

CURRICULUM VITAE

Personal Data

Name : Murad Eid Jurdak
Place & Date of Birth : Lebanon, June 8, 1943
Nationality : Lebanese

Education

<u>University</u>	<u>Degree</u>	<u>Year</u>
American University of Beirut	- BS (Math) - Teaching Diploma (Math)	1966
	- MS (Math)	1968
University of Wisconsin, Madison	- Ph.D. (Math Education)	1973

Work Experience

American University of Beirut

Academic

Professor	1985-present
Associate Professor	1979-1985
Assistant Professor	1973-1979
Instructor	1972-1973
Graduate Assistant (Math)	1966-1968

Management

Chairman, Department of Education	1993-2003, 1979-1982
Director, Division of Education Programs	1986-1993
Fulbright-Hays Scholar, University of Wisconsin, Madison	Summer, 1981
Director, Science & Mathematics Education Center (SMEC)	1983-1986, 1976-1978

UNRWA/UNESCO Institute of Education

Assistant Specialist of Teacher 1969-1971
Training in Mathematics

Al-Rawdah High School: Mathematics Teacher 1966-1969

Teaching and Related Activities

a. *Contribution to curriculum improvement in the field of specialisation:*

Chaired the Curriculum and Examination of the Department of Education which developed proposals for a BA in Education, Teaching Diploma in Elementary Education and MA in Elementary Education (1978-79) and the BA in elementary education and diploma in special education (1990-present)

b. *Areas of expertise:*

Research, curriculum development research methodology, teacher training, assessment and statistics

c. *Courses taught* :

- Measurement and Evaluation for Classroom Teachers
- Statistics in Education
- Teaching of New Math in Elementary School
- Foundations of Mathematics Education
- General Research Methodology in Education
- Recent Development in Mathematics Education
- Special Topics (Advanced Topics in Educational Statistics).
- Teaching of Mathematics I
- Teaching of Mathematics II
- Practicum in Teaching Math in Secondary School

d. *Thesis advising* : Supervised more than 45 MA theses

Publications

Books

Jurdak, M. (2009). *Toward equity in quality in mathematics education*. New York: Springer

Jurdak, M.E. (Editor). (1997). *The new and the possible in mathematics education*. Beirut: Lebanese Association for Educational Sciences.

Jurdak, M.E. (Editor). (1998). *Public examinations and educational indicators*. Beirut: Lebanese Association for Educational Sciences.

Journal Articles

- BouJaoude, S. & Jurdak, M. (in Press). Integrating physics and math through microcomputer-based laboratories (MBL): Effects on discourse type and quality and mathematization. *International Journal of Science and Mathematics Education*.
- Jurdak, M. & Nakhal, R. (2008). The impact of a Cabri learning environment on students' level of reasoning. *The Mathematics Educator*, 11(1/2), 67–78.
- Jurdak, M. (2008). Action map as a tool for assessing situated mathematical problem solving performance. *Montana Mathematics Enthusiast*, 5, 67-78.
- Jurdak, M. (2006). Contrasting perspectives and performance of high school students on problem solving in real world, situated, and school contexts. *Educational Studies in Mathematics*, 63, 283-301
- Jurdak, M. & Shahin, I. (2001). Problem solving activity in the workplace and the school: The case of constructing solids, *Educational Studies in Mathematics*, 47, 297-315.
- Jurdak, M. (1999). The role of values in mathematics education. *Humanistic Mathematics Network Journal #21*, 39-45.
- Jurdak, M. & Shahin, I. (1999). An ethnographic study of the computational strategies of a group of young street vendors in Beirut. *Educational Studies in Mathematics*, 40, 155-172.
- Jurdak, M. & Abu Zein, R. (1998). The effect of journal writing on achievement in and attitudes toward mathematics. *School Science and Mathematics*, 98, 412 - 419.
- Jurdak, M.E. (1997). Al-Khwarizmi's algebra. *Humanistic Mathematics Network Journal*, 15, 30-36.
- Jurdak, M.E. (1991). Status of mathematics education in the Arab countries in light of world trends. *Al-'lm wal Technologia*, 26, 30-33. (In Arabic).
- Jurdak, M.E. (1989). Van Hiele levels and the SOLO taxonomy. *International Journal of Mathematics Education in Science and Technology*, 22, 57-60.
- Collis, K.F., Romberg, T.A. & Jurdak, M.E. (1986). A technique for assessing mathematics problem-solving ability. *Journal for Research in Mathematics Education*, 17, 206-221.
- Jurdak, M.E. (1985). The role of sequence and context in structurally-related problems. *International Journal of Mathematical Education in Science and Technology*, 16, 515-524
- Jurdak, M.E. & Mutlak, I. (1982). The facilitating effect of structured games in mathematics. *International Journal of Mathematics Education in Science and Technology*, 13, 335-340.

- Jurdak, M.E. (1981). The influence of educational technology on developing mathematics curricula in the Arab countries (in Arabic). *Arab Journal of Education*, 1, 161-174
- Jurdak, M.E. & Sawaya, L.M. (1980). Factors affecting readability of mathematics textbooks (in Arabic). *Dirasat*, 7, 91-107.
- Jurdak, M.E. (1978). Tamyeez al-istidlalat al-sadika min quibal Majmou'atin min al-talaba al-lubnaniyyeen thunai'yi al-Lugha (recognition of valid inferences of certain groups of Lebanese bilinguals) (in Arabic). *Dirasat*, 5, 77-87.
- Jurdak, M.E. (1977). Structural and linguistics variables in selected inference patterns for bilinguals in grades six to ten. *Educational Studies in Mathematics*, 8, 225-238.

Chapters in Edited Books

- Jurdak, M. & BouJaoude, S. (2009). Country Case Study: Lebanon. In B. Vlaardingerbroek & Taylor, N. (Eds.). *Secondary school external examination systems - reliability, robustness and resilience* (pp. 153-165). New York: Cambria Press.
- El-Amine, A.& Jurdak, M. (2005). A case study of reforming Lebanese curricula. In El-Amine (editor), *reform of general education in the Arab countries*, pp 55-76. Beirut: UNESCO Regional Office of Education in the Arab States.
- Jurdak, M. (2004). The role of research in higher education: Status and expectations (in Arabic). In *Higher education in Lebanon, Annales de Philosophie des Sciences Humaines (Universite Saint-Esprit de Kaslik)*, pp.27-37
- Jurdak, M. (2002). A core paper for the preparation of teachers in the Arab countries. In *Teacher Preparation in the Arab Countries*. pp., 272-296 (in Arabic). Beirut: Lebanese Association of Educational Studies (LAES)
- Jurdak, Murad. (2001). Science Curricula and Acquisition of Values (in Arabic). *In Ghusayni R. (Ed.), Values and Education* (pp.265-286) (in Arabic). Beirut: Lebanese Association for Educational Sciences (LAES).
- Jurdak, M. (2001). Contrasting problem- solving in school and workplace. In Pehkonen, E. (editor), *Problem solving around the world*, pp. 97-102. Turku, Finland: University of Turku
- Jurdak, M. (2000). Technology and problem solving in mathematics: Myths and Realities. In *International Conference in Mathematics Education (pages 30-37)*. Beirut: Lebanese American University
- Jurdak, M.E. (1998). Public examinations. In Jurdak, M. (Editor), *Public examinations and educational indicators*. Beirut: Lebanese Association for Educational Sciences.

Jurdak, M.E. (1994). Mathematics education in the global village. In Robitaille, D., Wheeler, D. & Kieran, c. (Eds.), *Selected lectures from the 7th International Congress on Mathematical Education*, pp. 199-210. Quebec: Laval University.

Jurdak, M.E. (1993). Assessment in mathematics education in the Arab countries. In Niss, M. (Ed.), *Assessment in Mathematics Education and its Effects (Vol. II)*, pp. 35-41. Dordrecht, the Netherlands: Kluwer Academic Publishers.

Jurdak, M.E. (1989). Religion and language as culture carriers and barriers in mathematics education. In C. Kietel (Ed.), *Mathematics, Education and Society (Science and Technology Education, Document Series No. 35)*, pp. 12-14, Paris: UNESCO.

Jurdak, M.E. (1985). Preparing materials. In Romberg, T.(Ed.) *using research in the professional life of mathematics teachers*. Madison: Wisconsin Center for Education Research, University of Wisconsin.

Jurdak, M.E. (1982). Readability of a mathematics text (in Arabic). In *Teaching mathematics and sciences in Arabic at the Intermediate stage (pp. 13-16)*. Beirut: Makassed.

Jurdak, M.E. & Jacobsen, E. (1981). The evolution of mathematics curricula in the Arab States. In R. Morris (Ed.), *Studies in Mathematics Education: Vol. 2*, (pp. 133-147). Paris: UNESCO.

Refereed Proceedings

Jurdak, M. (2008). Equity-in-Quality: Toward a theoretical frame work. In Matos, J.F., Valero, P.& Yusukawa (Editors), *Proceedings of the Fifth International Mathematics and Society Conference*, pp 56-73. Lisbon: Centro de Investigacao em Educacao, University de Lisbon-, Learning and Philosophy, Aalborg University.

BouJaoude S.& Jurdak, M. (2008). *Integrating physics and math through microcomputer-based labs (MBL): Effects on discourse type and quality and mathematization*. Presented at the annual conference of the National Association for Research in Science Teaching (NARST), Baltimore, MD

Jurdak M., BouJaoude S. & Norma Ghumrawi N. (2007). Comparison of mathematization in microcomputer based laboratory (MBL) and verification – Type laboratory (VTL) in physics. In Pitta-Pantazi, P. & Philippou, G.(Editors), *Proceedings of the Fifth Congress of the European Society for Research in Mathematics Education*, pp. 2110-2119. Larnaka, Cyprus: European Society for Research in Mathematics Education and Department of Education, University of Cyprus.

BouJaoude, S, Jurdak, M.,& Ghumrawi, N. (2007). *Discourse type and time use in microcomputer-based lab versus verification type lab in physics*. Paper presented at the biennial conference of the European Science Education Research Association (ESERA), Malmö University, Malmö Sweden (2007, August).

- Jurdak, M.E. (1995). *Some lessons from two regional collaboration projects in the Arab region*. In Hunting R. et al (eds.), Proceedings of the ICMI conference on regional collaboration in mathematics education, pp. 355-363. Melbourne: Monash University
- Jurdak, M.E. (1995). *The role of values in mathematics education and computer education*. In Proceedings of the Second Panhellenic Conference on Mathematics Education, pp. 105-117. Nicosia: University of Cyprus.
- Jurdak, M.E. (1991). *Teachers' conceptions of math education and the foundations of mathematics*. Proceedings of the 15th international conference for the Psychology of Mathematics Education (PME), pp. 137-144, Assisi, Italy: PME
- Jurdak, M.E. (1989). *Van Hiele Levels and the SOLO taxonomy*. Proceedings of the 13th international conference for the Psychology of Mathematics Education (PME), pp. 155-162. Paris: PME.
- Jurdak, M.E. (1986). *Consistency of strategy usage in structurally equivalent problem*. Proceedings of the tenth international conference for the Psychology of Mathematics Education (PME), pp. 445-450. London: University of London Institute of Education.
- Jurdak, M.E. (1982). *The construct validity of each superitem- Guttman scalability*. In Vermandel, A. (Ed.), Proceedings of the sixth international conference for the Psychology of Mathematics Education (PME), pp. 254-259. Antwerp, Belgium: Organising Committee of VIth Conference, PME. Antwerp University..
- Jurdak, M.E. (1980). *Reflective intelligence and mathematics performance*. In Karplus, R. (Ed.), Proceedings of the fourth international conference for the Psychology of Mathematics Education (PME), (pp. 198-206). Berkeley: PME.

Non-refereed Proceedings

- Jurdak, M.E. (1983). *Some recent trends in the development of mathematics curricula (in Arabic)*. In final report of the conference on elementary and intermediate science and mathematics curricula in the Arab Gulf States, pp. 113-134. Kuwait: Gulf Arab States Educational Research Center.
- Jurdak, M.E. (1984). *A look into the future-mathematics education (in Arabic)*. Proceedings of the conference on mathematics and science education in the elementary and intermediate cycles in Lebanon (pp. 96-101). Beirut: SMEC.
- Jurdak, M.E. (1994). *Educational evaluation*. In educational evaluation of students achievement (in Arabic). Beirut: Hariri Foundation.

Technical Reports

Jurdak, M. (2006). *Impact of student, teacher, school factors on achievement in mathematics and science based on TIMSS 2003 Arab Countries Data*. Beirut: UNESCO Regional Office in Beirut (130 pages, (limited distribution)

Jurdak, M. (2001). *Students' achievement study, final report*. Beirut: UNESCO Office for Education in the Arab States (215 pages).

Sara, N. & Jurdak, M.E. (1984). *Status of Teachers in the Arab Region* (original is in English). Translated from English to Arabic by Mu'uwad, A.). Paris: UNESCO Regional Office for Education in the Arab States (90 pages).

Romberg, T.A., Jurdak, M.E., Collis, K.F. & Buchanan, A.E. (1982). *Construct Validity of a Set of Mathematics Super items*. Madison: Wisconsin Center of education Research, University of Wisconsin (87 pages).

Jurdak, M.E. (1973). *The effects of emphasising mathematics structural properties in teaching and of reflective intelligence on four selected criteria*. Madison: The Wisconsin R & Development Center for Cognitive Learning (178 pages).

School Textbooks

Jurdak, M.E. (Ed.). (1977). *Mathematics for elementary two (in Arabic)*. Khartoum: Ministry of Education.

Jurdak, M.E. (Ed.). (1977). *Teacher guide for elementary two mathematics (in Arabic)*. Khartoum: Ministry of Education.

Jurdak, M.E. (Ed.). (1977). *Mathematics for general secondary two (in Arabic)*. Khartoum: Ministry of Education.

Jurdak, M.E. (Ed.). (1977). *Teacher guide for general secondary two mathematics (in Arabic)*. Khartoum: Ministry of Education.

Jurdak, M.E. (Ed.). (1976). *Mathematics for elementary one (in Arabic)*. Khartoum: Ministry of Education.

Jurdak, M.E. (Ed.). (1976). *Teacher guide for elementary one mathematics (in Arabic)*. Khartoum: Ministry of Education.

Jurdak, M.E. (Ed.). (1976). *Mathematics for general secondary one. (in Arabic)*. Khartoum: Ministry of Education.

- Jurdak, M.E. (Ed.). (1976). Teacher guide for general secondary one mathematics (in Arabic). Khartoum: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Haddad, M. (Editor). (1979). Mathematics for elementary one (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Haddad, M. (Editor). (1979). Teacher guide for elementary one mathematics (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Eido, R. (Editor). (1979). Mathematics for elementary four (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Eido, R. (Ed.). (1979). Teacher guide for elementary four mathematics (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Haddad, M. (Editor). (1980). Mathematics for elementary two (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' committee and Editor) & Haddad, M. (Editor). (1980). Teacher guide for elementary two mathematics (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Edio, R. (Editor). (1980). Mathematics for elementary five (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Eido, R. (Editor). (1980). Teacher guide for elementary five mathematics (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Haddad, M. (Editor). (1981). Mathematics for elementary three (in Arabic). Riyadh: Ministry of Education.
- Jurdak, M.E. (Chairman of Authors' Committee and Editor) & Haddad, M. (Editor). (1981). Teacher guide for elementary three mathematics (in Arabic). Riyadh: Ministry of Education.
- Eido, R. (Chairman of Authors' Committee and Editor) & Jurdak, M.E. (Editor). (1981). Mathematics for elementary six (in Arabic). Riyadh: Ministry of Education.
- Eido, R. (Chairman of Authors' Committee and Editor) & Jurdak, M.E. (Editor). (1981). Teacher guide for elementary six mathematics (in Arabic). Riyadh: Ministry of Education.

Presentations in Scholarly Conferences

- Jurdak, M. *Equity-in quality in math education: A global perspective*. Presented by invitation as a plenary panelist at the International Congress of Mathematics Education (ICME 11), Monterrey, Mexico, 6-13 July, 2008
- Jurdak, M. *Equity-in-Quality: Toward a theoretical frame work*. Presented at the Fifth International Mathematics and Society Conference, Albufaira, Portugal (February 2008)

- BouJaoude S. & Jurdak, M. *Integrating physics and math through microcomputer-based labs (MBL): Effects on discourse type and quality and mathematization*. Presented at the annual conference of the National Association for Research in Science Teaching (NARST), Baltimore, MD, March 30- April 2, 2008.
- BouJaoude, S., Jurdak, M., & Ghumrawi, N. *Discourse type and time use in microcomputer-based lab versus verification type lab in physics*. Paper presented at the biennial conference of the European Science Education Research Association (ESERA), Malmö University, Malmö Sweden (2007, August).
- Jurdak M., BouJaoude S. & Norma Ghumrawi N. *Comparison of mathematization in microcomputer based laboratory (MBL) and verification – Type laboratory (VTL) in physics*. Paper presented in the Fifth Congress of the European Society for Research in Mathematics Education. Larnaka, Cyprus, University of Cyprus.
- Jurdak, M. *Action map as a tool for assessing situated mathematical problem solving performance*. Presented at the Topic Group 27 of ICMI 10, Copenhagen, Denmark, July 4-11, 2004.
- Jurdak, M. *Mathematics goals and achievement: the case of Lebanon*. Paper presented to PME25, Utrecht-The Netherlands, July 12-17, 2001
- Jurdak, M. *Contrasting problem-solving strategies in school and workplace*. Presented at ICME 9, Tokyo, July 31 – August 7, 2000.
- Jurdak, M. *The Internet and Curriculum Standards as Cultural Carriers and Barriers in Mathematics Education*. Presented at ICME 9, Tokyo, July 31 – August 7, 2000
- Jurdak, M. *Some lessons from two regional collaboration projects in mathematics education in the Arab region*. Presented in an ICMI conference on regional collaboration in mathematics education, Melbourne, Monash University, 1995.
- Jurdak, M. *The teaching of scientific values*. Presented to a conference sponsored by the National Commission for UNESCO, Beirut, February 12- 13, 1993.
- Jurdak, M. *Mathematics education in the global village: the wedge and the filter*. Presented to ICME 7, Quebec, August 17-23, 1992
- Jurdak, M. *Assessment in mathematics education in the Arab countries*. Presented at ICMI Study Conference on Assessment in Mathematics Education and its Effects, Cologne, Spain, April 11-16, 1991.
- Jurdak, M. *Religion and language as cultural carriers and barriers in math education*. Presented at ICME 6, Budapest, July 27 - August 3, 1988.
- Jurdak, M. *Consistency of Strategy Usage in Structurally Equivalent Problems*. Presented PME 10, London, July 20-25, 1985.

Jurdak, M. *Teachers' conceptions of math education and the foundations of mathematics*. Presented at PME 15, Assisi, Italy, June 29 - July 4, 1991. Jurdak, M. *Preparing materials*. Presented at ICME, Adelaide, Australia, August 24-30, 1984.

Jurdak, M. *Mathematics Education - A Look into the Future*. Presented at a conference on Mathematics and Science Education in the Elementary and Intermediate Cycles in Lebanon, sponsored by the Science and Mathematics Education Centre (SMEC) at A.U.B. Beirut, November 18-19, 1983.

Jurdak, M. *Trends in mathematics curricula*. Presented at a conference on Development of Science and Mathematics Curricula and Textbooks in the Arab Gulf States, Kuwait, and September 26-29, 1983.

Jurdak, M. *Educational technology and its impact on the development of mathematics curricula in the Arab states*. Presented to ALECSO conference on International and Regional Conference on Mathematics, Sana's, Yemen, April 5-10, 1981.

Jurdak, M. *Reflective intelligence and mathematics performance*. Presented at PME 4, Berkeley, California, August 16-17, 1980.

Jurdak, M. & Jacobsen, E. *The evolution of mathematics curricula in the Arab countries*. Presented to the UNESCO Meeting of Experts - Mathematics and at he Needs of Society, Paris, May 19-23, 1980.

Professional Activities

Membership in Professional Organizations

1. International Group on the Psychology of Mathematics Education (PME)
2. Association for Supervision and Curriculum Development (ASCD).
3. Lebanese Association for Educational Sciences (founding member), President 2004-present
4. School Science and Mathematics Association

Service on Editorial Boards

1. International Journal for Research in Mathematics Education
2. Journal of Mathematics, Science and Technology

Reviewer

1. Journal for research in Mathematics Education
2. School Science and Mathematics
3. Comparative Education

Curriculum Development

1. Project leader of the mathematics curriculum project in the Sudan, grades 1-9, 1973-76. The project included need assessment, curriculum development, development of instructional materials, teacher training, and curriculum evaluation.
2. Project leader of the mathematics curriculum project in Saudi Arabia, grades 1-9, 1976-1983. The project included need assessment, curriculum analysis, curriculum development, development of instructional materials, training of key personnel, curriculum evaluation and revision.

Consultancy

1. Ford Foundation resident consultant to the Certification Inservice Teacher Training Institute (CITTI) in Amman, second semester, 1972-73. Evaluated the math education program.
2. Ford Foundation consultant to Saudi Arabia. Participated in investigating the needs and problem of training the intermediate mathematics and science teachers in Saudi Arabia, 1974.
3. Visited Dubai as a consultant to Al-Ittihad School Project, 1978-79
4. ALECSO (Arab League for Education, Culture, and Science Organization) consultant in a two-member commission. Investigated the strengthening and expansion of Bakht-er-Ruda Institute of Education in the Sudan, February 17-25, 1980.
5. RADAC consultant to Bahrain to investigate the feasibility of introducing computer education in the secondary school, March 18-22, 1983.
6. World Bank consultant as a member of a preparation mission to Yemen. Need assessment in the areas of curriculum and evaluation, September, 1990.
7. World Bank consultant of three missions to Jordan, 1993 and 1994.
8. UNESCO consultant. Commission to write a paper on education in the twenty-first century, 1992.
9. World Bank consultant on evaluation and examination in Lebanon, 1997.

10. Consultant to The Institute of Education, Qatar
10. UNESCO consultant. Evaluation of two reports and a manuscript of a resource book on educational evaluation prepared by the Arab Center for Educational Research for Gulf States in Kuwait, 1998.
11. UNESCO consultant as a member of a team to evaluate the Arab Council for Education in the Gulf States in Riyadh, 1998.
12. UNICEF consultant to evaluate UNICEF Lebanon Country Program in Education.

Consultation Reports

- Jurdak M. (1992). *Education in the twenty-first century* (35 pages). Commissioned by UNESCO
- Jurdak, M. (1991). *Curriculum and assessment quality, Republic of Yemen, Basic Education Project* (18 pages). Commissioned by World Bank
- Bashshur, M. & Jurdak, M. (1980). *A report on Bakht-er-Rudar*, Commissioned by ALECSO, (35 pages)
- Jurdak, M. & Eido, R. (1977). *Detailed suggested curricula for the Elementary and Intermediate Cycle in Saudi Arabia* (110 pages).
- Jurdak, M. (1973). *A Report on the mathematics training program of CITT Amman* (21 pages).

Training

1. Supervised the implementation of the two-year in-service mathematics training program for intermediate teachers of the UNRWA/UNESCO Institute of Education, 1968-71.
2. Organized, supervised and lectured in summer institutes of UNRWA/UNESCO Institute of Education in Syria, Jordan, Lebanon, West Bank and Gaza in the summer of 1969, 70.
- 3 Edited most of mathematics assignments for the math in-service training course of UNRWA/UNESCO Institute of Education, 1969-1970.
4. Supervised and co-ordinated the training and writing session of four Sudanese mathematics educators (May 8 - July 8, 1974). The team prepared the experimental mathematics textbooks and teacher guides for grades one and seven.
5. Supervised and co-ordinated the revision and writing session of five Sudanese mathematics educators (April 28 - July 9, 1975). The team revised the books for grades one and seven and wrote mathematics textbooks and teacher guides for grades two and eight.

6. Participated in a 9-day training session for key mathematics educators in Saudi Arabia. The session was organized by the Ministry of Education to orient supervisors and teacher training personnel to the new science and mathematics textbooks, September 1987.
7. Active participation in the planning, administration and co-ordination of the Inservice Training Program for Teachers of Commercial Subject in Secondary Schools in Bahrain, 1983-84.
8. Visited Bahrain to conduct a 5-day workshop on testing and evaluation for secondary teachers of commercial subjects, January 14-18, 1984.
9. Conducted a training workshop module on testing and evaluation to school principals in Bahrain as part of the Training of School Principals Project in Bahrain, each year between 1985-1989.
10. Coordinated and conducted many teacher workshops as part of the Division of Education Summer Workshop Program.

Committees (AUB)

I served in different capacities on several ad hoc and project committees. The following is a partial list of standing committees on which I served:

1. Member and Chairman, Curriculum and Examination Committee of the Department of Education, 1987-79, 1990-1993
2. Member, the Division's Steering Committee, 1976-77.
3. Acting Chairman (1987-79) and member (1987-80) of DEEP Academic Affairs Committee.
4. Member of the Division Advisory Committee (1979-81) , (1982-84), 1993-2001
5. Member of Division Development and Services Committee 1979-81 and 1983-2000
6. Member, University Student Aid Committee, 1987-80.
7. Member, University Admission Committee, 1979-81.
8. Member, University Planning Committee, 1982-83.
9. Member, Senate Steering Committee.
10. Member, University Senate, 1986-2001
11. Member, Board of Graduate Studies, 1986-1993.

12. Member, Advisory Committee, Faculty of Arts and Sciences, 2001-2003, 2009-present

November, 2009