely to take advantage of the LCCC ACC Microsoft program were unaware of the program, despite that 92% were knowledgeable of LCCC's Albany County Campus. This informs us that it is a lack of awareness in the community, which is contributing to the low enrollment of ACC's new technical programs. It also indicates that LCCC is marketing the Albany County Campus effectively, but it is not effectively marketing this new program.

The primary populations in Albany County that are likely to enroll in Albany County Campus's technical programs are Laramie High School and University of Wyoming students. These local populations are of most interest because they also have the greatest future interest in higher education. Based on this action research, the research team considered three action plans that addressed the low enrollment in LCCC's new technical program.

First Action Plan

The first action plan is to develop a new marketing strategy to address the community's lack of awareness that focuses on University of Wyoming students as the primary target market. This was determined based on several research results (see Appendix E). It was found that only 15 % of UW students were aware of LCCC's Microsoft program. It was also found that 35 % of

UW students desired to have a career in a technical field including system administration, networking, Internet, and programming. An additional benefit of marketing to UW students would be informing their spouses or friends who have traveled with them. It is likely that a well-planned marketing strategy focused on UW students would have a positive influence on LCCC's low enrollment.

The development of a quality marketing strategy directed towards UW students should incorporate various marketing components identified in this research. It would address the four P's of marketing (Beder, 1986), which are Product, Price, Place, and Promotion. The price would be desirable to University students because LCCC's tuition is significantly less than the UW's. The product is comparable with that of the University. The place is in direct proximity to their current location making ACC accessible. An Associate Degree from LCCC is a stepping stone for transfer students as well as providing greater job opportunities while they continue their education at a University.

The marketing plan for this population alone would focus on adult learners. Advertisements in the Laramie Boomerang would need to be appealing to this group of students. A clear connection between the Microsoft Networking program and future employment opportunities will have to be made. Also, it would be important to market ACC as a competitive high-tech school, highlighting the lower tuition for the same kind of instruction.

Second Action Plan

The second action plan is to develop a marketing strategy that focuses on Laramie High School students as the primary target market. Several research results supported taking this action (see Appendix E). It was found that only 40 % of Laramie High School students surveyed were aware of LCCC's Microsoft program, but 32 % of those students plan on pursuing the

technical field in college. High school students have been identified as an emerging population of college applicants while they are still in high school (Botstein, 2003). As modeled by Simon's Rock College, high school students benefited from college courses throughout all grades in high school. This would create a successful relationship for everyone involved.

A marketing plan focusing on high school students alone would use real life examples of successful Laramie High School graduates, who have enrolled in the Microsoft program. Also, clear information concerning financial aid would be included. By marketing directly to high school students, Albany County Campus could receive the largest return on its investment.

Third Action Plan

The third action plan involved developing a marketing strategy which focused on both high school students and UW students as target markets. The research showed that these students had the greatest future interest in higher education and technology. Questionnaire data showed that 71% of the high school students and the UW students combined were not aware of LCCC's Microsoft program.

This action plan combines all of the marketing strategies included in the first and second action plans including developing effective marketing materials, dynamic program modifications, and developing a new image as a high-tech institution. If it was found that it would be most beneficial to market equally to both Laramie High School students and UW students, this plan would be preferred

Critical Evaluation and Selection

Each intervention included developing different marketing research plans. The first focused on UW students as the main target market, the second centered on Laramie High School

students, and the third saw the UW students and Laramie high school students as equally significant populations.

Through statistical analysis, it was found that there was no significant difference between the proportion of UW students and the proportion of high schools students interested in a technical education. Since it was also found that both high school students and UW students were unaware of LCCC's new program, the collaborative team concluded that LCCC should develop a marketing plan which focuses equally on UW and local high school students.

The marketing plan targeting both populations has all of the characteristics within the plans targeting them individually. Visually appealing advertisements would need to be created similar to the graphical brochures created by Sydney Community College (Traynor, 2003). Advertisements in the Laramie Boomerang newspaper and a brochure, which could be distributed around town, would need to be visually pleasing to adult consumers. This strategy will appeal to the UW students.

In addition to marketing, the employment market and the need for technical employees should be monitored to verify that LCCC is providing a desired educational product and identify adjustments that need to be made to the program. For example, when I started teaching at the Albany County Campus, LCCC's main campus was still teaching Microsoft Server 2000 even though Server 2003 had already been released and in use by industry. I proposed a change and was successful in improving the program by teaching the newer material. This type of dynamic monitoring and adjustment should be routine.

The marketing strategy should also incorporate promoting LCCC as a high-tech school, which can provide quality technology-based education. Through this strategy, UW students could perceive LCCC as equal to UW. This promotion could be accomplished by advertising

LCCC's use of Smartboards, Online courses, web-integrated courses, and technical programs. By directing ACC's marketing budget towards advertising in a way that generates the highest return on investment, LCCC can reach more people with educational needs with greater effect.

The results show most UW students receive their local news from the Boomerang newspaper and many were aware of LCCC, yet few were aware of the Microsoft program. Therefore, it would also be beneficial to develop a strategic marketing plan that incorporates weekly advertising of specific programs, such as the Microsoft program, in the Laramie Boomerang until there is strong knowledge of it in the community.

Through the development of a new marketing strategy with these components in addition to continued market research, strategic planning, and market plan development (Simerly, 1989), LCCC should be able to attract students who would benefit from its technical programs and provide better service to the community. By providing these services to the community and to UW students, LCCC and UW can have a productive relationship.

The five essential rules for designing programs and marketing (Phillips, 2004) would also contribute to the design of LCCC's new marketing strategy. In marketing to high school students, real-life examples of successful Laramie High School graduates could be used. One real-life role model is the experience of two local high school graduates who have been in ACC's Microsoft program since it started in the fall of 2003. These individuals worked minimum wage jobs for several years after finishing Laramie High School. They enrolled in the Microsoft program and after only one year owned a computer repair business as a direct result of ACC's program.

High school students would also benefit from photos of faculty members expressing friendly and easy access. Since Phillips (2004) noted, the importance of educational success and

information about financial aid, LCCC should also do a better job of reassuring potential students of success while informing them of the processes involved in obtaining financial aid and low tuition costs. A brochure could also be developed to provide clear, concise, and encouraging information for high school students.

Objective Analysis of Experience

This action research project was very challenging, educational, and rewarding. I discovered many aspects of performing a successful collaborative action research project in the future. In future research projects, I will consult a statistician prior to developing data-gathering instruments. I have also further developed my leadership skills including communication and collaboration. This experience provided positive returns because I am now able to conduct a more in-depth and complete action research project in the future.

Conclusion

Through action research, the collaborative team and I addressed the issues associated with the low enrollment in LCCC's technical programs. The Pearce and Robinson's (1989) six-step action research model was used in addition to multiple data collection methods in an effort to provide a high level of validity. This action research model provided a solid framework for requirements and allocation of resources. Three data collection methods—questionnaires, interviews, and secondary data, provided data triangulation and research validity. The data was collected and analyzed providing the quality information needed to plan and evaluate appropriate action plans in an effort to best address the Albany County Campus' low enrollment. This research has provided a better understanding of problem areas for LCCC's enrollment while developing solutions to address them. The development and implementation of a marketing plan

which meets all of the objectives previously stated, focusing on Laramie High School students and UW students should provide a successful solution to LCCC's low enrollment problem.

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Appendix A

Interview Questions

- 1) How did you find out about LCCC Albany County Campus's Microsoft Networking program?
- 2) What do you like most about ACC's Microsoft program?
- 3) What news media do you get most of your local information from?
- 4) What do you plan to do when you complete the Microsoft Networking program?
- 5) Please make any comments which could help LCCC's Albany County Campus improve the program and the communities awareness of it

Appendix B

LCCC Albany County Student Survey

LCCC ACC, Student survey data

- 1) Why did you first enroll at LCCC's ACC?
 - a) Quality of education/teaching
 - b) Scheduling of courses
 - c) Cost of courses
 - d) Program or area of study offered
 - e) Other: _
- 2) How did you find out about LCCC's Technical program?
 - a) From a friend or family member
 - b) From a news source
 - c) From an advisor or instructor
 - d) Other: Please list _
 - i) Business Expo
 - ii) LCCC mailing
- 3) What news media do you get most of your information from?
 - a) Radio, Please list station:
 - i) KBAB 650AM
 - ii) Public radio
 - b) TV, Please list program:
 - i) Ch 5:
 - c) Newspaper, Please list paper
 - i) Boomerang
 - ii) Casper Star
 - d) Other, please list
 - i) Internet
- 4) How is your education funded?
 - a) Personal finances
 - b) Financial aid
 - c) Parent funding
 - d) Employment development
 - e) Other: Please list _____
- 5) What do you plan to do with your education?
 - a) Gain skills and degree/cert needed to obtain a job
 - b) Continue for a bachelor's degree.
 - c) Gain skills and education for personal reasons
 - d) Other: Please list _____
- 6) Do you plan on staying in Laramie when you finish your education?
 - a) Yes, will remain in Laramie
 - b) No
 - c) Not sure

- 7) How long do you plan to attend LCCC's ACC?
 - a) Until Certification is completed
 - b) Until Associate Degree is completed
 - c) As long as areas of interest are taught
 - d) Other: Please list _____
- 8) How are you currently registered with LCCC's ACC?
 - a) Technical major
 - b) Other major
 - c) Undeclared
 - d) General major
 - e) Unknown
- 9) What can the instructors of LCCC's ACC do to help you most? (please select only one)
 - a) Provide quality instruction and material
 - b) Provide more individual assistance
 - c) Help find financial aid and other funding options
 - d) Provide flexible schedules
- 10) Please make any comments you would like relating to LCCC ACC's technical program, which can help the program be more successful:
 - a) Longer classes.
 - b) Quality program with experienced instructor
 - c) More space, computer labs
 - d) Additional funding and facilities
 - e) The program seems to be running fine. I am very pleased.

Appendix C

LCCC Albany County Campus Microsoft Questionnaire

*Technical Programs Enrollment Questionnaire***Please select all that apply to you**

- 1) Did you know that there is a community college in Laramie which offers associate degrees and certifications?
 - a) Yes
 - b) No
- 2) What is the name of the community college in the City of Laramie?
 - a)
- 3) Did you know that LCCC's Albany County Campus in Laramie offers a Microsoft networking certificate and associates degree?
 - a) Yes
 - b) No
- 4) How did you find out about LCCC and its programs? Please list:
 - a) Radio
 - b) News Paper
 - c) Internet
 - d) Person
 - e) Other
- 5) Do you plan to or did you go to college?
 - a) Yes
 - b) No
- 6) What college did you go to or do you plan to?
 - a) University of Wyoming
 - b) Laramie County Community College
 - c) Other
 - d) None
- 7) How did you or how do you plan to finance your college education?
 - a) Personal finances
 - b) Financial aid
 - c) Parental funding
 - d) Other
- 8) What would you like, what do you do, or what did you do for a career?
 - a) Computer specialist
 - b) Non-technical
- 9) What do you see as the most important aspect of getting a college education?
 - a) Gain skills and degree needed to obtain a job
 - b) Continue education beyond a bachelor's degree
 - c) Gain skills and education for personal reasons
 - d) Other; please list:

- 10) Do you plan on staying in Laramie when you finish your education?
 - a) Yes: will remain in Laramie
 - b) No
 - c) Not sure
- 11) Now that you know of LCCC's Microsoft Networking program in Laramie, are you or do you have friends/colleagues who would be interested in this program?
 - a) Yes: if yes please ask for a form to fill out
 - b) No
- 12) Please make any comments which could help LCCC's Albany County Campus meet the needs of the community.

If you have any questions, you can reach me at LCCC's Albany County Campus. (307) 721-5138 ext 4261 or email me at lstruemp@lccc.wy.edu

Appendix D

Questionnaire cover

Laramie County Community College (LCCC), Albany County Campus (ACC)

Microsoft Networking Program

Survey participants,

Thank you for taking the time to complete this questionnaire. This anonymous survey should take between 5 and 10 minutes of your time. The primary purpose of this survey is for a college research project. This research project may be used by educational facilities to identify better ways of communicating with individuals in need of education services and develop a community awareness of ACC's programs. If you have any questions you can call Larry Struempf at (307) 721-5138 ext 4261 or email him at lstruemp@lccc.wy.edu.

Thank You,

Larry Struempf and Albany County Campus