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The Assessment of a Tutoring Program to Meet CAS Standards Using a SWOT Analysis and Action Plan

This article summarizes the use of SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis and subsequent action planning as a tool of self-assessment to meet CAS (Council for the Advancement of Standards in Higher Education) requirements for systematic assessment. The use of the evaluation results to devise improvements to increase the effectiveness of the program and its services fulfills Part 13: Assessment and Evaluation of the CAS standards. Professional tutors in the reading, writing, and mathematics developmental laboratories of the Learning Resource Center (LRC) of Lincoln University, Pennsylvania welcomed the use of SWOT analysis and developed an evidence-based action plan to increase the effectiveness of the program.

The gold standard of best practices in higher education mandates performing regular self-assessments and using the results to embark on an action plan to improve services and programs. The Council for the Advancement of Standards in Higher Education (CAS) charges learning assistance programs to perform ongoing systematic evaluations and assessments using quantitative and qualitative methods. These self-assessments are to be used to develop an action plan to improve programs and services and to acknowledge employee accomplishments (Council for the Advancement of Standards, 2008). Self-assessment is also a vital part of the accreditation process of regional accrediting organizations, such as the Middle States Commission on Higher Education (Lincoln University, 2008).

SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis that includes action planning based on evidence of best practices supported by research findings is an easy-to-use method of analysis of self-evaluation and planning for improvement. The Interim Director of the Learning Resource Center (LRC) of Lincoln University, Pennsylvania introduced the use of SWOT analysis in fall 2008, and, in spring 2008, an action plan component linking research and practice was added. The professional tutors in the LRC accepted the use of SWOT analysis with enthusiasm. Tutors commented that SWOT analysis was easy to learn and an interesting way to look at the labs. Rogers (1997) found that the acceptance of an improvement or change by the users is a crucial factor in the implementation of an innovation. The LRC tutors accepted the use of SWOT analysis and action planning because it was uncomplicated, straightforward, and useful.

The implementation of SWOT analysis and action planning took place prior to conducting a CAS self-assessment, and, coincidently, satisfied the components of Part 13: Assessment and Evaluation of the CAS Standards. The SWOT analysis and action planning satisfied the systematic and periodic self-assessment required by criterion measures 13.3 and 13.4 of the CAS standards for Learning Assistance Centers (Council for the Advancement of Standards, 2008, p. 26). Additional methods of quantitative and qualitative analysis also included surveys of students, staff, and faculty (using a Likert-type scale and short answer questions); an analysis of improvement from a pretest to a posttest; a review of course grades; and student persistence and retention. The above methodologies gave a comprehensive picture of the effectiveness of the LRC. The LRC utilized all of the above methodologies in addition to SWOT analysis and action planning to assess the effectiveness of the program. The results of this bi-annual self-assessment are printed and distributed to constituents each semester in the form of a booklet and, in addition, are published on the LRC website.

The Vice President of the Division of Student Services and Enrollment Management and the Dean of Student Services challenged the programs of the Division to conduct a CAS self-assessment in 2008-2009. Committees were set up by the Dean of Student Services that included members external to the program being assessed. Each committee also included a team leader from within the program. The LRC CAS team met throughout spring and fall 2008, reviewed documentation, and completed a first assessment of the program in December 2008. A second assessment of the documentation and the creation of an action plan took place in spring 2009.

CAS Standards

Founded in 1979, CAS is an organization of professionals in the fields of student affairs, student development, and student services. The mission of CAS includes the advancement of student achievement, learning, and development through the application of standards and guidelines to increase the quality and effectiveness of programs. CAS standards provide realistic criteria supported by the profession and are based on best practices to guide the self-study process (Council for the Advancement of Standards, 2008).

The process of a CAS self-study consists of the establishment of a review team, a review of the CAS Standards and Guidelines, the compilation of documentary evidence, and an examination of the documentary evidence. Once the documentary evidence has been examined, judgments on performance are made and follow-up actions planned.

The thirteen parts of the CAS standards for Learning Assistance Centers include: Mission, Program, Leadership, Organization and Management, Human Resources, Financial Resources, Facilities, Technology and Equipment, Legal Responsibilities, Equity and Access, Campus and External Relations, Diversity, Ethics, and Assessment and Evaluation (Council for the Advancement of Standards, 2008, p. 2). Part 13 of the CAS standards and guidelines for Learning Assistance Programs focuses on assessment and evaluation.

Learning assistance programs are required to perform periodic assessments using qualitative and quantitative methods and data is to be collected from students and other constituencies (criterion measure 13.1). The results of this evaluation help revise and improve programs and services as well as acknowledge the accomplishments of staff. An uncomplicated and time-effective method of analysis of the collected data is SWOT analysis.

Criterion measure 13.2 requires that the data collected be comprehensive and comprise information from all constituencies, including students. When collecting data for SWOT analysis, the LRC surveyed students, professors, and staff members. Pretest and posttest scores, improvement from pretest to posttest, and grades were also examined. LRC staff collected data from all possible sources and constituencies to provide a comprehensive picture of the effectiveness of the program.

LRC staff members review Lincoln University's vision and mission, the vision and mission of the Division of Student Affairs and Enrollment Management, and the vision and mission of LRC each semester to ensure the program is congruent with the goals of Lincoln University (criterion measure 13.3). The LRC semester report, distributed throughout the campus, contains documentation of program effectiveness through an

analysis of student achievement data (criterion measure 13.3).

Criterion measure 13.4 mandates that the results of the above analysis be the basis of a plan to modify and improve the program and recognize staff performance. Improvements of LRC services are based on the semester-by-semester analysis of the program's effectiveness using SWOT analysis, and the action plan formulated from the SWOT analysis includes recommended improvements supported by evidence from research on best practices.

Professional adult reading, writing, and mathematics tutors staff the developmental laboratories that are required by the developmental courses at Lincoln University. Tutors collect data on a semester-by-semester basis and examine the following: An analysis of an end-of-semester survey filled out by students, the results of pre and posttesting, mid-term grades, and final grades. Specific activities in the labs are also reviewed for effectiveness and compared to final grades earned. All tutors in the LRC laboratories receive this information to aid in planning for the next semester and formulating the SWOT analysis and the resulting planning.

SWOT Analysis

The chief executive of General Motors, Alfred Sloan, who led the company from 1923 to 1946, originally performed an analysis from the perspective of the strengths and weaknesses of the business. The concept of SWOT analysis arose from discussions concerning Alfred Sloan's unique method of analysis in business policy classes at Harvard's Business School in the 1950's and 1960's. Even though there is little research and no particular theory to support the use of SWOT analysis, it has become a much-used tool in businesses and is now used in education (Ghemawat, 2002). SWOT analysis is a user-friendly way to analyze a program or organization, and many Boards of Trustees at universities, including Lincoln, use this approach to aid in strategic planning to improve performance.

The acronym, SWOT, reminds administrators of the necessary steps to be taken in SWOT analysis: Examining an organization's strengths, weaknesses, opportunities, and threats. SWOT analyzes an organization from an internal perspective (strengths and weaknesses) as well as an external one (opportunities and threats). SWOT analysis is a team effort that begins with one individual designated as the facilitator. Team members conduct the analysis by reviewing collected data, brainstorming strengths, clarifying and identifying the top strengths, and summarizing the strengths (Strategy, 2005). This method is repeated for weaknesses, opportunities, and threats. Each of the three laboratories at the LRC

comprised a team of three to four professional tutors from their respective labs, and the procedure at the LRC also included reviewing research literature for evidence-based best practices.

Strengths consist of an organization's expertise--what is being done well and what is valued by the organization's constituents (Strategy, 2005). Strengths may be defined as skills or processes, for example, in the LRC Reading Lab SWOT analysis, the process of gaining certification from the College Reading and Learning Association and collaboration with the Education Department are seen as strengths (see Appendix A).

The weaknesses of an organization may include lack of skills, lack of expertise, budgetary shortfall, organizational culture, lack of leadership, lack of technology, and poor service to constituents (SWOT analysis II, 2006). The LRC Reading Lab staff listed lack of staff and problems with technology as weaknesses (see Appendix A). (Please note that some items under weaknesses in the LRC SWOT plans could also be considered threats.) In order to address weaknesses, the Interim Director instituted a staff development program that included certification on the three levels of the International Tutor Certification Program of the College Reading and Learning Association. This training raised the skill level of the tutors, increased the expertise of the tutors and, thus, increased the effectiveness of the tutoring program. Certification also increased the recognition of the LRC by the university community.

Opportunities are changes in the environment that can be viewed as possible areas of growth, such as innovations in technology, changes in demographics of the constituents of the organization, trends, events, and so on (Strategy, 2005). The LRC took advantage of the opportunity of new technology through the purchase and implementation of online tutoring and assessment. LRC increased collaboration with the Education, English, and Mathematics Departments for the implementation of the new technology, augmenting the reputation of the LRC (see Appendix B).

The threats facing an organization are challenges, events, or forces that can be detrimental to the organization (Strategy, 2005). Precarious funding and the reluctance of some students to attend a required tutoring lab are listed as threats by the LRC Reading Lab (see Appendix A). These threats needed to be dealt with so that the LRC could increase its effectiveness, thereby enabling students to persist in college and earn their degree. To address the above threats, additional funding from a Title III grant was realized, and several professors agreed to change their grading policy to be tied to the completion of work in the lab. The threats were turned into opportunities by initiating the search for additional grant funding and increasing collaboration with the academic

departments. A program may be able to capitalize on its strengths and opportunities to increase effectiveness and address program weaknesses and threats.

The implementation of SWOT analysis and action planning, itself, partially addressed the indicated weaknesses of organizational culture and lack of leadership. The LRC, as part of the administration, is a component of the university's hierarchy and the process of SWOT analysis and action planning was a sharing of leadership. Leadership at the LRC went through several changes in the last several years; the LRC had three directors within three and one half years. Utilizing SWOT analysis and action planning at the program level not only presented an analysis of internal and external factors and the current condition of the LRC, but also established a firmer base for the continuation of the program in light of the changes in leadership.

Action Planning

SWOT consists of an analysis of information collected about the situation of the organization or program, but it does not complete the self-assessment process. After SWOT analysis has been conducted, the next step is creating an action plan that uses the identified strengths to take advantage of the opportunities and address the weaknesses and threats. In order to emphasize the importance of an action plan and the evidence on which it is based, the author modified the outline of SWOT analysis and added a chart for the action plan that included identification of evidence-based best practices. In this way, the tutors had to take into account research findings when formulating the action plan (see Appendixes A, B, and C).

Each lab team devises the action plan for their respective lab. The director then reviewed the modifications to determine the compatibility of the goals and objectives of Lincoln University, the Division of Student Services and Enrollment Management, and the Learning Resource Center. Improvements that are based on best practices and fulfill recommendations by the faculty are considered priority implementations. After a review of the LRC budget to determine the feasibility of implementing the improvements, the improvements are then slated to be implemented.

Reading Lab SWOT Analysis and Action Planning

The Reading Lab tutors identified several strengths: Certification by the College Reading and Learning Association (CRLA), positive interactions with students, students feeling comfortable in the lab, students finding the lab work attainable and beneficial, and ongoing evaluation

and improvements contributing to the effectiveness of the lab (see Appendix A).

Weaknesses identified by the tutors included initial difficulty in accessing the online tutoring program, inadequate staffing, low involvement by faculty, and students not exhibiting as much improvement as expected. The online tutoring program was new to tutors and students, and, even with training, the tutors initially found it difficult to guide students to access the online program. When applying for access to a web-based program, accuracy is essential, and some students struggled with entering information correctly. After their experiences in the first semester, the tutors and students were able to access the online program more smoothly.

As tutors obtained more experience in the program, they perceived many opportunities in the use of the online tutoring program. When utilizing the writing function of *My Reading Lab*, tutors were able to individually meet with students to review their comprehension of a reading passage, a best practice. Skill areas in the online program also were prioritized according to the content areas that are assessed on the Education Department's own reading comprehension exam. In addition, the pretest of *My Reading Lab* and the reading level of the online program were aligned more closely with the reading level of the students. The Reading Lab staff noted other opportunities from increasing collaboration with the Education Department to completing advanced training and certification by the College Reading and Learning Association.

Inadequate staffing and funding of the program represent significant threats for the Reading Lab. There has been difficulty in finding qualified professional tutors to staff the Reading Lab, and funding fails to meet professional tutors' pay scales in the area. Because the hours of the lab operations are during the day (8 hours per day, from 9:00 am to 5:00 pm) peer tutors are not a viable option.

Students and faculty have not completely bought-in to the required laboratories. The Reading Lab does not appear on the students' roster and students manually sign up for a lab session during an orientation meeting. This may influence students to undervalue lab attendance even though it counts as 10% to 15% of their course grade. Though lab attendance is a departmental requirement, some students do not feel that lab attendance is mandatory, and some faculty do not consistently support lab attendance.

The tutors have explained to students that attending lab and completing the lab work increases the probability of a higher grade, and the tutors have extended an invitation to each professor to visit the Reading Lab at any time to observe a lab session. An orientation to the online reading

program was held for professors, the LRC Director requested to be put on the agenda of the Education Department meeting and distributed the semester LRC report to professors who teach the developmental reading courses.

The Reading Lab tutors developed several recommendations for improvement: Align the lab work with the course work, provide frequent positive feedback to each student, and utilize the benefits of collaboration with the Education Department. The Reading Lab staff members modified the sequence of topics in the online tutoring program to be congruent with the weekly topics in the reading course and cover the topics on the Education Department's reading comprehension exam. Reading tutors met individually with students to review the results of the pretest and the answers to the online exercises, and are careful to begin and end each session with a positive comment. Both the review mini-lessons and the online tutoring program provided explicit and structured instruction in the lab.

Writing Lab SWOT Analysis and Action Plan

The tutors in the Writing Lab identified a structured curriculum and explicit instruction to be strengths of the Writing Lab (see Appendix C). The online tutoring program, *My Writing Lab,* provides not only diagnostic testing, but also a curriculum in grammar and the writing process. An operation manual for the Writing Lab that included lesson plans for each review lesson enhanced the structure of the lab. Writing activities utilize an analysis of each student's individual diagnostic pretest and contribute to the strength of the online tutoring program. The tutors appreciated the development of a team atmosphere, and the improvement of students' writing skills showcased the effectiveness of the Writing Lab.

Weaknesses consisted of the understaffing of the lab which limits the one-on-one tutoring that is needed to meet the students' overwhelming requests for help with revisions and proofreading. The factors that influenced the lack of tutors for the Writing Lab include the rural location of the university, the funding available, and the inability to utilize peer tutors due to time constrictions. The students' lack of preparation for college level writing has challenged the Writing Lab to increase its effectiveness, and, furthermore, only moderate improvement in basic grammar and punctuation poses an additional challenge.

The Writing Lab tutors have addressed concerns involving communication through collaboration with the English Department. The Composition Committee of the English Department and the Writing Lab jointly met to plan a pilot project that will be initiated fall 2009. A

Writing Lab tutor will be assigned to one English 100 and one English 101 class and, after attending one class per week, the tutor will meet with the students immediately after that class to review the lesson and help with homework.

Opportunities included the possibility of hiring additional writing tutors in the future, the increased experience of the tutors in the online program, and the ability to adapt the online program to address the needs of the students. With the insight gained from one semester's experience with an online writing tutoring program, the writing tutors modified the online program for spring 2009 in order to focus on grammar and punctuation. An opportunity for grant monies from Title III allowed the LRC to increase tutor hours. Also, the diagnostic testing provided by the online program gave the tutors a clearer picture of the students' strengths and areas of need so that the tutors can address each student individually.

The Writing Lab staff cited budget constraints as a threat because lack of available funding limits the hiring of staff and the provision of competitive salaries. The economic issues facing the nation will hinder addressing this threat. The physical facilities of the LRC restricts the number of lab sessions offered, and the increase in the number of underprepared students being admitted to the university has resulted in a higher number of students in laboratory sessions. The Writing Lab could provide only one 50 minute session per week in order to accommodate over 500 students in fall 2008.

The action plan created by the Writing Lab tutors included meeting individually with each student to discuss the results of the diagnostic pretest and helping each student formulate a plan to address and rectify his or her weaknesses. Accordingly, review lessons have been planned in revision and proofreading. The implementation of the review lessons will include explicit instruction and activities in small cooperative groups to provide opportunities for active, task-centered learning. To increase the focus on meta-cognition, tutors will meet individually with a student as he or she finishes writing a paragraph, review the writing with the student, and emphasize meta-cognitive strategies.

Mathematics Lab SWOT Analysis and Action Plan
One of the most significant strengths of the Math Lab has been ALEKS, the online math tutoring program, which has proved effective in increasing students' math skills. The implementation of ALEKS went extremely smoothly, and students perceived that ALEKS helped them improve their skills in the areas of Arithmetic and Algebra. The Math Lab also conducted one-on-one tutoring, and students reported a positive attitude

toward the tutoring. Additional strengths of the Math Lab included the institution of mandatory Math Lab attendance for the developmental mathematics courses and the hiring of additional professional math tutors. Another significant strength of the Math Lab included the increased collaboration between the Mathematics Department and the LRC.

Math Lab tutors noted that the physical facilities were a weakness. The Math Lab could only take place from 3:00 pm to 10:00 pm because the lab rooms were being used by the Reading and Writing Labs from 9:00 am to 3:00 pm. Both students and staff would like to see the Math Lab take place during the day as well as in the evenings. Another weakness was the hesitancy of students to request help, perhaps because of the students' feelings concerning their lack of subject knowledge and the stress of peer pressure.

The Math Lab tutors saw opportunities in continuing to increase collaboration with developmental math professors and interfacing the Math Lab with the Mathematics Department. ALEKS may also be used for tutoring higher level math students. The tutors identified the precarious funding situation as the only threat for the Math Lab. ALEKS is a costly online tutoring program and funding is a continuing issue.

The action plan for the Math Lab included focusing on three math skills (Arithmetic, Real Numbers, and Linear Equations) that have been identified by the diagnostic pretest as areas of need. Also, the following were included in the action plan: Increasing collaboration with the Mathematics Department, reviewing diagnostic testing with each student, and individualized planning for students. Additionally, the tutoring staff recommended including the use of a math journal with the use of math graphic organizers, increasing math vocabulary, and reviewing how to read a math textbook.

Lessons Learned

SWOT analysis was an easy-to-learn and easy-to-use process, and, along with an action planning component and the use of a graphic organizer, the implementation of SWOT analysis proceeded with minimal effort and no resistance. The tutors became engaged in SWOT processes and expressed enthusiasm for such an uncomplicated and interesting assessment. The reading, writing, and mathematics lab tutors each created their own SWOT analysis and action plan for their labs, encouraging ownership and buy-in.

Even though SWOT analysis and action planning was not implemented to fulfill CAS standards, it dovetailed very nicely with CAS standard 13. Conducting SWOT analysis and determining an action plan each semester allowed continuous improvement of the program in addition to

addressing CAS standard 13. Furthermore, collecting data from different sources and using several methods, such as surveying all constituents, reviewing pretest and posttest data, and examining course grades, gave an accurate and inclusive portrait of the program as well as fulfilling the requirements of CAS standard 13.

In spring 2008, the graphic organizer for SWOT included an action planning worksheet with a column to identify research that supported the tutors' recommendations. This empowered the tutors to incorporate critical thinking skills into their analysis and decision making. To facilitate the use of evidence in the self-assessment process, tutors received research findings and a one-page handout summarizing research findings was distributed at the time of the SWOT analysis (see Appendix D). The analysis was well balanced because both the good points and the not-so-good points were examined. In the past, the weaknesses of the program were avoided and not reviewed, but in using SWOT analysis, areas that needed improvement could not be ignored. SWOT analysis and action planning also forced the team to be practical and realistic, devising many improvements that they could actually implement themselves.

Through the collection and analysis of data in conducting SWOT analysis, LRC staff members identified numerous strengths, and articulated problem areas. Examining possible opportunities encouraged a mindset of effectual problem solving, and facing threats to the program gave substance to unspoken issues. Having the tutors determine the action plan themselves empowered the tutors, and the tutors' ownership of the analysis and action plan kept the recommended improvements on a realistic footing.

SWOT analysis also revealed that experience with the online program was a significant factor in utilizing the online program for all three labs. LRC learned that inaccuracy in entering information into the online program in any lab created much frustration on the part of the student and the tutor, and plans could be made to reduce the frustration level. Moreover, aligning the online tutoring program with work in the class on a week-by-week basis came to light as a significant recommendation in the action plan.

SWOT analysis revealed that collaboration between the labs and their academic departments, including alliances with the respective academic departments, remains a critical component of the LRC. Lincoln's LRC is under the Division of Student Services and Enrollment Management, and partnering with the academic departments enhanced the relationship between the academic and the administrative sides of the university. Focusing on collaboration also gave rise to the piloting of a joint project between the Writing Lab and the English Department's Composition

Committee that will be implemented in fall 2009.

SWOT analysis highlighted the major concerns of the tutors: Inadequate staffing and unstable funding. Financial support from a Title III grant was able to partly address these issues. The physical facilities of the LRC turned out to be a considerable limitation on services because the growing number of underprepared students being admitted to the university has increased student participation in the Learning Resource Center.

In summary, a systematic self-assessment process, such as SWOT analysis and an evidence-based action planning, contributed to the improvement of the Learning Resource Center and fulfilled the criteria for CAS standard 13. A periodic self-assessment utilizing SWOT and action planning provided a foundation for supporting the ongoing development of the program. Tutors continuously supported the improvements to the Learning Resource Center because they were the persons who conducted the analysis and determined the improvements. SWOT analysis forced staff members to examine not only the strengths and opportunities, but also the obstacles and negative aspects of the program. The process of SWOT analysis and action planning encouraged ideas for increasing the effectiveness of the program that may have not come to light without such an analysis. The LRC at Lincoln University has found conducting SWOT analysis and creating an action plan not only a satisfying process, but also a process that raises the program to a level of excellence that would not be obtained otherwise.

Appendix A
SWOT Analysis and Action Plan of the LRC Reading Lab
SWOT Analysis

Strengths: What is done well?

- Certified tutors
- Modern technology/software in MRL
- Standardized/systematic program MRL
- Tutors continue to learn about MRL
- Positive rapport and interactions with students
- 65% of students feel comfortable in lab
- 77% of students found lab work attainable
- 57% of students found lab work beneficial
- Small class size
- Individualized instruction based on diagnostic test results
- Shared information between labs and EDU professors
- Access to student performance data through MRL Gradebook
- 100 and 101 course levels in labs on different days
- Eighty-five students improved their diagnostic reading skills scores
- EDU 100 students scored 3.2% average improvement from pre to post
- EDU 101 students scored 4.5% average improvement from pre to post
- 56% of students improved test scores from 1 to 20 percentage points
- 10% of students improved by more than 20 percentage points
- 47% of EDU 100 students improved scores
- 29% of EDU 101 students improved scores

Weaknesses: What could be improved?

- Confusion about access codes/user name/passwords slowed process and time on task in MRL
- Tutors had limited MRL experience
- Random selection/completion of MRL exercises by some students
- Students determined time on task for varying practice exercises/tests
- No lab syllabus
- Inadequate number of tutors
- Some tutors work alone one day a week
- Inadequate number of admin. staff (1/3 the staff of 2007-2008)
- Insufficient time available to fully prepare for posttest improvement
- Limited faculty involvement with lab
- Funding and competitive salaries
- Transient area—traffic
- Student confusion about the relation between lab/course/final grades
- Fifty-three students' diagnostic test results decreased from pretesting to posttesting: EDU 100 skill areas decreases: Main Idea: -22%, Supporting Details: -31%, Purpose and Tone: -25%, Inference: -4% EDU 101: Main Idea: -16%, Supporting Details: -27%
- Twelve students' scores stayed the same from pre to post
- Av. EDU 100 Flesch Rdg grade levels: pre: 7.5/post: 7.8

- EDU 100 students improved an average of 4% on Lexiles (Flesch Reading Grade Level)
- EDU 101 students improved an average of 8.8% on Lexiles (Flesch Reading Grade Level)

- Av. EDU 101 Flesch Rdg Grade levels: pre: 7.9/post: 8.6
- Reading level of MRL was set too high: 6-9th for EDU 100 students and 9-11th for EDU 101 students

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Opportunities: What opportunities are open?
- Create a syllabus for lab
- Advanced tutor training certification
- Tutors are experienced with MRL activities and applications
- Continued implementation of MRL
- Daily feedback to students through MRL
- Further collaboration with EDU professors
- Tutors already familiar with spring EDU 101 students and their progress
- Require all practice sets and tests
- Individual tutor/student appointments to review MRL pre-diagnostic test results
  - Provide feedback on performance
  - Answer questions/give further info/direction for student assignments
  - Identify skill areas in prioritized order for students' study plans
- Opportunity to lower reading level of MRL
- Skill areas are prioritized based on reading comprehension exam item analysis

Threats: What are the obstacles?
- Incomplete staffing
- Precarious program funding
- Hiring freeze
- Interim Director instead of permanent Director position
- Incomplete number of administrative staff (currently 1/3 of 2007-2008)
- Perceived irrelevance for lab attendance by students
- Unclear how many faculty avail themselves of the advantages of MRL

Appendix A
SWOT Analysis and Action Plan of the LRC Reading Lab Action Plan

Improvement	Based on this evidence

1. After reviewing My Reading Lab (MRL) diagnostic pretest results individually with students and tutors and scheduling practice sets and test exercises that address student weaknesses and focus on skills encountered in the Applegate in the following order: Supporting Details, Purpose and Tone, Main Idea, Inference, Vocabulary, Critical Thinking and Patterns of Organization. Students will be required to complete all practice sets and tests before Mastery is achieved. Success will be defined when at least 60% of students achieve Mastery as indicated by a Blue Check in 3 skill areas beyond those mastered on the pretest and 60% of students show a 10% improvement from pre- to post-diagnostic tests.	From diagnostic test scores
	From Center for Student Success (2007):
	    Align lab and course work
	    Lab work will supplement course work
	    Positive feedback related to a specific activity/task/behavior
	Gordon et al. (2006) and Center for Student Success (2007):
	    Ongoing systematic instruction
	    Ongoing systematic program evaluation

2. Tutors will require student completion of all MRL required practice sets and tests in each skill area also found in the Applegate according to the following order: Supporting Details, Purpose and Tone, Main Idea, Inference, Vocabulary, Critical Thinking and Patterns of Organization. Success will be defined when at least 60% of students achieve Mastery as indicated by a Blue Check in 3 skill areas beyond those mastered on the pretest and 60% of students show a 10% improvement from pre to post diagnostic tests.	From student survey
	From diagnostic test scores
	From Center for Student Success (2007), Boylan et al. (1992), and Silverman and Casazza (1999):
	    Align lab and course work
	    Lab work should supplement class work
	    Positive feedback related to a specific task/activity/behavior

Improvement	*Based on this evidence*
3. MRL course work will focus on skill areas in prioritized order, based on Applegate skills and areas in which student performance decreased from pre to postdiagnostic tests in Fall 2008.	Center for Student Success (2007), Boylan et al. (1992), and Silverman and Casazza (1999): Structured curriculum Diagnostic testing Ongoing systematic evaluation Align lab work with the course Frequent and timely feedback Positive feedback of a specific task
4. Tutors will modify the Reading grade level for MRL by lowering the Lexile level to meet the needs of students. As time allows, tutors will assign students' Lexile readings designed to increase reading grade levels between pre and post diagnostic Lexile tests.	Center for Student Success (2007), Boylan et al. (1992), and Silverman and Casazza (1999): Structured curriculum Diagnostic feedback Frequent and timely feedback
5. Education Department Faculty to be invited to observe a MRL session with students: schedule faculty for specific sessions based on availability.	Center for Student Success (2007), Boylan et al. (1992), and Silverman and Casazza (1999): Align lab work with the course Faculty and tutor collaboration Lab work should supplement instruction
6. Continue tutor training toward higher level tutor certification.	Center for Student Success (2007): Ongoing tutor training

Appendix B
SWOT Analysis and Action Plan of the Mathematics Lab
SWOT Analysis

Strengths: What is done well?
- ALEKS, effectiveness of ALEKS in increasing students' math skills, efficient one-on-one strengths
- Smooth implementation of ALEKS-Online Tutoring
- Effectiveness of ALEKS from the students' perspective
- Effective/efficient one-on-one tutoring
- Strong collaboration between LRC Director and Chair of the Mathematics Department
- Mandatory Math Lab attendance for students
- LRC staffing has increased to cope with total demand for tutoring and Math Lab

Weaknesses: What could be improved?
- Facilities-Because of limited space, math tutoring begins at 3 pm
- Students over-relying on ALEKS resulting in "not asking for help" (perhaps students didn't want their 'peers' to know, or felt intimidated for lack of subject knowledge)
- Lack of effective utilization for peer-tutoring
- Students failing to attend math lab regularly are missing the benefit of using ALEKS to its full extent

Opportunities: What opportunities are open?
- Improve ongoing dialog and interaction between LRC & math professors
- Offer intensive arithmetic sessions through ALEKS: for students whose skills are not sufficient in order to enable them to pass Math 103 & 104
- Explore other opportunities for pursuing online tutoring for more advanced math courses

Threats: What are the obstacles?
- Possible lack of funding for the ALEKS program

Appendix B
SWOT Analysis and Action Plan of the Mathematics Lab
Action Plan

Improvement	*Based on this evidence*
1. Focus on strategies to help the students who lack math skills (Arithmetic, Real Numbers and Linear Equations). Identify levels needed to be able to appropriately integrate into college math course in which they will enroll.	Pre & Post Diagnostic test from ALEKS program
2. Create handouts for students to help improvement in Math 103: vocabulary (Math 103), multiplication times tables, and word problems.	Center for Student Success (2007): Improve Math vocabulary. Posttest average in the Arithmetic, Real Numbers, and Linear Equations in Math 103 & Math 104.
3. Meet & Greet with math professors during the beginning of Spring 2009.	Invited all math department to "Meet & Greet" Jan. 13-16, 2009
4. After each student has completed the ALEKS program pretest, tutors will explain their results and then guide each student to focus on: Arithmetic (first area), Real Numbers (second area), and Linear Equations (third area).	Center for Student Success (2007): Individual student diagnostic reports

Appendix C
SWOT Analysis and Action Plan of the LRC Writing Lab
SWOT Analysis

Strengths: What is done well?

- Structured curriculum with explicit instruction
- Implementation of need-based activities
- Good rapport with students
- Many students give positive feedback in spite of many saying they don't want to be here
- Tutors work well together daily resulting in a positive learning experience
- Two tutors have been here for a year working together which lends more continuity to the program and a greater understanding of student needs
- Tutors continue to gain an understanding of what works and what doesn't work
- Tutors possess strong abilities in giving one-on-one feedback
- Ongoing tutor training/Certified tutors
- Some English department faculty find value in LRC which is reflected in student attitude
- Multiple instructional format and strategies (visual, verbal and written)
- Updated technology- comprehensive online writing program and new computers
- Students are able to work at their own speed with My Writing Lab computer program
- Students are able to focus in areas of need with My Writing Lab
- New diagnostic online testing more effective in assessing student progress

Weaknesses: What could be improved?

- Understaffed: Many students need individual help that we are unable to provide due to high student-to-tutor ratio
- Limited amount of time in a weekly 50-minute lab session to complete all activities
- Lack of enhanced communication with English Department, and some English faculty appear uninterested in LRC program
- Lack of labs being listed on the students' roster is confusing
- Lack of credit for lab attendance and work results in student resentment manifested in lowered attendance and poor participation
- Many students seem to lack skills in revising and proofreading
- There was little percent improvement as indicated by online pre and posttest comparison in punctuation and mechanics: Eng 100 - 14%, Eng 101- 7.5%
- Only moderate improvement as indicated by percent improvement online pre and posttest comparison in Basic Grammar: Eng 100 - 26%, Eng 101 - 15%
- Many students neglect to read lesson summaries on the writing program and just guess when answering questions

- Overall improvement as indicated by percent improvement from the online pretest to the posttest: Eng 100 -32%, Eng 101 - 24%
- Significant improvement as indicated by percent improvement from the online pretest to the posttest in Sentence Grammar: Eng 100 - 74%, Eng 101 - 54%
- Significant improvement as indicated by online pre and posttest in Usage and Style: Eng 100 - 50%, Eng 101 - 46%
- Course levels are now divided into separate labs allowing more specialized attention

- Many students neglect to read reasons for their mistakes on the writing program
- Many students claim to have chosen answers at random during the pretest which may have skewed overall diagnostic results
- Some students state they do not like to use the computer program and need more one-on-one help in specific areas
- Many students complain about lab rules, i.e., no hats, cell phone usage, or music allowed

Opportunities: What opportunities are open?
- Plan for scheduling more tutors simultaneously in the lab
- One semester of experience with the new writing program will aid tutors in revising the lab procedures for next semester
- More accurate diagnostic testing indicates a clearer picture of student needs

Threats: What are the obstacles?
- LRC budget constraints prohibit the attraction and recruitment of staff and availability of competitive salaries to maintain the targeted number of tutors
- Large classes prevent tutors from addressing everyone's individual needs
- Negative student attitude and motivation
- Larger classes are likely as the enrollments are increasing each year

Appendix C
SWOT Analysis and Action Plan of the LRC Writing Lab
Action Plan

Improvement	*Based on this evidence*
1. Mini lesson reinforcement activities to be completed in small groups in order to address time issues, improve participation, and supply opportunities for active learning that is task centered, with addressing a variety of learning styles.	Center for Student Success (2007): Active learning: small cooperative group learning that is task or problem centered Student survey
2. My Writing Lab online writing program will continue to be used which helps with individual progress. As students complete writing tasks, tutors will immediately evaluate and critique students' writing. Students will be required to conference individually with tutors at least 3 times to acquire feedback on writing. Students will be required to complete the grammar section of My Writing Lab prior to working on the writing process section.	Center for Student Success (2007) and Silverman and Casazza (1999): Diagnostic Testing, ongoing systematic program evaluation, frequent and timely feedback related to a specific task/activity Student survey given to lab students at end of semester
3. Schedule a "Meet and Greet" open house in the LRC for English faculty to meet with LRC staff. Discuss faculty and student needs, enlighten faculty on lab process and effectiveness. Meeting with English composition committee scheduled for 2:00pm Tuesday, Jan. 20, 2009.	Center for Student Success (2007): Align lab work with the course Teachers and lab personnel work closely Lab work should supplement instruction

Improvement	*Based on this evidence*
4. Tutors will take students step-by-step through the online writing program, emphasizing the importance of reading all necessary material and completing all necessary exercises in order to experience success.	Center for Student Success (2007): Explicit instruction
5. Plan to increase mini-lesson presentations in the areas of need as indicated by diagnostic test results.	From results of the pre and posttests Silverman and Casazza (1999): Positive feedback related to a specific task/activity/behavior

6. After reviewing the pretest individually, continue to direct students to concentrate on those activities addressing Sentence Grammar (Subject and Verbs, Subject-Verb Agreement, Run-ons, Pronoun Antecedent Agreement, Fragments, Parts of Speech, Combining Sentences and Varying Sentence Structure); Punctuation and Mechanics (Spelling and Commas, Semi-colons); and Usage (Parallelism and Easily Confused Words) and Style. Success will be defined when at least 70% of the students receive 80% in at least five topics areas above those mastered on the pretest, as well as at least 70% of the students show a 30% improvement from the pre-diagnostic to the post-diagnostic test.	From results of the pre and posttests
	Center for Student Success (2007) and Chaffee (1992):
	    Explicit instruction in meta-cognition
	    Individual student reports from My Writing Lab

7. Lessons and reinforcement exercises in specific areas that affect the majority of students will continue to remain part of the lab program to augment online lessons in My Writing Lab.	From results of the pre and posttests Boylan's What Works: Research-based Best practices in Developmental Education (2002) & The Center for Student Success (2007): Positive feedback related to a specific task/activity/behavior

Appendix D
Research for Evidence-Based Best Practices
1. Structured Curriculum and explicit instruction (Gordon et al., 2006).
2. More than 5 hours of tutoring per semester (Rheinheimer & Mann, 2000).
3. Write/verbalize a summary of what you know about a topic (Center for Student Success, 2007).
4. Write/verbalize how to go about writing an essay (Center for Student Success, 2007).
5. Write/verbalize questions about the reading (Center for Student Success, 2007).
6. Write/verbalize problem solving (Center for Student Success, 2007).
7. Multiple representations, instructional formats, strategies (Center for Student Success, 2007).
8. Analyze word problems orally (Center for Student Success, 2007).
9. Build a math vocabulary (Center for Student Success, 2007).
10. How to read a math textbook (Center for Student Success, 2007).
11. Explicit instruction in reading comprehension strategies and explicit instruction in meta-cognition (how to learn) (Center for Student Success, 2007).
12. Tutor Training and diagnostic testing (Center for Student Success, 2007).
13. Ongoing systematic program evaluation (Center for Student Success, 2007).
14. Align lab work with the course (Center for Student Success, 2007).
15. Teachers and lab personnel work closely (Center for Student Success, 2007).
16. Locate labs near the course classrooms (Center for Student Success, 2007).
17. Lab work should supplement instruction (Boylan et al., 1992).
18. Lab work should appeal to a wide variety of learning styles (Visual and Hands-on) (Center for Student Success, 2007).
19. Small cooperative groups/study groups (Center for Student Success, 2007).
20. No unstructured individual study (Center for Student Success, 2007).

21. Frequent and timely feedback (Silverman & Casazza, 1999).
22. Positive feedback related to a specific task/activity/behavior (Cameron & Pierce, 1994).
23. Mastery learning. Demonstrate mastery of a set of skills before moving on (85% or B+ minimum correct response rate) (Kulik & Kulik, 1991).
24. Teach critical thinking. Use logical structures of reasoning, analyze information and apply in understanding concepts and solving problems (rubrics for organizing information, develop problem solving protocols, explicit instruction and student demonstration of the steps in problem solving: gathering information, making decisions, etc. (Chaffee, 1992).
25. Teach learning strategies in a variety of contexts, self monitoring of comprehension, teach theories behind the strategies, use materials from a variety of courses (Boylan, 1999; Boylan, 2002; Young & Ley, 2001).
26. Active Learning: Group learning that is task or problem centered (McKeachie, 2002).
27. Classroom assessment techniques: One minute paper at end of the period: What did you learn today that was useful/What questions do you still have today/What was the muddiest point (not clear to you) and use for the next session (Angelo & Cross, 1991).

References

Angelo, T. A., & Cross, K. P. (1991). *Classroom assessment techniques: A handbook for college teachers.* San Francisco, CA: Jossey-Bass.

Boylan, H. (1999). Exploring alternatives to remediation. *Journal of Developmental Education, 14*(1), 1-4.

Boylan, H. (2002). *What works: Research-based best practices in developmental education.* Boone, NC: Continuous Quality Improvement Network/National Center for Developmental Education.

Boylan, H., Bonahm, B., Claxton, C., & Bliss, L. (1992, November). *The state of the art in developmental education: Report of a national study.* Paper presented at the First National Conference on Research in Developmental Education, Charlotte, NC.

Cameron, J., & Pierce, W. D. (1994). Reinforcement, reward, and intrinsic motivation: A meta-analysis. *Review of Educational Research, 64*(3), 363-403.

Chaffee, J. (1992). Critical thinking skills: The cornerstone of developmental education. *Journal of Developmental Education, 15*(3), 2-8, 39.

Center for Student Success (2007). *Basic skills as a foundation for student success in California community colleges.* The Research and Planning Group for California Community Colleges: California.

Council for the Advancement of Standards in Higher Education (2008). *CAS Self-assessment guide for learning assistance programs*. CAS: Washington, DC.

Council for the Advancement of Standards in Higher Education (n.d.). *History of CAS.* Retrieved May 20, 2008, from *http://www.cas.edu/*.

Ghemawat, P. (2002). How business strategy tamed the "invisible hand." *Harvard Business School Week.* Retrieved May 15, 2008, from *http://hbswk.hbs.edu/cgi-bin/print?id=3019*.

Gordon, E. E., Morgan, R. R., O'Malley, C. J., & Ponticell, J. (2006). *The tutoring revolution: Applying research for best practices, policy implications, and student achievement.* Lanham, MD: Rowman & Littlefield Education.

Kulik, J., & Kulik, C. L. (1991). *Developmental instruction: An analysis of the research*. Boone, NC: National Center for Developmental Education.

Lincoln University (2008). *Comprehensive Self-Study Report submitted to the Middle States Commission on Higher Education for Reaffirmation of Accreditation.* Retrieved May 5, 2008, from *http://lincoln.edu/academicaffairs/middlestates08/LU_SellfStudy02-2008.pdf*.

McKeachie, W. J. (2002). *Teaching tips: Strategies, research, and theory for college and university professors.* Boston, MA: Houghton Mifflin.

Rheinheimer, D. C., & Mann, A. (2000, Winter). Gender matching, floor effects, and other tutoring outcomes. *Journal of Developmental Education*, *24*(2), 10-28.

Rogers, E. (1997). *Diffusion of Innovation (4ᵗʰ ed.).* New York: The Free Press.

Silverman, S., & Casazza, M. (1999). *Learning and development: Making connections to enhance teaching*. San Francisco, CA: Jossey-Bass.

Strategy: Create and implement the best strategy for your business, (2005). Boston, MA: Harvard Business School Press.

S*WOT analysis II: Looking inside for strengths and weaknesses*, (2006). Boston, MA: Harvard Business School Press.

Young, D. B., & Ley, K. (2001). Developmental students don't know that they don't know: Bridging the gap. *Journal of College Reading and Learning*, *31*(2), 171-178.

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