

WAYNE STATE UNIVERSITY

Professional Record
Faculty

NAME: Andre Wilkinson Furtado

DATE PREPARED: October 1st 2000

DATE REVISED: Feb 24th 2018

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DEPARTMENT/COLLEGE: Interdisciplinary Studies Department, College of Lifelong Learning/College of Urban Labor and Metropolitan Affairs/ College of Liberal Arts and Science
(Fall 1974 to Fall 2007)

Mathematics Department, College of Liberal Arts and Science

(Winter 2008)

PRESENT RANK & DATE OF RANK: Assistant Professor (1974)

WSU APPOINTMENT HISTORY:

Year Appointed/Rank:

1974/Assistant Professor

Year Awarded Tenure:

1981

CITIZEN OF: India (Permanent Resident of USA since 1974)

EDUCATION: [Give name of institution, place, and date of degree.]

Baccalaureate:

B.Sc. (Chemistry), First Class, St. Xavier's College, Bombay University, 1961

B.S. (Chemical and Metallurgical Engineering), Univ. of Michigan, Ann Arbor, 1963

Graduate M.S. (Chemical Engineering) University of Michigan 1965

Ph.D. (Chemical Engineering), University of Michigan, December 1973

FACULTY APPOINTMENTS AT OTHER INSTITUTIONS (Years and Rank):

[Not administrative appointments; see below.]

Senior Research Associate, Univ. of Michigan, Dept. of Chemical Engineering, Winter, S/S 74

signature:



02/25/18

HONORS/AWARDS : Lifetime Service Award CBS (CLAS) 2006
: Excellence in Teaching Award, (CULMA) 2005
: Excellence in Teaching Award, Wayne State University 1990
: College of Lifelong Learning General Assembly Honor Award W 87
Travel Grant from Office of Research, WSU, CLL, and US/WC for
travel to China (\$1500) S/S 87

I. TEACHING

A. Years at Wayne State: 44 years

B. Years at Other Colleges/Universities (please list)

University of Michigan, Dept. of Chemical Engineering (6 months, 1974)

C. Courses Taught at Wayne State in Last Five Years

1. Undergraduate

Essentials of Math (Mat 0900)
Elementary Algebra (Mat 0993)

D. Course of Curriculum Development

1) Instituted a *Basic Math* course at Jackson Prison Module (1974-1976)

2) Developed a 10 program set on ecology for the *Science and Ecology* TV Series (1975)

3) Prepared a course *Education for the Future* at the Jackson Prison Module of US/WCP (University Studies/Weekend College) in collaboration with Prof. Gloria House, Humanities Division. Operating from the hypothesis that a prison population may not be eager to make an investment in an academic experience that was previously alien to them, the course was developed to provide students with an insight into the nature and purpose of the educational process and to help students set personal educational goals in preparation for survival after release. (1976-1977)

4) Prepared a Conference course and a Reader on *Aging and Death and Dying*
This interdisciplinary course examined medical, cultural, economic, and spiritual factors involved in the processes of Aging and Dying. Lectures were combined with practical activities such as visits to Nursing Homes, War veterans grappling with the effects of long gone death on the battlefield, etc. (1978)

5) Prepared a Conference course and a Reader on *Technology, Health, and the Environment*. (1979-1983)



This course expanded on the ethical and social dimensions of many of the biological and ecological concepts presented in the Changing Life on Earth TV course which it complements. Course readers and assignments have been prepared since 1979 and have been continuously revised up to 1983 in collaboration with Prof. Norma Shifrin. Includes issues relating to food, nutrition, and caloric intake, the ethics of abortion, and euthanasia, environmental contamination (pesticides, air and water pollutants including specific cases)

6) Developed a four year curriculum plan through US/WCP for the position of Computer Programmer/Analyst in the City of Detroit (1984)

7) Introduced commercially available biology kits and slides to illustrate difficult concepts in genetics and evolution as visually as possible and to permit some hands-on work as supplements to the *Changing Life on Earth* TV course. Models demonstrating the role of chromosomes in inheritance were especially prepared for this course. (1985)

8) Institutionalized the use of personal computers in the *Computers and Society* course. We were the first at WSU to require students to purchase a (TIMEX/SINCLAIR 1000) computer as a prerequisite for a computer course. This provided unlimited access to computing to our decentralized student body who could work at home. A packet of readings highlighting the technology, the terminology, and social impacts was prepared along with a set of exercises in the BASIC Programming language (1985)

9) Prepared a comprehensive document *Elective Tracks for the BGS Degree* during the summer of 1982 that suggested practical ways in which US/WC could integrate academic offerings from other colleges at WSU in the BGS program to meet specific career and professional needs. (1986)

10) Spearheaded the six year effort to get the *Introduction to Interdisciplinary Studies: New Student Conference* course institutionalized throughout the US/WCP program after a version of it was taught at the Jackson prison Module. The main objective was to examine the role of the Humanities, the Social Sciences, and the Science and Technology sequences at US/WC and how they flow into the interdisciplinary investigation of issues and problems. It also assesses basic student academic skills and allows them to reflect on and plan their academic work. (1987-1988)

11) Consultant for revision of the *Energy, Technology and Society Television Series*. (1988)

12) Developed a Radio Shack Color Computer Lab at Room 453 CJI through solicitation of \$12,000 from Prof. Otto Feinstein's CISU Project. Designed and wired the lab with an interactive video network that permitted video instruction without interfering with work on individual student stations. Also wired lab to permit printer sharing. Special



Computer Literacy classes were developed for unemployed inner city African American adults. (1987)

13) Modified the GST 271 *Computers and Society* course to include instructional materials and assignments involving the Radio Shack Color computer which all students were required to purchase. (1987)

14) Developed a tutorial program for the Math Proficiency Exam for US/WCP students, and a simulated Math Proficiency Exam administered just prior to the administration of the actual exam to improve student test-taking strategies. As a result, the failure rate which averaged 39% in 1983 (with only 10% of the student body scoring over 60%) dropped to 3% in 1985 (with 72% scoring over 60%)

15) Modified the GST 271 *Computers and Society* course to meet the General Education Computer Competency requirement. (1987)

16) Developed a non-traditional set of instructional materials for the Chicano-Boricua Studies(CBS) Program Math practicum and for a Math Class offered through Counseling Services at Wayne State University. (1988)

17) Upgraded the computer lab by shifting from the cassette storage based Radio Shack Color Computer lab to a Macintosh lab with 15 stations and a 30 Mb harddrive for each station and using state of the art integrated word-processing, database, spreadsheet, and drawing software and an LCD projector for classroom demonstrations of procedures and techniques. (1988)

This lab has been subsequently used not only by ISP students , but also by minority students in other programs (Hispanic students in the CBS program, and African - American students in the DCE program), and Non Credit programs

18) Modified the GST 271 *Computers and Society* course by developing word-processing/database/spreadsheet/drawing/painting assignments using Microsoft Works, programming assignments using a graphics based programming language called Karel, developing transparencies and using demonstration software to demonstrate concepts such as logic circuits, modeling, process simulation, etc. and a Reader to assist in understanding computer concepts, hardware and software. (1991)

19) As Conference Coordinator, modified the GSI 343 Foreign Culture conference on *The Chinese*. Worked with Prof. Cliff Maier and Prof. Mary Lee Field to upgrade the presentations on the History of Chinese Science and Technology and Chinese Art respectively using selected slides as instructional aids in each case. Arranged live performing arts presentation of the Lion Dance, added new videos from the Longbow series, prepared study questions for selected readings from the text, and prepared a Conference Reader (1988)



- 20) Prepared the curriculum for the first *China Study Trip* offered through US/WCP in collaboration with the Liaoning Education Society, Liaoning, China. (1989)
- 21) Prepared the curriculum and the itinerary for an *India Study Trip*. (1989)
- 22) Served on a Committee to develop a new *Interdisciplinary Studies Seminar* course that combined both small weekly workshop and larger weekend conference formats to introduce students to interdisciplinary studies. W89-F91
- 23) Prepared a new Math Proficiency Exam simulation exercise to help students to prepare for a completely revised, more inclusive, and considerably more difficult exam.
- 24) Prepared a syllabus for a new Interdisciplinary math course, *History and Concepts of Math*, for submission to the General Education Committee. The course combines both history and concepts behind common mathematical procedures to provide an interdisciplinary perspective more suitable to adult students. (1991)
- 25) Prepared a new Math Diagnostic test to assess student entry-level skills in the *Interdisciplinary Studies Seminar*, especially to assess students who are underprepared for the Math Proficiency Exam simulation exercise. (1992)
- 26) Prepared a Reader for the GST 1510 *History and Concepts of Math* course using sources in the literature. (1995)
- 27) Prepared additional written tutorial materials for the GST 1510 *History and Concepts of Math* course to help students understand concepts not seen before in the high school curriculum (1998)
- 28) Book under preparation "Math for the Scared" for GST 1510 *History and Concepts of Math* course. Parts of the first draft currently being used in GST 0510 and GST 1510 and a special Directed Study math course to help students understand math concepts (Summer, Fall 2000)
- 29) Exercises and solutions in preparation for book "Math for the Scared" (Winter 2001)
- 30) Preparation of a New Math Diagnostic Test involving numerical and graphical literacy and other basic arithmetic and algebra skills for assessing student preparedness for the Math Proficiency Exam and for recommending appropriate coursework and individualized preparation for the exam (Fall 2000)
- 31) Prepared 150 Math worksheets for students to prepare them for the new material in the new Math Placement Exam (Fall 2003)
- 32) Revised the Math for the Scared course and exams in the course to prepare students for the new Math Placement Exam (Fall 2003)



31) Prepared a new course “Math Lab” to enable students to practice math in class to get up to speed to qualify for Math 0993 from the Math Placement Exam. This course is taken in tandem with Math for the Scared and is expected to improve student performance in the exam (Winter 2004)

32) Preparation of additional math worksheets and instructional materials for “Math for the Scared and “Math lab” (Winter 2005)

33) Added a web-based software component Enable Math to the Math for the Scared class from a WSU Learning Community Grant to provide practice opportunities for students. This has been a very successful intervention, which along with a lab and the active participation of a CBS academic advisor/counselor has increased the pass rate in the Math Proficiency Exam from a low of 22% in Fall 2003 to 64% in Fall 2006 for CBS students. (Fall 2006)

34) Used student mentors to aid students in a pre-Mat 0993 course (IST 0510) Fall 2007

35) Prepared Materials for a Pre Mat 0993 Arithmetic Tutorial for adult students as a prelude to enrolling in a special Mat 0993 section for adult students

35) Developed a new model for Mat 0900 to meet working adult student needs. To be admitted into the class, students need to take an online arithmetic test, follow a study guide until they can improve their score to be proficient enough to have a chance to succeed. The class meets twice a week for 3 hours each, and an online component provides immediate homework feedback. (Winter 2012)

36) Developed worksheets with solutions to be used in all computer-based Mat 0993 classes using Learning Catalytics software to provide students with practice and to improve conceptual knowledge. These worksheets are used by all sections. (Fall 2014)

37) Developed challenging problem sets for Mat 0993 with solutions on Learning Catalytics software to help prepare students to succeed in quizzes and tests (Fall 2015 to present)

E. Course Materials (Unpublished)]

Introduction to History and Concepts of Mathematics Reader GST 151(revised annually to 2009)

Practical Mathematics Reader GST 0510 (revised annually to 2009)



Computers and Society Reader GST 2710 (2004)

New Student Seminar Reader ISP 2030Mat (2005)

Reader for Mat 0900 (2011,2012,2013)

Mat 0993 weekly worksheets now computerized with solutions and used in all sections
(2014)

II. GRANTS

Wrote grant to WSU Technology fund **for Instructional Technology Enhancements for Off-Campus sites at Wayne State University** funded at the level of \$55,000, May 2000

Wrote grant to WSU Technology fund for **Technology-Enhanced Curriculum Development, Delivery and Student Services to Non-Traditional Students in DCE and ISP** (\$127,491) July 1999

III. PUBLICATION

A. Chapters Published

1. Authored (Refereed)

Furtado, Andre, Linda Lora Hulbert, Julie Thompson Klein, Lisa Maruca, Caroline Maun, Daphne W. Ntiri, Roslyn Abt Schindler, To Educate the People: The Rise and Fall of the Department of Interdisciplinary Studies at Wayne State University. in The Politics of Interdisciplinary Studies, McFarland Publishers, Jefferson, NC. (Fall 2009)

Furtado, A. "An Educational Model for a Prison Setting" in A Humanities Based Curriculum for Working Adults by Otto Feinstein 1976

2. Co-Authored

Powers, J and A. Furtado. "Thermodynamic Analysis" in Engineering of Coal Conversion Processes to Provide Clean Fuel, Electric Power Research Institute project 206-0-0, University of Michigan, College of Engineering, Feb 1974

B. Editorships of Books/Proceedings

C. Journal Articles Published



D. Refereed Journals

Furtado, A.W. and D. Johnson. "Education and Rehabilitation in a Prison Setting"
Journal of Offender Counseling, Services and Rehabilitation
Vol. 4 (3), Spring 1980

Powers, J., A. Furtado, R. Kent and A. Kwan. "Smoothed Experimental Enthalpy Data for Four Mixtures: Three Methane-Ethane Binary Mixtures and a Ternary Mixture with Propane" J. Chem. Eng. Data, Vol. 24, No 1, January 1979

1. Invited Review Articles
2. Nonrefereed Journals

E. Papers Published in Conference Proceedings

1. Refereed Papers

Furtado, A.W., "The Development of a Global Perspective in a General Education Degree Program" presented at the Conference on Future Visions in Higher Education, Dalian, China August 4-8, 1987.

Miyazaki, T., A.W. Furtado, and J.E. Powers
Smoothing of Thermodynamic Data Based on Equality of Second Derivatives
"First International Conference in Calorimetry and Thermodynamics, Warsaw
1969.

2. Non-refereed Papers

Furtado, A.W. and J. Garibay, "Social and Environmental Factors Influencing High Risk Latino Student Retention at a Four Year Public Research Institution: The Detroit-Wayne State University Experience" , Minority Student Today Conference, San Antonio, Texas, Oct. 4 1992.

"A Non-Traditional Computer Literacy Course at Wayne State University", at the Computers on Campus Conference, Nov. 12, 1990. Sponsored by the University of South Carolina Division of Continuing Education

Golba, J.C., K.Y. Kim, V.K. Khanna, T. Miyazaki, A.W. Furtado, D.L. Katz, and J.E. Powers "Progress at the Thermal properties of Fluids Laboratory at the University of Michigan" Proceedings of the 51st Annual Convention of the Natural Gas Processors Association (NGPA) Technical papers pp 39-42, April 1972.

A.W. Furtado, J.C. Golba, D.L. Katz, and J.E. Powers "Progress at the Thermal Properties of Fluids Laboratory at the University of Michigan" Proceedings of the



50th Annual Convention of the Natural Gas Processors Association (NGPA)
Technical papers pp 24-28, March 1971.

A.W. Furtado, J.C. Golba, D.L. Katz, and J.E. Powers “Progress at the Thermal Properties of Fluids Laboratory at the University of Michigan”
Proceedings of the 49th Annual Convention of the Natural Gas Processors Association (NGPA) Technical papers pp 1-8, March 1970.

A.W. Furtado, D.L. Katz, and J.E. Powers “Progress at the Thermal Properties of Fluids Laboratory at the University of Michigan”
Proceedings of the 48th Annual Convention of the Natural Gas Processors Association (NGPA) Technical papers pp 5-11, March 1969.

Yesavage, V.F., A.W. Furtado and J.E. Powers “Results of Experimental Measurements of Enthalpy Data and Comparison with predictions for a Mixture Containing 77 mole% Propane in Methane”
Proceedings of the 47th Annual Convention of the Natural Gas Processors Association (NGPA) Technical papers pp 3-28, March 1968.

F. Papers Presented

Furtado, A.W. “Counted Out: Student Disenfranchisement through the General Education requirement” Battleground States Conference, Bowling Green University, March 30th 2006

Furtado, A.W. "Marketing Interdisciplinary Studies Programs" Association for Integrative Studies Conference, Oct 8th, 1998, WSU, Detroit, Mi

Furtado, A.W. “Factors Affecting Performance of Chicano-Boricua Students in the Math Proficiency Exam and the Math Placement Test at WSU”, Third Scholar’s Roundtable of the Midwest Consortium for Latino Research, Aug. 16-18th 1996, Univ. of Nebraska, Lincoln, Nebraska

Furtado, A.W., and M. Dickson “Retention of Students in Selected Non-Traditional Academic Programs” at the Road to Student Success- Retention Efforts that Work TriState Conference, Wayne State Univ., Oct 6 1994

(This presentation examined the impact of academic/personal counseling, and tutoring in English, Math and Computers on the retention of two specific sub-populations: African-American students in the DCE (Division of Community Education) program and adult returning students in the ISP (Interdisciplinary Studies Program at Wayne State University)



Furtado, A.W., and J. Garibay “Increasing the Latino Presence on Campus: Problems and Solutions” Midwest Conference for Latino Research, University of Illinois, Chicago, March 19, 1992

Furtado, A.W., and J. Garibay “Social and Academic Environmental Factors Influencing High Risk Latino Students at a Four Year Public Research Institution: The Detroit-Wayne State University Experience” at the Minority Today Conference, San Antonio, Oct. 6, 1992 sponsored by the University of South Carolina, Division of Continuing Education

Furtado, A.W. with D. Badillo, J.Fujigaki, J. Garibay, and J. Mora Torres “Perceptions on the Motivation, Learning and Retention of Students in the Chicano-Boricua Studies Program at WSU” also Workshop Coordinator, The Fourth Annual Conference on Latino Issues, WSU, Nov. 1, 1991

”A Non-Traditional Computer Literacy Course at Wayne State University”, Computers on Campus Conference, Myrtle Beach, South Carolina, Nov. 13, 1990

Furtado, A.W., T. Kotila, and L. Hulbert “The New Student Conference: Introducing Adults to the University, The Freshman Year Experience Conference, Feb. 20, 1989, Univ. of South Carolina, Columbia, SC

” Non-Traditional Students and a Computer Literacy Course” Second Annual Noel-Levitz Retention Conference ,July 1988, Boston, Mass

“The Development of a Global Perspective in a General Education Degree Program” presented at the Future Visions in Higher Education Conference. Dalian, China, Aug. 6, 1987

” A Computer Literacy Curriculum of Adult Learners” at The Options are Wide Open Conference, Madonna College, March 21 1986

”Developing Curricula to Improve Computer and Math Skills” at the To Educate the People Consortium Meeting, March 12, 1985, Tampa, Florida

“Developing Basic Skills(Reading, Writing and Math) in the Weekend College Model” at the To Educate the People Consortium Curriculum Development Meeting, Kansas City, Kansas, April 1981

“The Biology and Ecology Curriculum at US/WC: A Multi-disciplinary Framework” at the To Educate the People Consortium Meeting, Jan 7 1979, Washington, DC

“The Weekend College Program at Wayne State University: How Traditional Institutional Structures and Objectives Function as Impediments to Innovation”



North American Seminar on Participatory Research, Highlander Research and Educational Center, Sept. 8 1979, Tennessee

" Impact of Student Participation on the Effectiveness of the Educational Process"
North American Seminar on Participatory Research, Highlander Research and Educational Center, Sept. 7 1979, Tennessee

G. Invited Seminars or Lectures Presented in Last Five Years

“Mathematics Performance in Detroit Metro High Schools and their Impact on Subsequent Performance in Wayne State Developmental and Freshman Level Math Classes” - A series of three presentations to area high school counselors sponsored by the WSU admissions office. WSU Oct 22, Nov5, Nov 7, 2008

“Introduction to Quantitative Critical Thinking and Administration of a Math Skills and MPE (Math Proficiency Exam) Diagnostic Test”
Interdisciplinary Studies Seminar, ISP 2030,

(Winter 2008/Winter 2007/Fall 2006/Winter 2006/Fall 2005/Winter 2005/Fall 2003)

“Helping Non-Traditional Students at Wayne succeed in the Math Competency Exam” Tutor Institute WSU April 15, 2005

“A Critical Analysis of the Math Proficiency Examination at Wayne State University“
Seminar to WSU Ad Hoc Committee to Evaluate General Education February 15th 2000

“A Critical Analysis of the Math Proficiency Examination at Wayne State University“
Seminar to ISP faculty and staff, Oakland Center WSU, April 14, 2000

“ An Introduction to the World Wide Web and to the Development of Web-Pages using Claris Home Page on the Macintosh” April 4, 1997 (A seminar to train ISP faculty to develop Web courses)

“Introduction to Quantitative Critical Thinking and Administration of a Math Skills and MPE Diagnostic Test”
Interdisciplinary Studies Seminar, GIS 203, Oct 19 F 96

“Introduction to Quantitative Critical Thinking and Administration of a Math Skills and MPE (Math Proficiency Exam) Diagnostic Test”
Interdisciplinary Studies Seminar, GIS 203, Feb. 25 W95

G) Unpublished Research



Statement: Some of my research is to determine patterns of student enrollment and student retention to help forecast how resources ought to be allocated to meet these patterns. However, most of my data gathering and research work revolves around retention of students, specifically in Math, Computer and Writing courses and more recently (since 2011) specifically in Mat 0900/Mat 0993/Mat 0995/Mat 1500. The objective is not only to find areas of weakness and to develop strategies for addressing these weaknesses, but also to disseminate the results of such research to students so they can be made more aware of their weaknesses and start addressing them more quickly. In effect, my research is a dynamically evolving on-going activity with its primary focus as the student population that I am dealing with at any given time. Although unpublished, this research should be considered of significant service value as each of these contain original researched data that have contributed immensely to the understanding of what our retention problems are and how they might be solved.

Some of this research has been presented to the Associate Provost Howard Shapiro to assist him and the University in pinpointing specific areas where retention efforts might be concentrated. This research has been presented to the University Liaison Committee on Retention, of which I am a member in late March 2007 and also to the Chair of the GRAD Committee, Dr. Marquita Chamblee in Fall 2015.

First Time Freshmen Fall 09 WSU First Term Academic Performance as a function of High School GPA, ACT score, Admission Status, Learning Community Participation, and Cultural Diversity Feb 8th 2010

This 30 slide power point presentation does a demographic analysis of first time freshmen at Wayne and analyses their first term performance at Wayne through their WSU GPA as a function of a single academic preparedness variable (that combines their ACT and High School GPA) , and learning community participation. It appears that learning community participation significantly improves student performance when compared with students not in learning communities when the level of academic preparedness is low. The performance difference decreases at higher levels of academic preparedness.

The Mathematics Education Dilemma at Wayne State University (presented to the WSU Retention Liaison Committee August 8th 2007

This 70 slide power point presentation addressed the need for the Research Mission culture at Wayne with its focus on academic excellence and its attendant filtering effects and the Urban Mission culture at Wayne with its focus on empowering non-traditional and academically under-prepared students to find ways to bridge the chasm between seemingly incongruous goals so as to promote a diversity of pedagogical approaches and student support services that promote both excellence and equity in mathematics education



Retention at Wayne: Some Inconvenient Truths (Presented to the Retention Liaison Committee March 29th 2007)

This paper compares WSU graduation rates vs. comparable institutions with similar student demographics and finds it among the worst, especially for African-Americans. The composition of faculty relative to the African-American student body has demonstrated clearly that African-American faculty numbers need to be significantly increased. Difficulties for students in non-math intensive majors in meeting the math requirement are explored including possible solutions to this serious problem. Ways to uncover academic areas where interventions are necessary have been presented along with suggestions to identify high-risk students early on and steer them into appropriate interventions. Internal political factors that need to be addressed to move forward on the retention issue have been discussed.

The CBS Math Experiment Fall 2006 (presented to the Living Learning Communities Group, WSU March 5th 2007)

A multiplicity of interventions including tutoring, a math lab, web-based software and additional exam simulations were used to prepare 22 CBS students who scored less than 30% on an arithmetic diagnostic test to succeed in the Math Placement Exam. 64% of the students qualified out of Mat 0993 including 7 out of 11 or 54% of those whose ACT scores were between 14 and 16. No program at WSU has had comparable success in math with such academically disadvantaged students. Also 27% of the students qualified for Mat 1800.

Counted Out: Student Disenfranchisement through the General Education Requirement: A Case Study **March 2006**

At Wayne State University, (WSU), the retention rate, and particularly the 6-year graduation rate of African-American students is considerably below that of Caucasian Americans (>32% Black-White gap in graduation rates). This institution, located in Detroit, a city, with one of the highest African-American populations (>80%) in the nation, has also, ironically, one of the highest black-white graduation gaps in the nation despite the explicitly described Urban Teaching Mission University reflected in the Board of Governors mission statement which claims among other things that the university is dedicated to the service of non-traditional and academically disadvantaged students.

Efforts to address this problem can be complicated by barriers to academic success, especially when single departments, despite general education policy to the contrary, insists on exclusive domain over a required general education subject. Instruments now used that have replaced instruments accepted as national standards have decreased the success rate of such students and serve to intimidate rather than empower them. Skill and speed in computation overlays an accurate assessment of student conceptual learning. This in turn exacerbates the retention problem for such students at WSU. The need for openness to pedagogies that



address the learning styles of students and stir their motivation to learn the subject matter in a learning community environment is urgent if retention is to be improved. Also addressed in brief are related attempts to marginalize programs that serve non-traditional adult students.

CBS: Pathway to the Future Fall 2004

It is essentially a report about the status of Chicano-Boricua Studies to its Governing Board. Data was provided on CBS activities and accomplishments. Data on student recruitment, ethnicity, and retention were gathered, analyzed, and summarized.

The Chicano-Boricua Re-chartering Story

July 2004

This paper summarized the deficiencies of the Academic Senate at Wayne State University in handling the application of the Chicano-Boricua Studies Center for a 6-year extension of its charter. This paper was presented to the Board of Governors. The Senate did not evaluate Research and Retention data submitted to it in support of CBS accomplishments.

The De-democratization of Higher Education at WSU

July 2004

This paper examines the systematic way in which Wayne State University has moved away from serving the Urban Mission: the non-traditional and the academically disadvantaged students to serving the more elite student and the more traditional students.

The Math Competency Requirement and Non-Traditional Students at CLL at WSU (March 8th 1999)

This comprehensive report examines the experiences of adult students from ISP and freshman students from CBS in meeting the Math Competency requirement through the Math proficiency Exam. The effect of raising the passing score from 17 to 21/45 has been examined. It was found that the failure rate was substantially increased. The appropriateness of the Math Proficiency Exam in meeting the Math Competency requirement is questioned. Recommendations from various educational mathematics associations have been presented and innovative practices at other Universities to develop quantitative reasoning especially among students in non-math intensive disciplines are presented. This report was submitted to the General Education Ad-Hoc Committee to suggest the need for reassessment of instruments used to meet the Math Competency requirement.

Development of Statistical Information on undergraduate enrollment patterns at selected Michigan Universities, at ISP, in specific subprograms within ISP (i.e. Chicano-Boricua Studies, DCE, SAA, BIS, BTIS, M IS and at specific off-campus locations at Oakland and Macomb.) W98



Registration patterns between the beginning of the Telephone Registration period and the 10th day of class including a comparison between ISP and WSU patterns W98

Factors influencing ISP student use of telephone registration in W 98

Upper bounds for the retention of undergraduate degree seeking students at ISP from F93 to W98

Skills and educational needs analysis for ISP students enrolled in the Interdisciplinary Studies Seminar W 98

Analysis of Winter 96 Math Proficiency Exam Data with Special Attention to Students taking the Test through CLL (F96, expanded in W97)

The results showed that ISP/CLL has the lowest percentage of people of any college passing the MPE at 48.1%. ISP women who did not take the GST 151 preparatory class passed at the low rate of 20%, compared to a rate of 60% for ISP women who took the course. the data underscores the need for serious pre-MPE exam preparation

Examination of Performance of three cohorts of students in the Math Proficiency Exam. The ISP, and the CBS cohorts are compared against the University wide cohort. Performance with respect to % Passing, Mean Scores, % females passing are compared. Particular attention is being paid to fraction of students at several threshold scores starting from 17 to 25. (The passing MPE score is to be increased gradually from 17/45 in 1994 to 25/45 in 2001. (F94/W95)

Examination of the relationship between Math Diagnostic Test Assessment scores and Math Proficiency Exam scores of students along with individual preparation strategies to refine suggested criteria for specific interventions based on Diagnostic test scores (F93-W95)

Comparison of Academic Performance of students targeted by the Coordinated Retention Services (CRSP) grant (F92-W94) with those before the inception of the grant (F91-W92). Results are published in the Final Report of the CRSP project to Select Student Support Services in the Office of Minority Equity 1993-1994 (SS94/F94)

Examination of the Effect of Tutoring on the Academic Performance of CRSP Students Recommended for Tutoring in Selected Course Sections from F92-W94

Results are published in the Final Report of the CRSP project to Select Student Support Services in the Office of Minority Equity 1993-1994 (SS94/F94)



Additional graphical data on tutoring effectiveness was developed for presentation to the Joint Academic Senate-Administration Ad-Hoc Committee on Retention (W97)

Examination of the Relationship between CRSP Intervention and Impediments to Graduation Certification for ISP students with respect to Math and English Proficiency Requirements and the Advanced Math Requirements.

Results are published in the Final Report of the CRSP project to Select Student Support Services in the Office of Minority Equity 1993-1994 (SS94/F94)

Analysis of data on curricular impediments to certification for graduation for ISP students gathered by Ms Lois Hazell, Counselor, ISP Program.
(F93/W94)

Developed a computer program to study enrollment patterns from raw data:

Distribution of ISP AYES between

- a) Various class locations
- b) Various days of the Week
- c) Morning and Evening classes
- d) General Education and Non-General education courses
- e) Between ISP Degree students and non-ISP

(F93)

Conferences Attended:

EIAWG(Equity,Inclusion and Accessibiity Working Group) Retreat July 30/July 31 2017

School craft college

Student Academic Success Summit “Cultivating Partnerships for Learning and Growth” Feb 26thth 2016, McGregor, WSU sponsored by Provost’s Office WSU

GRAD Committee Retreat Aug 15/Aug 16, 2015 Waldenwood Resorts and Conference Center, Hartland Mi.

Scholarship of Teaching and Learning Academy (SOTL) May 16,17, 2010, Eastern Michigan University

Student Academic Success Summit “Making Teaching Community Property” Feb 19th 2009, McGregor, WSU sponsored by and Office of Undergraduate Programs and General Education, WSU

Scholarly Teaching, Assessment of Learning and General Education, Jan 23 2008, sponsored by Office of the Provost and The Office for Teaching and Learning WSU



Student Academic Success Summit Follow-up ,Oct 10, 2007, WSU, sponsored by WSU Equity and Excellence Advisory Committee and Office of Undergraduate Programs and General Education

Student Academic Success Summit "Engaged Learning: Making It Real," March 27,28 2007, Student Center Building WSU, sponsored by WSU Equity and Excellence Advisory Committee and Office of Undergraduate Programs and General Education

Student Academic Success Summit "Making Our Diversity and Educational Asset," (Group Discussion Facilitator) April 9,10 2007, McGregor, WSU, sponsored by WSU Equity and Excellence Advisory Committee and Office of Undergraduate Programs and General Education

A handwritten signature in black ink, appearing to be 'A. Furtado', written over a horizontal line.

IV. SERVICE

A. Administrative Appointments at Wayne State

Interim Associate Dean for Degree Programs, College of Lifelong Learning and
Interim Director, Interdisciplinary Studies Program Winter 1998 to Winter 1999
Acting Director, Chicano-Boricua Studies Program, CULMA Fall 2004

B. Administrative Appointments at Other College/University

C. Committee Assignments

1. University Committee Chaired

Academic Senate Curriculum Committee Chair F00, W 01

2. University Committee Membership

Member (EIAWG) Equity, Inclusion, Accessibility Working Group convened by
Dr. Marquita Chamblee, Associate Provost for Diversity and Inclusion
Member, (GRAD) Greater Retention and Achievement through Diversity
Committee convened by Deputy President Phyllis Vroom F13 to present

Member, Academic Senate W96/F96/W97/F97/W98/F98/W99/F99/W00/F00/
W01/F03/W04/F04/W05/F05/W06/F06/W07/F07/W08/F08/W09/F09/W10/F10/
W11/F11/W12/F12/W13

Member, Academic Senate Curriculum and Instruction Committee
W96/F00/F03/W04/F04/W05/F05/W06/F06/W07/F07/W08/F08/W09/F09/W10/F
10/W11/F11/W12/F12/W13

Member Math Backlog/Graduation Action Project W12/F13

Student Success Task Force Fall 2009/Winter 2010

Teaching and Learning Task Force Winter 2009-Fall 2009

WSU Student Retention Task Force W 2007-F2009

WSU Liaison Committee for Student Retention W 2007

WSU General Education Committee F2005/W2006/F 2006

WSU General Education Math Subcommittee F2005/W2006/F2006/W2007

WSU LLC (Living Learning Communities) Committee W2006/F2006/W2007



WSU LLC (Living Learning Communities) Assessment Sub Committee W 2007

Faculty Representative to the Faculty Affairs Subcommittee of the
WSU board of Governors F00,W01,F03

WSU Retention Advisory Committee Fall 1999 to 2002

Member, Teaching and Learning Technology Roundtable F98/W99/F99

Member, Academic Senate Policy Committee F96/W97/F97/W98

Member, Academic Senate Budget Committee F98/W99

Member, Academic Senate Student Affairs Committee F97/W98

Liaison to Academic Affairs Subcommittee of the Academic Senate W97

Member Joint Academic Senate-Administration Ad Hoc Retention Committee
W97

Faculty Representative to the Student Affairs Subcommittee of the
WSU Board of Governors W97, F98,SS 98

Member, WSU Advisory Board, Chicano-Boricua Studies W01 to present
Member, Advisory Board, APEX (W12 to present)

2. College/Department Committee Chaired

Co-chair: IS Political Action Committee to save CULMA F04/W05

Faculty Coordinator, Literacy and Critical Thought Division
W01,F01,W03,F03,F06

Ex-officio Chair, Tenure and Promotion Committee, ISP, W 98-W 99

Ex-officio Chair, Salary Committee, ISP, W 98-W 99

Ex-officio Chair, Coordinator's Council, ISP, W 98-W 99

Ex-officio Chair, Workload Committee ISP, W 98-W 99

3. College/Department Committee Membership

Math Dept: Developmental Math Committee F17 to present

Math Dept: Retention Committee F08/W10

CBS Counselor Search Committee F05/W06

CBS Faculty Search Committee F05/W06

CBS Latino En Marcha Scholarship Awards Committee Ongoing to present

ISP Teaching Awards Committee W05



ISP Feinstein Awards Committee	F03 to F06
ISP Curriculum Committee	F00,W01
ISP Technology Committee	F98 to present
ISP World-wide Web Committee	F98 to W01
ISP Director/Associate Dean Search Committee	F98/W99
ISP Alumni Awards Committee	W99,W01
ISP Academic Standing Committee	W03,F03,W04
World-wide Web Quest Committee to plan and implement CLL Web-site	W97
Dean's Administrative Staff	W98/F98

- a. Positions Held in Professional Associations in Last Five Years :None
- b. Membership/Offices Held in Public or Private Agencies Related to Discipline in Last Five Years :None
- c. Professional Consultation
 - i. Public Presentations as an Expert in Discipline : None
 - ii. Testimony before Public Bodies: Cherry (Michigan Leut. Governor)
Commission on Undergraduate Education July 2005
 - iii.
 - iv. Consulting to Public Agencies, Foundations, Professional Associations
 - v. Consulting to Private Enterprises : None
- d. Journal/Editorial Activity
 - i. Editorships : None
 - ii. Editorial Board Memberships : None
- e).Other Professionally Related Service



Program Leadership, Support and Development:

1) Served as the Faculty Coordinator of the Jackson Prison Module of US/WCP (1974-1977) the first degree-granting program to operate at a prison in Michigan, from its inception. Was responsible for hiring and orienting part-time and other full-time faculty, developing the curriculum with the cooperation of other faculty, providing academic support services for students, and successfully pursuing renewal funding for the program from the state during my tenure at Jackson.

2) Responsible for the development, maintenance and continual improvement of a computer lab at Room 453 in the Justice building since 1976 to facilitate hands-on computer experience for students taking the GST 271 Computers and Society course. Additional help in this responsibility has arrived in the person of Mr. Tom Moeller since 1990. In the Fall of 94, this course alone accounted for more than 10% of the entire AYES for the ISP program for the term

3) Responsible for initiating and continuing the recruitment and retention of Chicano-Boricua Studies (CBS) and Division of Community Education (DCE) students to select competency focused classes [i.e. Practical Mathematics (GST 051), Developmental Writing (GIS 051), Computers and Society (GST 271) and Speech (GIS 156)] offered by the ISP program as part of an effort to address problematic academic areas for minority students to improve their retention at WSU and to open new career opportunities for them in the process. Also serve as a liaison between ISP faculty and CBS, especially with respect to the regular communication of student performance and attendance. The headcount of the combined sub-population has been as high as 20% of the total ISP head count , and as much as 15% of the AYES in a given term.

4) Responsible for preparing students for the Math Proficiency Exam (MPE) in its various incarnations. A presentation is made at almost every New Student Conference about the need for and the origins of quantitative analysis and common mathematical procedures and the various ways in which the requirement can be fulfilled. Originally the administration and solution of a simulation test during the New Student Conference was sufficient to qualify between 75% to 100% of the students to meet the requirement. Since 1991, the increased difficulty of the exam, along with the projected gradual increase in the passing score from 38% to 56% has necessitated the search for more effective strategies such as tutoring, including in-class tutoring, development of instructional materials, diagnosis of math skill level of students, and suggesting effective strategies based on the diagnosis results, development of a new interdisciplinary Math course for which degree credit is available, and working with ISP counselors to exhort students to plan to meet the requirement early.

5) Responsible for ongoing regular internally distributed research on retention, academic performance of ISP, CBS and DCE students, and enrollment patterns of ISP students. The academic performance data reveals areas such as Senior Essay, Math Proficiency, and English Proficiency requirements where we need to concentrate our



retention efforts. Enrollment is studied with respect to location, day of the week, morning or evening, by division (Soc. Sc., Humanities, Sc. & Tech. Literacy & Crit. Thinking, etc.), by course level (below 200, or above 200), by General Education course status and other variables. This information is useful for marketing, and recruitment and for allocation of resources. The analysis of enrollment pattern data has been absorbed by Student Services since Fall 94.

6) Prepared position paper on strategies to improve recruitment and retention in the ISP program to be used as a guideline by the Marketing Task force

7) Prepared an 8 page comprehensive document for suggestions for change at CLL and forwarded to the CLL Review Committee chaired by Prof. John Reed, English Dept. WSU. The document suggested ways to make various divisions of CLL function more synergistically, and provides ideas for recruitment in new areas and strategies for research on our student population.

8) Prepared an internal report on problems with the effectiveness of the New Student Conference in the conference format and suggested plans for restructuring the experience involving more student-instructor contact in small groups

9) Coordinated the transfer of the GST 271 lab from the Justice Building to the Rackham building

10) Developed a comprehensive plan for upgrading the GST 271 lab to include 5 additional stations and to upgrade the software to do both faculty training to develop Web courses, to permit the inclusion of the internet experience in our computer classes, and to use software to improve student composition

Program Leadership As Interim Director of ISP (Jan 99 to Dec 99)

Developed a Telephone Registration Questionnaire for distribution to all ISP students to examine the factors that make our students four times as likely to register late than students in other parts of the University. A summary report has been prepared. The distribution of the questionnaire to all students in itself served as an information resource for students with respect to late registration fees.

Developed a New Student Questionnaire that has been put on the ISP Web-site by Prof. David Bowen who also has set up a program for automatic analysis of on-line data. This questionnaire will be taken by ISP students enrolled in the W98 and SS 98 Interdisciplinary Studies Seminar. It will be later used to gather data for all ISP students and modified for use with prospective students. The purpose of the questionnaire is to gather information related to demographics, student academic and ancillary needs, and additional information valuable to our marketing efforts

Developed a Question and Answer brochure for marketing purposes for both Undergraduate and Graduate (with the help of Prof. Francis Shor) programs. Draft



versions of the brochure were widely circulated for ISP and CLL input. This item has also been put on the ISP Website as FAQ's for current and potential students.

Developed data and charts on enrollment trends for ISP by location, by sub-program, and by year in comparison with trends at other institution's

Held three Faculty/Academic Staff meetings to educate them with respect to enrollment trends, competitor strategies and potential recruitment and retention initiatives, and have solicited their participation in small group projects.

Presented information on ISP, WSU and competitor enrollment trends and potential strategies for recruitment and retention to CLL Dean's Administrative Staff at all day retreat

Presented strategies for improving recruitment and retention and the need for using technology in these strategies to the Social Work faculty

Scheduled a training session for support staff to help advise students with respect to the Spring -Summer telephone Registration procedure.

Developed a training session for ISP Academic staff to help students discover potential scholarship opportunities on the internet and to provide them with strategies to acquire them. This approach will be institutionalized in the future to increase student opportunities for obtaining financial aid.

Developed a process for support staff so that all three external call -in telephone lines used by students and outsiders will be answered by a person at all times between 8.30 am and 5 p.m.

Worked with Kris Kryzanski, CLL Director of Corporate Relations to begin the development of joint marketing of corporate training and CLL degree and certificate programs to corporate attendees at leadership seminars hosted by CLL through Kris.

Met with the CLL Advisory Board to consider ways to examine corporate training/certification needs. They are currently gathering information on such programs in their own institutions for discussion at the next meeting. CLL's ability to meet those needs will be examined

Met with Oakland Community College counselors to develop the format for a course selection plan for each concentration to facilitate the 2+2 program for entry into the Bachelor of Technical and Interdisciplinary Studies program at ISP. (Ongoing)

Prepared a course selection plan for selected individual programs at Macomb Community College to facilitate transfer to ISP.



Instituted internal electronic dissemination of ISP program information via the Web-Board on the CLL network as part of our effort of moving towards a paper less office environment

Ordered over \$30,000 of computer hardware and software to equip a multi-media training room for faculty to facilitate the development of web-based and distance learning courses using multi-media where possible

Initiated the development of a centralized client database with web-accessible entry for marketing purposes.

Initiated the development of software to allow students to enter their plan of work directly on the web, and allow counselors to also examine, modify and approve such plans of work.

Initiated contact with Mr. Hal Stack of the Labor Studies program in CULMA to facilitate the entry of these students into the ISP degree programs

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Program Leadership As Acting Director of CBS (Fall 2004)

Brought stability to the CBS program that became unstable due to personnel issues that were intolerable

Re-involved a CBS faculty member and administrator in CBS matters. These members were effectively isolated from the program

Conducted an External Advisory Board Meeting and prepared CBS retention and recruitment data for the presentation and made recommendations for changes and improvements to the Advisory Board.

Handled media communications with the Latino community

A handwritten signature in black ink, appearing to be 'A. Furtado', written over a horizontal line.