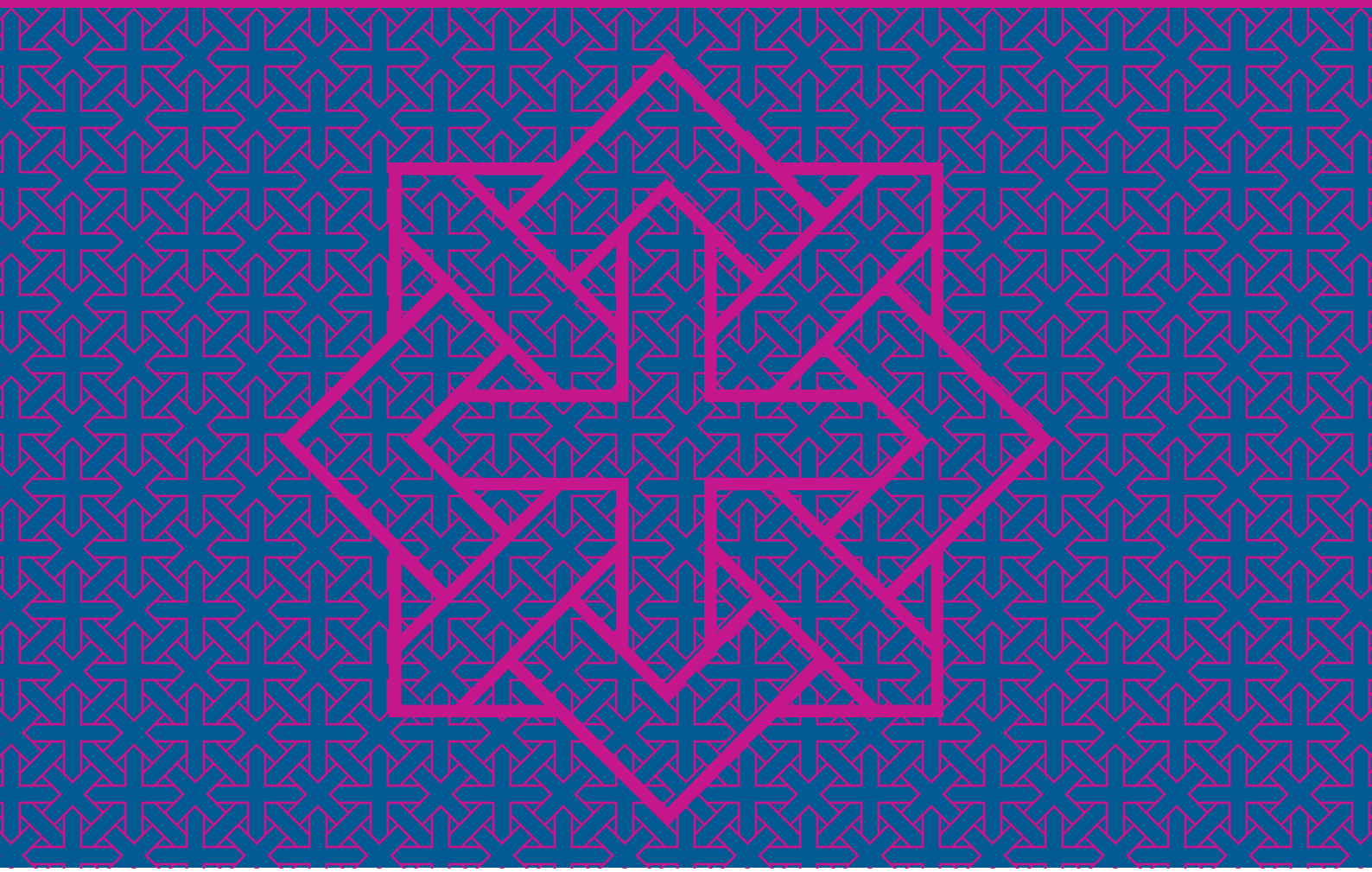
semester 5

Curriculum Development

WINDOWS ON PRACTICE GUIDE

B.Ed. (Hons.) Elementary

2012



Higher Education Commission

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Technical Support: Education Development Center (EDC); Teachers College, Columbia University

Higher Education Commission

Foreword

Teacher education in Pakistan is leaping into the future. This updated Scheme of Studies is the latest milestone in a journey that began in earnest in 2006 with the development of a National Curriculum, which was later augmented by the 2008 National Professional Standards for Teachers in Pakistan and the 2010 Curriculum of Education Scheme of Studies. With these foundations in place, the Higher Education Commission (HEC) and the USAID Teacher Education Project engaged faculty across the nation to develop detailed syllabi and course guides for the four-year B.Ed. (Hons) Elementary and the two-year Associate Degree in Education (ADE).

The syllabi and course guides have been reviewed by the National Curriculum Review Committee (NCRC) and the syllabi are approved as the updated Scheme of Studies for the ADE and B.Ed. (Hons) Elementary programmes.

As an educator, I am especially inspired by the creativity and engagement of this updated Scheme of Studies. It offers the potential for a seismic change in how we educate our teachers and ultimately our country's youngsters. Colleges and universities that use programmes like these provide their students with the universally valuable tools of critical thinking, hands-on learning, and collaborative study.

I am grateful to all who have contributed to this exciting process; in particular the faculty and staff from universities, colleges, and provincial institutions who gave freely of their time and expertise for the purpose of preparing teachers with the knowledge, skills, and dispositions required for nurturing students in elementary grades. Their contributions to improving the quality of basic education in Pakistan are incalculable. I would also like to thank the distinguished NCRC members who helped further enrich the curricula by their recommendations. The generous support received from the United States Agency for International Development (USAID) enabled HEC to draw on technical assistance and subject-matter expertise of the scholars at Education Development Center, Inc., and Teachers College, Columbia University. Together, this partnership has produced a vitally important resource for Pakistan.

PROF. DR. SOHAIL NAQVI
Executive Director
Higher Education Commission
Islamabad

Introduction

As part of nationwide reforms to improve the quality of teacher education, the Higher Education Commission (HEC), with technical assistance from the USAID Teacher Education Project, engaged faculty across the nation to develop detailed syllabi for courses for the new four-year B.Ed. (Hons) Elementary programme.

The process of designing the syllabus for each course in years 3–4 of the programme began with curriculum design workshops. Deans and directors from universities where these courses will be taught were invited to attend the workshops. The first workshop included national and international subject matter experts who led participants in a seminar focused on a review and update of subject (content) knowledge. The remainder of this workshop was spent reviewing the HEC scheme of studies, organizing course content across the semester, developing detailed unit descriptions, and preparing the course syllabi. Although the course syllabi are designed primarily for Student Teachers taking the course, they are useful resource for teacher educators, too.

Following the initial workshop, participants developed teaching notes, which included ideas for teaching units of studies and related resources. Faculty worked individually or in groups, focusing on their own preparation to teach, while bearing in mind that their end products must also be useful to those in the future who will teach the course. Subsequent workshops were held over the course of a year to give faculty sufficient time to complete their work, engage in peer review, and receive critical feedback from national and international consultants. In designing both the syllabi and the teaching notes, faculty and subject experts were guided by the National Professional Standards for Teachers in Pakistan 2009.

All of the syllabi developed by faculty are included in this document, along with a listing of topical teaching notes. Additional references and resources appear at the end of the document. These should provide a rich resource for faculty who will teach the course in the future. Sample syllabi with accompanying teaching notes are also included to provide new faculty with a model for developing curriculum and planning to teach. This Windows on Practice guide is not intended to provide a complete curriculum with a standard syllabus and fully developed units of study, rather it aims to suggest ideas and resources for faculty to use in their own planning. Hence, readers will find sample units and materials that reflect the perspective of faculty designers rather than prescriptions for practice.

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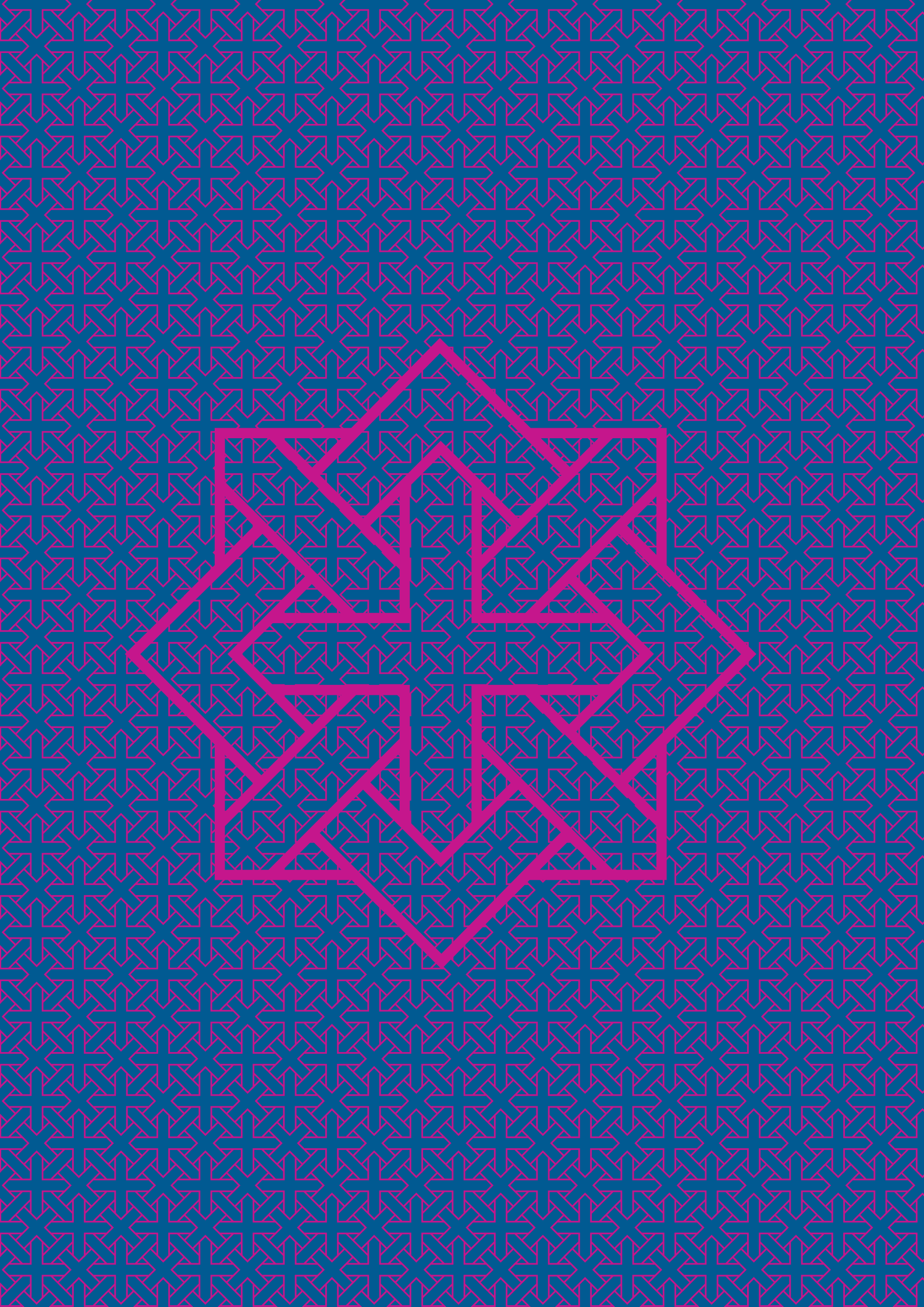
Initial drafts were reviewed by the National Curriculum Review Committee (NCRC), and suggestions were incorporated into final drafts, which were then submitted to the NCRC for approval.

Faculty involved in course design: Aliya Jawad, Fatima Jinnah Women University, Rawalpindi; Aroona Hashmi, Institution of Educational Research (IER), University of the Punjab, Lahore; Asima Idrees Raja, Sardar Bahadur Khan Women's University (SBKWU), Quetta; Bushra Salahuddin, Gomal University; Ghulam Sarwar Soomro, Shah Abdul Latif University (SALU), Sindh; Imtiaz Ahmed, Karachi University; Nabi Bux Samo, SALU, Sindh; Dr Saeed Khan, University of Hazara; Dr Shaheen Pasha, University of Education, Lahore

International subject (content) specialist leading the seminar and design workshop: Dr Frances Schoonmaker, Professor Emeritus, Teachers College, Columbia University, New York City, USA

Date of NCRC review process: 11–12 January 2013

NCRC Reviewers: Dr Bernadette Dean, St Joseph's College for Women, Karachi; Dr Rizwan Akram Rana, IER, University of the Punjab, Lahore; Dr Abdul Hameed, University of Management and Technology



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Rationale for a course on curriculum design

In the HEC 2010 document, 'Curriculum of Education: B.Ed. (Hons.) 4-year Degree Program (Elementary & Secondary, Associate Degree in Education, M. Ed./ MS.Education)', the course Curriculum Development was included as a foundation course in order to orient Student Teachers to the nature of curriculum work.

This course is intended to orient the prospective teachers about the principle, process and procedure of curriculum design and development. The participants will be informed about various foundations on which the curriculum is based, defining and delineating the objectives, selection of content, its scope and outcomes, teaching strategies, curriculum evaluation, design of instructional materials. This course will also include various factors that affect the process of curriculum development and implementation. Prospective teachers will be provided exposure to various curriculum development models and theories to enhance their understanding. The course will be delivered within the context of existing curriculum and the bodies and procedures adopted for curriculum development process in Pakistan (HEC, 2010, p. 84).

In the past, the Curriculum Development course was not considered necessary for beginning teachers. It was assumed that they would use the curriculum provided by schools, which would be primarily taught through textbooks. In recent years, however, teachers have been seen as curriculum decision-makers who need to understand both the 'how' and the 'why' of curriculum design. If teachers understand how a curriculum has been developed, they are likely to be more prepared to make it educationally fruitful for their students. Moreover, if adaptations are necessary, they will reflect an understanding of the overall goals, purposes, and design principles inherent in the curriculum they are teaching. In many cases, teachers may find themselves creating unique curricula to meet the context-specific needs of their students and the communities in which they are situated.

Common misconceptions about curriculum

Teachers in training are likely to enter their programmes with some or all of these common misconceptions about curriculum. These are misconceptions shared by the public. The course Instructor needs to be aware of these misconceptions, as well as others that may be unique to individual Student Teachers. The Instructor should constantly search for ways to help Student Teachers confront and critique these misconceptions so that they can intelligently create, use, and interpret their school's curriculum. Examples of common misconceptions include the following:

- The curriculum is just a textbook or list of topics from which a student is to be taught and assessed.
- The syllabus is the curriculum and once the syllabus has been completed, the teacher's work is largely finished.
- Curriculum should be developed by offsite experts, and teachers should implement it as the designers intended.
- The curriculum tells teachers what to teach, how to teach it, and what types of exercises to assign to their students.

- The curriculum should be based on the final examination, not the other way around.
- The curriculum is exactly what the teacher teaches and expects students to learn. (There is no hidden curriculum.)
- The curriculum is best delivered by lecture.

Confronting misconceptions

- A syllabus has a wide range of functions, from serving as point of contact between students and teachers to acting as a learning contract between them. Once a syllabus has been developed, it becomes the teacher's basis for planning. It does not mean the teacher's work is complete—it has only just begun!
- Teachers make final decisions about what to teach, how to teach it, and what types of exercises to assign to their students. They base these decisions primarily on what they know about their students and the curriculum they are following. (This is in contrast to teaching for examinations.) In most cases, teachers should be expected to adapt school curricula to meet the needs of their students. However, there may be exceptions in which it is essential for a teacher to implement a curriculum with precision, such as if a curriculum has been designed to teach about an urgent public health issue or is being piloted.
- All examinations should be based on the curriculum that has been designed for a particular subject or age group and what is actually being taught. Curricula should not be test driven. Tests should be 'curriculum driven'.
- The 'intended curriculum' is what curriculum designers and teachers intend for students to learn. In reality, what they learn is influenced by many hidden factors, such as the students themselves, the classroom environment, and what is going on in the world around them.
- Hidden curriculum is difficult to define because it varies among students and their experiences, and it is constantly changing as the knowledge and beliefs of a society evolve.
- There is no one best way to teach most things. Lecturing is effective in some situations, but rarely for young children and only some of the time for adults.
- On school campuses, the all-around development of an individual is a key objective of co-curricular activities (compared to lecturing).

Adapted from course notes by Dr Saeed Khan.

2

Course syllabi

In this section, you will find syllabi written by faculty, either as individuals or in groups. Using the HEC Scheme of Studies for the course, they worked to address the demands of the subject itself, active learning pedagogies, Student Teachers, and the particular university milieu in which they work. The syllabi reflect the same key concepts and broad goals, but they vary in sequence and emphasis.

SYLLABUS 1

By

Asima Idrees Raja, Aliya Jawed, Bushra Salahuddin, and Aroona Hashmi

Year, semester

Year 3, semester 5

Credit value

3 credits (48 contact hours)

Prerequisite

Successful completion of semesters 1–4

Course description

Curriculum development is intended to orient Student Teachers to the principles, processes, and procedures of curriculum design and development. Student Teachers will be informed about the objectives, selection of content, its scope and outcomes, teaching strategies, and design of instructional materials. This course will also include various factors that affect the process of curriculum development and implementation. Student Teachers will learn about traditional and progressive notions of curriculum monitoring, assessment, and evaluation as well as how these notions influence curriculum improvement efforts.

This course gives Student Teachers the opportunity to develop an in-depth understanding of the central idea of curriculum. Furthermore, it will enable Student Teachers to plan and develop curricula to meet the needs of their students.

Course outcomes

At the end of this course, Student Teachers will be able to do the following:

- understand the concept of curriculum
- differentiate between different types of curricula
- gain awareness of curriculum design and development
- analyse the components of the curriculum development process
- state the critical issues, problems, and trends in curriculum thinking
- recognise the role of the teacher as a curriculum planner and developer to meet the challenges and demands of the 21st century
- apply the skills and knowledge to translate intended curriculum into practice.

Teaching and learning approaches

Student Teachers are encouraged to not only know about curriculum, but to also act as curriculum planners and developers.

A variety of teaching and learning approaches will be used throughout this course: lecture, group discussion, group work, peer learning, informational posters, and question-and-answer sessions. Discussion and reflection will help Student Teachers become familiar with the concept of curriculum; its elements, aims, and objectives; and the curriculum development process.

Unit 1: Introduction to curriculum (weeks 1–3)

Unit 1 explores traditional and progressive conceptions of curriculum and essential elements in curriculum. Student Teachers will be explore curriculum design elements such as objectives (including Bloom's Taxonomy of Educational Objectives), content selection, implementation of curriculum, and the curriculum milieu.

Learning outcomes

At the end of the unit, Student Teachers will be able to:

- know and understand basic concepts of curriculum
- identify the essential elements in the curriculum
- discuss curriculum implementation and milieu
- differentiate between different forms of curricula
- know and understand the importance of curriculum goals, aims, and objectives
- use Bloom's Taxonomy in planning.

Content

- What is curriculum?: Traditional and progressive conceptions
- Various forms of curriculum
- Essential elements in curriculum: Objectives, content selection, and milieu
- Curriculum implementation
- Curriculum aims, goals, and objectives
- Taxonomy of educational objectives (Bloom's three domains)

Unit 2: Curriculum design (weeks 4–7)

In Unit 2, Student Teachers will gain knowledge of curriculum design and its principles. They will analyse the importance and need for curriculum design. They will apply this knowledge by developing a unit plan for a primary school subject they are studying in their programme.

Learning outcomes

At the end of the unit, Student Teachers will be able to do the following:

- understand and explain the need and importance of curriculum design
- use elements of curriculum design to reflect on a unit plan for one of their programme courses.

Content

- The need for and importance of teacher involvement in curriculum design
- The concept of curriculum design
- Using the curriculum design process
- Analysing a unit plan in light of curriculum design concepts

Unit 3: Curriculum change and curriculum development in Pakistan (weeks 8–10)

Unit 3 focuses on the process of curriculum development in Pakistan at the primary and secondary levels. Student Teachers will learn about major steps in the curriculum change process. They will also critically examine the issues of curriculum change in Pakistan and will make specific suggestions about how to address these issues.

Learning outcomes

At the end of the unit, Student Teachers will be able to do the following:

- understand and explain curriculum development and change in Pakistan
- critically examine issues in curriculum development and change
- provide suggestions on how to overcome these issues.

Content

- The concept of curriculum change and its sources
- The process and strategies of curriculum change
- Issues of curriculum change in Pakistan
- The process of curriculum development in Pakistan
- Curriculum development at the primary and secondary levels
- Critique and discuss the unit plan chosen for analysis in Unit 2

Unit 4: Curriculum monitoring, evaluation, and assessment (weeks 11–14)

Unit 4 contrasts traditional and progressive notions of evaluation. Student Teachers will learn about formative and summative evaluation and consider the role of these in curriculum improvement. They will have opportunity to consider how curriculum monitoring and evaluation occur.

The focus of this unit, however, is on assessment and the relationship between assessment and curriculum. Student Teachers will differentiate between traditional and progressive concepts of assessment and will have an opportunity to develop an assessment plan to accompany their unit outlines.

Learning outcomes

At the end of the unit, Student Teachers will be able to do the following:

- know and understand traditional and progressive conceptions of evaluation
- explain the role of evaluation and assessment in curriculum improvement
- know and understand the relationships among evaluation, assessment, and curriculum
- develop an assessment plan for the unit they have outlined.

Content

- Traditional and progressive notions of curriculum monitoring and evaluation
- Forms of curriculum evaluation (formative and summative)
- The role of evaluation in curriculum improvement
- Traditional and progressive notions of assessment
- Types of assessment (norm-referenced and criterion-referenced assessment, portfolio assessment, and performance-based assessment)
- Practical application of an assessment plan for the unit they have chosen to analyse (developed in another course in the program) through critique and development

Unit 5: Futuristic perspectives on curriculum (weeks 15–16)

In Unit 5, Student Teachers will learn about future perspectives and trends in curriculum, including technology, changing needs of learners, and global issues. They will present the unit they have chosen to analyse.

Learning outcomes

At the end of the unit, Student Teachers will be able to do the following:

- describe at least one trend in curriculum
- articulate practical application design principles in curriculum through discussion of their own work.

Content

- Future trends
- Presentation of unit critique and analysis.

Textbooks and references

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Assessment techniques

A variety of assessment techniques will be used, including the following:

- quizzes, 30 minutes each in weeks 3 and 13 (Each accounts for 5% of the final grade.)
- assignments due during weeks 6 and 13 (Each accounts for 5% of the final grade.)
- 5–10-minute presentations during weeks 7 and 14 (Each accounts for 5% of the final grade.)
- midterm, 90 minutes during week 9 (25% of final grade)
- final exam, three hours during week 18 (45% of final grade).

Course assignments

Student Teachers will be assigned a selection of the following coursework, along with detailed instructions for completing each assignment:

- analysis and critique of a unit previously prepared in another programme course (e.g. Methods of Teaching, Teaching of Science)
- a one-day workshop on the role of teachers in curriculum improvement
- engaging in a group discussion and making a poster on issues in writing curriculum and suggestions for improvement
- a paper on writing objectives.

Notes for faculty teaching this course

The following resources may be helpful for choosing appropriate readings. You may include your chosen list of readings on the syllabus or distribute it in class. However, readings should include only those resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

Rao, V. K. (2005). *Principles of curriculum*. New Delhi: APH Publishing Co.

Mridula, P. (2007). *Principles of curriculum reforms*. New Delhi: Vedams eBooks Ltd.

Veer, U. (2004). *Modern teacher training*. New Delhi: Anmol Publications Ltd.

Mansoor, N. (2000). *Guidelines to teaching*. Lahore: Pakistan Education Foundation.

Beane I. A., Toefer C. F., & Alessi S. J. (1986). *Curriculum planning and development*. Boston: Allyn & Bacon.

Farooq R. A. (1993). *Education system in Pakistan: issues and problems*. Islamabad: Asia Society for the Promotion of Innovation and Reforms in Education.

Kelly A. (1999). *The curriculum: Theory and practice*. London: Paul Chapman.

McNeil J. D. (1990). *Curriculum: A comprehensive introduction*. Los Angeles: Harper Collins.

Sharma R. C. (2002). *Modern methods of curriculum organization*. Jaipur: Book Enclave.

Websites

Leslie Owen Wilson's 'Curriculum index' offers an overview of curriculum development and planning.

- http://www4.uwsp.edu/education/lwilson/curric/curtyp.htm

This is a self-directed module on curriculum theory, design, and assessment.

- www.col.org/stamp/module13.pdf

SYLLABUS 2

By
Dr Saeed Khan

Year, semester
Year 3, semester 5

Credit value
3 credits (48 contact hours)

Prerequisite
Successful completion of semesters 1–4

Course description

A curriculum is never a value-free document. Foundations of curriculum are guided by some philosophical, sociological, and psychological understanding on the what, why, and how of a curriculum. In order to contextualize the curriculum development process, Student Teachers will be exposed to curriculum development in Pakistan at two levels: school-level curriculum and higher education-level curriculum. Participants will learn about problems and issues of curriculum reform in Pakistan.

The focus of this course is on curriculum development, beginning with the construction phase and continuing until a curriculum is ready for implementation in educational organizations. Student Teachers will be provided with real experiences to study and observe different stages of curriculum development in order to enhance their understanding of how a curriculum is developed as a document. Using principles they will have learned in this course, they will apply their learning through analysis of a unit of study they have developed in another course in their programme.

Student Teachers will learn about two broad categories of curriculum development: the deductive model and the inductive model. They will be introduced to the study of curriculum, forms of curriculum, and elements of curriculum. Curriculum is defined differently by people who study curriculum and by end users. The class will have to come to an agreement about the meaning of *curriculum* and related terms such as *syllabus*, *scheme of studies*, and *lesson planning*.

Course outcomes

After completing this course, Student Teachers will be able to do the following:

- describe curriculum and its forms, elements, and related terms
- identify the philosophical, psychological, and sociological foundations of curriculum
- describe the characteristics of curriculum: aims, goals, objectives, and taxonomies of educational objectives
- identify models and designs of curriculum and their implications for teaching and learning
- describe the process of curriculum development and change in Pakistan
- apply knowledge of curriculum development in analysing a unit written in another course.

Learning and teaching approaches

A variety of teaching and learning approaches will be used throughout the course: lecture, demonstration, interactive discussion, cooperative learning, independent study, student portfolio, academic forum, and debates.

1 UNIT 1: Course introduction (weeks 1–2, 6 hours)

Unit 1 will provide Student Teachers with an overview of the course, curriculum development, key terms, and basic elements of curriculum.

Week #	Topics/themes
1	Overview of curriculum development • Introduction and differentiation of terms (curriculum, syllabus, course outline, course guide, and scheme of studies) • Relationship between curriculum, standards, instruction, and assessment
2	Overview of curriculum development (continued) • Hidden curriculum and co-curricular activities • Elements of curriculum: objectives, content selection, learning experiences, and assessment of students' learning

2 UNIT 2: Foundations of curriculum (weeks 3–5, 9 hours)

Unit 2 explores the forces that influence curriculum developers and determine the basis for curriculum development.

Week #	Topics/themes
3	Philosophical foundation • Philosophy • Modes of philosophy (speculative, prescriptive, and analytic) • Branches of philosophy (ontology, epistemology, and axiology) • Different philosophies on curriculum
4	Psychological foundation • Nature of the learner (developmental stages) • How learning takes place (readiness, need, interest, attitude, motivation, association, retention, self-regulation, laws of learning, logical sequence, and horizontal and vertical sequence)
5	Sociological foundation • Society • Culture • Elements of culture (universals, specialties, and alternatives) • Economic and social development • Life skills

3 UNIT 3: Foundations of curriculum (weeks 6–7, 6 hours)

Unit 3 focuses on how society facilitates the teaching-learning process through National Educational Policies and creating educational institutions to fill the gaps between national aspirations and classroom instruction.

Week #	Topics/themes
6	Curriculum aims, goals, and objectives • Distinction among aims, goals, and objectives • Relationship among aims, goals, and objectives • Sources of aims, goals, and objectives • Functions of objectives • Types of objectives
7	Taxonomies of educational objectives • Cognitive domain • Affective domain • Psychomotor domain • Solo taxonomy of educational objectives

4 UNIT 4:	**Models of curriculum (weeks 8–10, 9 hours)**
Week #	Topics/themes
8	Rational models • Tyler model • Hilda Taba model
9	Cyclic models • Wheeler • Nicholls and Nicholls
10	Dynamic model • Walker model • Skilbeck model

5 UNIT 5:	**Curriculum design (weeks 11–12, 6 hours)**
Week #	Topics/themes
11	Subject-based curriculum design • The role of and interactions between teachers and students • The classroom environment • Assessment
12	Activity-based curriculum design • The role of and interactions between teachers and students • The classroom environment • Assessment • Analysis of previously developed unit based on understanding of curriculum design

6 UNIT 6: Curriculum process in Pakistan (weeks 13–15, 9 hours)

Unit 6 examines how curriculum is developed and the role of the teacher in curriculum development.

Week #	Topics/themes
13	Curriculum development (early childhood education to Higher Secondary School Certificate (HSSC) • Curriculum wing • Directorate of Curriculum and Teacher Education (DTCE) and Provincial Bureau of Curriculum • Textbook boards
14	Curriculum development (higher education) • HEC • NCRC
15	Curriculum development • The role of teachers in curriculum development • The process of curriculum change • Presenting reports on analysis of curriculum units • Various issues in curriculum change

Textbooks and references

This course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Grading policy

A variety of assessments will be used in the course, including midterm and final examinations.

Assignments

Assignments will be listed on a separate handout. These assignments will help you gain a better understanding of the subject matter and will count towards their final grade.

Notes for faculty teaching this course

The following resources may be helpful for choosing appropriate readings. You may include your chosen list of readings on the syllabus or distribute it in class. However, readings should include only those resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

Bilbao, P. P., Lucido, P. I., Iringan, T. C., & Javier, R. B. (2008). *Curriculum development*. Manila: Lorimar Publishing Inc.

Murray, P. (1993). *Curriculum development & design* (5th ed). Sydney: Allen and Unwin.

Sharma, R. C. (2002). *Modern methods of curriculum organization*. New Delhi: Manohar Book Service.

Wiles, J. W. & Bondi, J. C. (2011). *Curriculum development: A guide to practice* (8th ed.). Boston: Allyn & Bacon.

Websites

This chapter, 'Curriculum, instruction, assessment, and standards', provides a review of typical approaches to standards and assessments used by schools. It suggests that curriculum is a useful tool in bridging the gap between standards and assessments on one hand and instruction for students on the other.

- http://www.sagepub.com/upm-data/6919_squires_ch_1.pdf

'Philosophy of education' (from Wikipedia)
- http://www.mashpedia.com/Philosophy_of_education

Philosophy of education, part 1: Introduction
- http://www.youtube.com/watch?v=ml95d6kJ4kc&list=LP2-FVzm_zCos&index=1&feature=plcp

Curriculum development
- http://www.youtube.com/watch?v=AAkKSgSChJA

Introduction to curriculum
- http://www.youtube.com/watch?v=dN8oeQoz9NQ&feature=related

Importance of the syllabus in teaching—Part 1
- http://www.youtube.com/watch?v=T7xLD4XfqAw&feature=related

Syllabus basics 1: Course guidelines
- http://www.youtube.com/watch?v=f727o5t0Xow&feature=related

SYLLABUS 3

By
Dr Shaheen Pasha

Year, semester
Year 3, semester 5

Credit value
3 credits (48 contact hours)

Prerequisite
Successful completion of semesters 1–4

Course description

This course is designed to assist Student Teachers in understanding the various philosophies and key concepts related to curriculum, the challenges of curriculum design, factors influencing decision-making, and the roles played by various stakeholders in curriculum. Student Teachers will also review various assessment strategies, the implementation of different evaluation procedures, and the effective reporting of results as this relates to curriculum design. Student Teachers will be involved in examining existing curriculum and curriculum policy documents as well.

During this course, the key features of a curriculum will be discussed. Various curriculum development processes, how a curriculum differs from a syllabus, evaluation strategies, and factors influencing the curriculum development process will be considered. Change is an important aspect of human society. To cope with changes occurring in society, curriculum must be revised. This course discusses the implications related to the change process and appreciates the factors and stakeholders involved in this process.

This course is designed for Pakistani Student Teachers. Therefore, the process of curriculum development with reference to Pakistan and the agencies responsible for curriculum development at the national and provincial levels will be covered. Student Teachers will have an opportunity to apply their learning through identification of a unit developed for another course and analysing it in light of their new curriculum knowledge.

Learning outcomes

At the end of this course, Student Teachers will be able to do the following:

- describe the key concepts of curriculum
- explain various types of curriculum and design models
- identify philosophical, sociological, psychological, and economic underpinnings of various models
- identify internal and external factors that influence the curriculum development, implementation, and change process
- review the models, purposes, and problems of curriculum assessment and evaluation
- understand the process of curriculum development with reference to Pakistan and the agencies responsible for curriculum development at the national and provincial level
- apply curriculum knowledge to analysis of a unit plan developed for another course in the programme.

Course outline

The course will cover selected topics from those listed in each unit, as time permits.

Each unit will provide Student Teachers with an overview of the fundamental concepts of curriculum and their philosophical underpinnings. Student Teachers will be introduced to the purposes and goals of different types of curriculum and the key elements of curriculum.

Unit 1: Curriculum fundamentals (3 weeks)

Unit 1 provides an overview of the fundamental concepts, key elements, philosophical underpinnings, and purposes and goals of curriculum.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- explain the various meanings of curriculum and the importance of curriculum
- understand the philosophical considerations, purposes, and goals of different types of curriculum
- identify the key elements of curriculum.

1 UNIT 1:	Curriculum fundamentals (3 weeks)
Week #	Topics/themes
1	**Key concepts** Introduction Definitions of curriculum Function, goals, characteristics, and importance of curriculum How curriculum differs from: • Syllabus • Course of study • Educational programme • Teaching • Instruction
2	**Types of curriculum** Core curriculum Broad-based curriculum Integrated curriculum Activity-based curriculum Teacher-centred curriculum Learner-centred curriculum Hidden curriculum Formal and informal curriculum
3	**Elements of curriculum** Curriculum aims Learning outcomes and objectives (knowledge, skills, and attitudes) Contents Teaching and learning methods Assessment methods Supporting elements • Learning resources (teachers, support staff, funding, books and journals, IT support, and teaching rooms) • Monitoring and evaluation procedures • Practicum or internship placement activities • Student support and guidance mechanisms

Unit 2: Foundations, theories, and approaches to curriculum development (2 weeks)

Unit 2 introduces various theories and approaches for curriculum development and the differences and similarities among them.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand the varying conceptions of the term curriculum foundations
- identify various theories and approaches to curriculum design
- define the philosophical considerations, purpose, and goals of curriculum.

2 UNIT 2:	**Foundations, theories, and approaches to curriculum development (2 weeks)**
Week #	Topics/themes
4	**Curriculum foundations** Philosophical foundation Psychological foundation Sociological foundation Economic foundation
5	**Theories and approaches for curriculum development** Academic rationalism Social reconstruction Social efficiency Socio-cultural reproduction Self-actualization and others

Unit 3: Curriculum development processes and influencing factors (3 weeks)

Unit 3 covers various processes of curriculum development as well as internal and external factors that influence the curriculum development process. A unit of study prepared for another course in the programme will be analysed in light of the content of this course.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand various curriculum development processes
- discuss internal and external factors and their influences on the curriculum development process
- apply curriculum knowledge to their own work through analysis of a curriculum unit prepared for another course.

3 UNIT 3:	**Curriculum development processes and influencing factors (3 weeks)**
Week #	Topics/themes
6	**Curriculum development processes** Analysis of situation Formulation of aims and objectives Selection of learning experiences Selection of content Organization of experiences and content Selection of teaching-learning strategies Evaluation
7	**Internal factors influencing the curriculum development process** Teacher Pupil School environment and others
8	**External factors influencing the curriculum development process** Technology Knowledge Ideology Economics

Unit 4: Change process and curriculum evaluation (3 weeks)

Unit 4 explores the curriculum change process; factors and stakeholders involved in the change process; and the basic concepts, meanings, types, content organization, and evaluation of curriculum.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand the change process and identify stakeholders involved in the curriculum development process
- know basic concepts, meanings, types, and stages of planning for evaluation.

4 UNIT 4:	**Change process and curriculum evaluation (3 weeks)**
Week #	Topics/themes
9	**Curriculum evaluation** Basic concepts, meanings, and types of curriculum evaluation Stages of planning for evaluation
10	**Curriculum evaluation models** Models of curriculum evaluation The purposes and problems of curriculum evaluation Evaluation tools Delimiting evaluation
11	**Change process** Change process: Innovation, dissemination, adaptation Stakeholders Curriculum products • Standards • Guides • Other

Unit 5: Curriculum development in Pakistan (3 weeks)

Unit 5 provides an overview of primary school programmes and related curriculum issues; various aspects of curriculum development with reference to Pakistan; the role and responsibilities of various agencies responsible for curriculum development at the national and provincial levels; and critical evaluation of the prevailing curriculum situation.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand the basis of the primary school programme and its organization
- identify the agencies responsible for curriculum development at the national and provincial levels
- critically evaluate the prevailing system of education in Pakistan.

5 UNIT 5:	**Curriculum development in Pakistan (3 weeks)**
Week #	Topics/themes
12	**Primary school programmes and issues** Basis of the primary school programme Organizing the curriculum Determining appropriate primary school curriculum content Educating children with disabilities in a regular classroom Inclusion: What does it mean? Gifted and other students with needs Learning styles and systems Organization and grouping in primary schools
13	**Middle school programmes and issues** Functions of the middle school Establishing an identity for the middle school Middle school student and teachers Managing middle school programmes Organizing for instruction in the middle school Comprehensive planning for middle schools The role of technology Evaluating the middle school The middle school as a part of the total curriculum

5 UNIT 5:	Curriculum development in Pakistan (3 weeks)
14	**Curriculum development in Pakistan** The curriculum planning process in Pakistan in light of the 18th Amendment to the constitution Agencies responsible for curriculum development at a national level Agencies responsible for curriculum development at the provincial level Critical evaluation of the prevailing process of curriculum development

Textbooks and references

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Notes for faculty teaching this course

The following resources may be helpful for choosing appropriate readings. You may include your chosen list of readings on the syllabus or distribute it in class. However, readings should include only those resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

Suggested readings

Oliva, P. F. (2009). *Developing the curriculum* (7th ed.). Boston: Allyn & Bacon.

Walker, D. F. (2002). *Fundamentals of curriculum: Passion and professionalism* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Wiles, J. W. & Bondi, J. C. (2011). *Curriculum development: A guide to practice* (8th ed.). Boston: Allyn & Bacon.

Bilbao, P. P., Lucido, P. I., Iringan, T. C., & Javier, R. B. (2008). *Curriculum development*. Manila: Lorimar Publishing Inc.

Glatthorn, A. A., Boschee, F. A., & Whitehead, B. M. (2008). *Curriculum leadership: Strategies for development and implementation* (2nd ed.). Beverly Hills, CA: Sage Publications.

Kridel, C. (2010). *Encyclopedia of curriculum studies*. Beverly Hills, CA: Sage Publications.

Harrison, J. M., Blakemore, C. L., & Buck, M. M. (2001). *Instructional strategies for secondary school physical education* (5th ed.). Boston: McGraw-Hill. See Basic principles of curriculum design (pp. 131–148).

3

Representative syllabi with teaching notes

This section contains two example syllabi with accompanying teaching notes. The teaching notes have been integrated around broad themes addressed in the course. Faculty who are teaching the course for the first time or who are interested in the process of curriculum design may find it useful to see how the authors of these two representative syllabi chose to develop particular ideas and themes in their notes. Ideas presented in teaching notes here are not duplicated in the later section where integrated themes may be found.

REPRESENTATIVE SYLLABUS 1

By
Imtiaz Ahmed

Year, semester
Year 3, semester 5

Credit value
3 credits (48 contact hours)

Prerequisite
Successful completion of semesters 1–4

Course description

The Curriculum Development course is intended to orient Student Teachers to the meaning, importance, and scope of curriculum. Participants will also be introduced to the models and foundations of curriculum in the sociopolitical and historical context of Pakistan. They will develop an understanding of the principles and procedures of the curriculum development process with a special focus on Pakistan.

Student Teachers will apply what they learn in the course by analysing a unit they have developed for a previous course. If time permits, they will also explore topics such as a global perspective on curriculum development with particular attention to South Asian curriculum practices, as well as recent trends, issues, and future scenarios both nationally and internationally.

Learning outcomes

At the completion of this course, Student Teachers will be able to:

- understand the meaning, importance, key concepts, and elements of curriculum
- appreciate the significance of various foundations in the curriculum development process
- critically analyse the models of curriculum planning and identify the most feasible models for use in a Pakistani context
- apply their new knowledge of curriculum development by analysing and critiquing a unit of study they have already created in another course
- identify the forces and factors that affect the process of curriculum development in Pakistan
- highlight the contributions of instructional technology and the teacher as a reflective practitioner in the curriculum development process
- anticipate future scenarios of curriculum development to incorporate curriculum change and innovation (if time permits).

Major themes

- The conceptual framework of curriculum development
- Models of curriculum development
- Foundations of curriculum development
- The role of instructional technology in curriculum development
- The teacher as a reflective practitioner and curriculum developer
- Global perspectives on the curriculum development process

Unit 1: Introduction to curriculum

This unit introduces Student Teachers to the meaning, concepts, terminology, scope, types, and elements of curriculum.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- comprehend and analyse the meaning and concepts of curriculum
- understand the scope of curriculum
- critique the effectiveness of different types and forms of curriculum.

Content

- Definition of curriculum
- Key concepts of curriculum development
- Differences among curriculum, syllabus, and course
- Scope of curriculum
  - Instructional activities
  - Co-curricular activities
  - Guidance and counselling
- Elements of curriculum (objectives, content, teaching methods, and evaluation)
- Types of curriculum
  - Teacher-centred curriculum
  - Student-centred curriculum
  - Overt, explicit, or written curriculum
  - Covert or hidden curriculum
  - Core curriculum
  - Spiral curriculum
  - Integrated curriculum
  - Activity curriculum
  - Intended and achieved curriculum
  - Null curriculum

Unit 2: Foundations of curriculum

Unit 2 covers the importance of foundations in the development of curriculum. Student Teachers will analyse the role of each of the four foundations in developing curriculum for Pakistani schools.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- understand the role of the foundations in curriculum development process
- compare and contrast the impact of foundations on student learning.

Content

- Philosophical foundation
- Sociopolitical foundation
- Psychological foundation
- Economic foundation

Unit 3: Curriculum aims, goals, and objectives

Unit 3 presents the aims, goals, and objectives of curriculum as described in the mentioned taxonomies. Student Teachers will learn about the relationships and differences among aims, goals, and objectives. Using this knowledge, they will analyse the educational aims of Pakistan's National Educational Policies.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- differentiate between aim, goals, and objectives
- analyse the educational goals as stated in Pakistan's education policies.

Content

- Relationships and differences among aims, goals, and objectives
- Taxonomies of educational objectives
  - Cognitive domain
  - Affective domain
  - Psychomotor domain
  - Solo taxonomy of educational objectives
- Analysis of educational aims prescribed in National Educational Policies (1947–2009)

Unit 4: Models of curriculum planning

Unit 4 introduces the mechanism of models used in curriculum planning and development, focusing on the major principles, advantages, and disadvantages of the given models.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- critique the effectiveness of the various models of curriculum planning and development
- compare the similarities and differences of the mechanism of the various models.

Content

- Objective model
- Interaction model
- Cyclical model
- Dynamic model
- Haws process approach

Unit 5: The process of curriculum development in Pakistan

Unit 5 highlights the process of curriculum development in Pakistan. Student Teachers will discuss and debate the pros and cons of the centrally based curriculum development process. Student Teachers will analyse the role of different agencies, such as the HEC, Curriculum Wing, and textbook boards, in the process of curriculum development.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- understand the process of curriculum development in Pakistan
- identify trends and issues in the curriculum development process
- analyse the role and responsibilities of different agencies in the curriculum development process in Pakistan.

Content

- The curriculum development process for the primary and secondary levels
- Principles and factors of curriculum development in global and local contexts
- Trends and issues in the curriculum development process in Pakistan
- School-based and centrally based curriculum development
- The role and responsibilities of the following agencies in curriculum development:
  - Higher Education Commission
  - Curriculum Wing, Ministry of Education
  - textbook boards
- The role of teachers in curriculum development at the primary and secondary levels

Unit 6: Instructional technology and curriculum change and innovation

Unit 6 covers the strategies and models of curriculum change and the role of instructional technology in curriculum innovation and implementation.

Learning outcomes

At the end of this unit, Student Teachers will be able to comprehend and discuss the role of instructional technology in curriculum change and innovation.

Content

- Process of curriculum change: Strategies and tactics
- Models of curriculum change

Major assignments and grading policy

The existing grading policy in the public sector universities will be followed as such:

Mode of assessment	Marks
Midterm exam	30
Assignments (including the journal)	20
Final exam	50

Throughout the semester Student Teachers will be required to submit weekly reflections. They will also record their thoughts in reflective journals to document the progression of their responses to the course content. Student Teachers' reflections will be the basis to make judgments related to student learning and to analyse how this learning may be used effectively as reflective practitioners in the future. The reflective journal would be assessed against 10 marks.

For the final course assignment, Student Teachers will submit an academic paper comparing Pakistan and a country of their choice in terms of the curriculum development process. The paper will include detailed evidence, statistics, and research; existing similarities and differences in the curriculum development process of these two countries; and suggestions to improve the curriculum development process in Pakistan. The paper will be assessed against 10 marks.

Throughout the course, Student Teachers will also be required to participate in simulation exercises.

Textbooks and references

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Resources

The following resources may be helpful for choosing appropriate readings. You may include your chosen list of readings on the syllabus or distribute it in class. However, readings should include only those resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

Biggs, J. (2003). *Teaching for quality learning at university* (2nd ed.). Buckingham, UK: Open University Press.

Isani, U. A. G. & Virk, M. L. (2005). *Higher education in Pakistan—A historical and futuristic perspective* (2nd ed.). Karachi: National Book Foundation.

Jalalzai, M. K. (2005). *The crisis of education in Pakistan—State policies and textbook*. Lahore: Al-Abbas International.

Khan, A. H. (1997). Education in Pakistan—Fifty years of neglect. *The Pakistan Development Review, 36*, 647–670.

Memon, G. R. (2007). Education in Pakistan: The key issues, problems and the new challenges. *Journal of Management and Social Science, 3*, 47–55.

Oliver, M. (2010). Quality assurance and quality enhancement in e-learning. Retrieved from

- http://evidencenet.pbworks.com/w/page/19383515/Quality%20assurance%20and%20quality%20enhancement%20in%20e-learning

Oliva, P. F. (2009). *Developing the curriculum* (7th ed.). Boston: Allyn & Bacon.

Rana, S. (2009). Quality management in higher education—A perspective. Retrieved from

- www.clitlahore.edu.pk

Rasheed, M. I., Aslam, H. D., & Sarwar, S. (2010). Motivation issues for teacher in higher education: A critical case of IUB. Retrieved from

- www.macrothink.org/journal/index.php/jmr/article/download/349/251

Shami, P. A. (2005). *Education in Pakistan—Policies and policy formulation* (1st ed.). Islamabad: National Book Foundation.

Siddiqui, S. (2010). *Rethinking education in Pakistan, perceptions, practices and possibilities* (2nd ed.). Karachi: Paramount Publishing Enterprise.

Wiles, J. W. & Bondi, J. C (2011). *Curriculum development: A guide to practice* (8th ed.). Boston: Allyn & Bacon.

Teaching notes for representative syllabus 1

1	UNIT 1:	Introduction to curriculum
Week #	Session #	Topics/themes
1	1	Introducing the course Definition of curriculum
	2	Differences among curriculum, syllabus, and course Scope of curriculum • Instructional activities • Co-curricular activities • Guidance and counselling
	3	Key concepts of curriculum development
2	1	Elements of curriculum • Objectives • Content • Teaching methods • Evaluation
	2	Types of curriculum • Official • Hidden • Null • Operational
	3	Types of curriculum • Teacher-centred curriculum • Student-centred curriculum
3	1	Core curriculum Spiral curriculum
	2	Integrated curriculum
	3	Activity curriculum Intended and achieved curriculum Null curriculum

Note that although this outline is for nine weeks, seven session plans are offered below. Also note that teaching plans are intended to offer ideas. They may not be an exact match to the content listed in the unit outline.

Essential questions

- Which definition of curriculum provides a comprehensive view of curriculum?
- What is the relationship between the different elements that make up a curriculum?
- Given the mutual integration of guidance and counselling, what is the scope of curriculum?
- What is the impact of instructional and co-curricular activities on student learning?

Teaching plan: Introducing the course

Content	Method	Resources	Time
Motivational activity that assesses prior knowledge	**Brainstorming** Ask Student Teachers to share their expectations of what they will learn from the Curriculum Development course. Write student expectations on the board.	Chalk or white board	5 min.
Course objectives, course outline, and mode of assessment	Oral explanation of course objectives, outline, and mode of assessment	Overhead transparency, handout	10 min.
Understanding the term *curriculum*	**Think, pair, share** Have Student Teachers work in pairs. Give each pair a worksheet and have them choose texts to be exploring as indicated on the worksheet. Invite pairs to write their understanding of the selected topics on the worksheet. Ask Student Teachers to write three questions that would help them clarify their understanding of the term *curriculum*. Ask different pairs to share their understanding of the term with the whole class. Ask the pairs to ask their questions about the term *curriculum*. Answer the questions and write the main points on the board.	Worksheets, relevant books, board	30 min.
Understanding the term *curriculum*	**Creating a symbol for curriculum** Have Student Teachers work individually to create a drawing that shows their understanding of the term *curriculum*. They should use colours and symbols from the school environment. Ask Student Teachers to post their drawings on the board. As time permits, have as many Student Teachers as possible share their understanding of curriculum through their drawings. Either a presentation or a gallery walk would be suitable. Conclude the session by summing up the points presented by the Student Teachers.	Paper for drawing symbols, coloured pencils	15 min.

Materials

Worksheet

Create a curriculum development worksheet. The first part of the worksheet should include the following instructions, 'After consultation with the Instructor, choose two articles or chapters from different books on curriculum development and write your understanding of the term *curriculum*.

The second portion of the worksheet should invite Student Teachers to ask questions. They should write three questions that would help clarify the term *curriculum*.

Leave enough room for student responses.

Alternatively, write the instructions on the board and have students respond on a blank piece of paper.

Handout

Prepare a handout with definitions of *curriculum* for use in class. For a list of common definitions, refer to the Integrated Teaching Notes, Definitions.

Teaching plan: Definition of curriculum

Content	Procedure	Resources	Time
Revision	Ask Student Teachers to share their understanding of *curriculum* in one sentence. Write the main points on the board.	Board	5 min.
Meaning of curriculum	Share the origin of the term *curriculum* and the opinion of different experts about the term.	Overhead transparency	10 min.
Curriculum as experience Curriculum as intention Curriculum as product Curriculum as process Curriculum as praxis	Divide Student Teachers into five groups. Give each group a handout related to the topics mentioned in the content column to read, understand, and discuss. Ask groups to write down the main points on the provided butcher sheets. Have each group share their findings with the whole class. On the board, draw columns for curriculum as experience, intention, product, process and praxis on the board. As the groups share their findings, write the main points on the board. Summarize the lesson by referring to the points written on the board.	Handouts, butcher sheets, markers, masking tape, and 'Curriculum theory and practice' by M. K. Smith (in the Articles section)	45 min.

Teaching plan: Key concepts of curriculum development

Content	Method	Resources	Time
Revision	Provide each Student Teacher with the handout containing images of curriculum. Ask Student Teachers to write contextual examples for each image. Have some share their examples with the class.	Handout	15 min.
Concepts of curriculum • Scope and sequence • Syllabus • Content outline • Textbook • Course of study • Planned experiences	Ask Student Teachers how they believe teachers understand the concepts of curriculum. Write their responses on the board. Elaborate on the topic by writing additional (main) points on the board. Discuss missing concepts and use the opportunity to correct misconceptions. Have Student Teachers work in triads and write their understanding of the topics discussed. If time permits, they can share their ideas with the class.	Board	30 min.
Need and importance of curriculum	Draw four columns on the board and label each column with the following: country, society, teachers, and learners. Ask Student Teachers to write two paragraphs of about 10 lines each on any two topics written on the board from a curriculum perspective. (How is the topic related to curriculum?) Have different class members share the paragraphs they wrote. Write the main points on the board. Sum up the lesson by referring to these main points.		15 min.

Materials

Prepare a handout or make a list on the board. The handout or list should have two columns 'Image of curriculum' (left) and 'Your understanding (with example)' (right). Leave enough space for Student Teachers to write between the items in the Image column.

Image of curriculum	Your understanding (with example)
Curriculum as subject matter	
Curriculum as experience	
Curriculum as intention	
Curriculum as cultural reproduction	
Curriculum as a list of subjects	
Curriculum as entire course content	
Curriculum as planned learning experiences	
Curriculum as written plan of action	
Curriculum as arrangement of learning experiences	
Curriculum as arrangement of children into groups and classes	
Curriculum as arrangement of teaching tasks of staff members	
Curriculum as arrangement of content of teaching	
Curriculum as arrangement of learning environment for children	

Notes for faculty

This section includes some of the terms Student Teachers will encounter in this unit, Several of the terms have multiple definitions.

Syllabus

A syllabus is a summary of a course that the Instructor gives to each student during the first class session. Typically, syllabi contain the following:

- specific information about the course
- contact information for the instructor, including office location and office hours
- an outline of what will be covered in the course
- a schedule of test dates
- due dates for assignments
- grading policy
- classroom rules.

A syllabus is a detailed description of a course of study, often including the books to be read, papers to be written, and examinations to be given.

A syllabus is a detailed outline of the course prepared by the Instructor. It often includes the following:

- a description of the purpose for the course
- course requirements with specified dates for midterms, the final exam, papers, and other projects
- a week-by-week schedule of classes, topics, readings, and assignments
- contact information for the Instructor, including email address, office location, and phone number.

Textbook

A textbook is a standard book about a branch of study (e.g. curriculum subject).

A textbook is a book used in schools or universities for the formal study of a subject.

Course of study

A course of study is 'education imparted in a series of lessons or class meetings'.

➢ http://thefreedictionary.com/course+of+study

A course of study may also refer to a broad curriculum outline to be followed over a designated period (e.g. a semester, a year).

Scope

Scope refers to what the curriculum covers. It suggests the breadth of the curriculum.

Sequence

Sequence refers to what should be taught, at what stage, and in what order.

Teaching plan: Elements of curriculum

Content	Procedure	Resources	Time
Elements of curriculum • Aims and objectives • Content • Learning experiences • Teaching Method • Evaluation	Explain the elements of a curriculum to Student Teachers with the help of a transparency. Encourage Student Teachers to ask questions during the presentation. Divide the class into pairs. Give each pair a handout or write items on the board or chart paper. Ask pairs to read the handout and differentiate between the descriptions of the elements. Have the class discuss whether they agree or disagree with the statements.	Overhead transparency, handout	40 min.
Forms of curriculum • Formal • Informal	Ask Student Teachers to give contextual examples of formal and informal curriculum. Elaborate on the two forms of curriculum with the help of overhead transparency.	Overhead transparency	10 min.
Assignment task	Have Student Teachers make a web or graphic organizer to show the linkage between elements of curriculum.	Assignment: web or graphic organizer	10 min.

Materials

Prepare a set of overhead transparencies on the elements of a curriculum (e.g. aims, goals, and objectives) or a course handout. You may want to refer to a textbook resource, such as Print's *Curriculum Development and Design* (1993). The transparencies or handout should include the following elements and a brief phrase or two to describe each:

- elements of curriculum
- aims, goals, objectives
- content
- learning experiences
- evaluation.

Teaching plan: Types of curriculum (official, hidden, null, operational)

Content	Procedure	Resources	Time
Revision	Hold a brainstorming session about the concept and meaning of curriculum. Record the Student Teachers' answers on the board.	Board	5 min.
Introduction of the following types of curriculum • Official • Hidden • Null • Operational	Divide the class into groups of five and give each group a copy of the worksheet. Have groups research the assigned topic (drawing on the Eisner text) and prepare a presentation to give to the class. Clarify any misconceptions regarding the topic during the groups' presentations and answer Student Teachers' questions. Note: researching the assigned topic and making the presentation will likely take more than one session.	Worksheet, library, computer lab, and *Educational imagination: On the design and evaluation of school programs* by E. W. Eisner	55 min.

Eisner, E. W. (1979). *Educational imagination: On the design and evaluation of school programs.* New York: Macmillan. Available from
➢ http://people.cehd.tamu.edu/~pslattery/documents/EducationalImagination.pdf

Materials

Prepare a worksheet to guide the group task. The worksheet should appear similar to the following:

Group Task

Group number: _____

Type of curriculum: _____

Using books in the library or information found online, explore, discuss, and develop an understanding of the type of curriculum assigned to your group. Prepared an oral presentation to give to the class.

Teaching plan: Student-centred and teacher centred curriculum

Content	Procedure	Resources	Time
Student-centred curriculum Teacher-centred curriculum	Give each Student Teacher a handout. Ask them to read the comparison between student-centred and teacher-centred curriculum. Have Student Teachers write their understanding of the two types of curriculum. Allow Student Teachers to share their understanding with the person sitting next to them. Bring the class together and have Student Teachers to share their understanding of the topic with the whole class.	Handout	25 min.
Experience-based curriculum	Explain experience-based curriculum with the help of a transparency. Ask for questions or comments about the three types of curriculum. Provide answers and clarification as needed.	Overhead transparency	10 min.
Advantages and disadvantages of the three types of curriculum	Place six butcher sheets on the board. Label them as follows: • Experience-based curriculum—advantages • Experience-based curriculum—disadvantages • Student-centred curriculum—advantages • Student-centred curriculum—disadvantages • Teacher-centred curriculum—advantages • Teacher-centred curriculum—disadvantages Ask class members to write the advantages and disadvantages of the three types of curriculum on the papers.	Butcher sheets, markers	10 min.

Materials

Prepare a handout on the following comparison of curriculums. Be sure to include space in each box for student responses. You may also wish to use it on an overhead transparency as the basis for a mini-lecture.

Subject-centred curriculum	Student-centred curriculum
Centred on subject	Centred on students
Emphasis on teaching the subject matter	Emphasis on promoting the all-round growth of learners
Subject matter selected and organized before the teaching situation	Subject matter selected and organized cooperatively by all learners
Controlled by the Instructor or someone representing authority who is external to the learning situation	Controlled and directed cooperatively by pupils, teachers, parents, supervisors, principals, and others in the learning situation
Emphasis on teaching facts, imparting information, and acquiring knowledge for its own sake or possible future use	Emphasis on meanings and the way students make sense of things
Emphasis on teaching specific habits and skills as separate and isolated aspects of learning	Emphasis on building habits and skills as integral parts of the learning process
Emphasis on improving the method of teaching specific topics within a subject	Emphasis on understanding and improving through experiential learning
Education considered as conforming to the patterns set by the curriculum and its various associated instruments	Education considered to help to building socially creative individuals who contribute to society
Education considered as schooling	Education considered as a continuous, intelligent process of growth

Teaching plan: Core curriculum and integrated curriculum

Content	Procedure	Resources	Time
Core curriculum Integrated curriculum	Have Student Teachers read the handouts about core and integrated curricula. Hold a brainstorming session in which Student Teachers express their understanding of the two types of curriculum. Write their answers on the board. Have the class discuss the two curricula and provide explanation as needed.	Handouts, board	50 min.
The key concepts of core and integrated curricula	Explain the differences between integrated and core curricula. Use a transparency as needed.	Overhead transparency	10 min.

Material

Prepare a handout using key points or quotations from Lake's 'Integrated Curriculum', which is included in the Articles section of this document.

Notes for faculty

Core curriculum

The term *core curriculum* is associated with the Progressive Education Movement in the United States. In a core curriculum, some or all subjects are taught around a central theme. It is more often thought of as an organization method for elementary school classrooms, but the concept of core curriculum can also be used at the middle and secondary school levels. In elementary school classrooms, teachers are usually generalists. They plan all or part of the day's curriculum around a particular theme, searching for ways to integrate language, science, math, literacy, social studies, art, music, etc. In upper-grade classrooms, teachers of subject areas plan and teach cooperatively, guiding students to integrate various subjects. For example, the upper-grade theme of Addressing World Hunger could be explored from the perspective of language, writing, literacy, social studies, mathematics, and science. Music and art may also be brought in to enrich the learning experience.

The term *core curriculum* is also used to mean a course of study that is central to a school or school system and usually mandatory for all students. Core curricula are often instituted, at the primary and secondary levels, by school boards, departments of education, or other administrative agencies charged with overseeing education.

Curriculum and its types

Leslie Wilson offers a summary of curriculum types, drawing on broader literature. Her article, 'Curriculum: Different Types', may be found in the Articles section at the end of this document and at her website:

- http://www4.uwsp.edu/education/lwilson/curric/curtyp.htm

2	UNIT 2:	Foundations of curriculum
Week #	Session #	Topics/themes
4	1	The contribution of sociology and culture in curriculum planning
	2	The contribution of philosophy and psychology in curriculum planning
	3	Psychological foundation
5	1	Economic foundation
	2	Comparing philosophical and socioeconomic foundations
	3	Comparing psychological and economic foundations

Essential question

How do the foundations of curriculum contribute to formulating objectives, selecting and organizing learning experiences, choosing appropriate teaching strategies, and assessing learning?

NOTE: In preparation for this unit, consult Curriculum Notes for additional ideas for handouts, PowerPoint slide presentations, or overhead transparencies.

Teaching plan: The foundations of curriculum: The contribution of sociology and culture in curriculum planning

Content	Procedure	Resources	Time
Introduction to the foundations of curriculum development	Write the names of two topics on the board. Ask the class what contributions they think these disciplines have made to curriculum planning and development. Ask Student Teachers to select one of the topics– the one of most interest to them. Explain and discuss the contribution of sociology and culture in curriculum planning and development.	Board, access to the library	40 min.
Contribution of sociology and culture in curriculum planning and development	Ask Student Teachers to do research in the library and write about the contribution of the discipline of their choice in curriculum development.		20 min.

Teaching plan: The foundations of curriculum: The contribution of philosophy and psychology in curriculum planning

Content	Method	Resources	Time
The importance of psychology and philosophy in curriculum planning and development	**Debate** Divide class in two groups: psychology and philosophy. Give the class handouts related to their respective topics. Ask them to read the handouts and prepare for discussion within their groups. The discussion should focus on the importance of the discipline in curriculum planning and development. Have class write the main points of their discussions on the board.	Handouts, board	45 min.
The contributions of psychology and philosophy to curriculum planning and development	Explain the topic with the help of a transparency or handout.	Overhead transparency of handout	15 min.

Teaching plan: The contribution of economics in curriculum planning

Content	Method	Resources	Time
The importance of economics in curriculum planning and development	**Discussion** Divide the class into small groups. Give the class handouts related to their respective topics. Ask them to read the handouts and prepare for discussion within their groups. The discussion should focus on the importance of the discipline in curriculum planning and development. Ask groups to discuss the importance of the economic foundation in curriculum planning and development. Write the main points of the discussion on the blackboard.	Handouts, board	50 min.
The contributions of economic foundation in curriculum planning and development.	Explain the topic with the help of a transparency or handout.	Overhead transparency of handout	10 min.

3	UNIT 3:	Curriculum aims, goals, and objectives
Week #	Session #	Topics/themes
6	1	Distinguishing between aims, goals, and objectives
	2	Taxonomies of educational objectives: Cognitive domain
	3	Taxonomies of educational objectives: Affective domain
7	1	Taxonomies of educational objectives: Psychomotor domain
	2	Taxonomies of educational objectives: Solo taxonomy of educational objectives
	3	Analysis of educational aims prescribed in National Educational Policies (1947–2009) (critical reading, analysis, and discussion in small groups)
8	1	Analysis of educational aims prescribed in National Educational Policies (1947–2009) (critical reading, analysis, and discussion in small groups)
	2	Analysis of educational aims prescribed in National Educational Policies (1947–2009) (group presentations followed by Instructor feedback)
	3	Analysis of educational aims prescribed in National Educational Policies (1947–2009) (group presentations followed by Instructor feedback)

Essential questions

- Are educational aims translated into curriculum in Pakistan?
- Are the aims given in educational policies specific, measureable, attainable, relevant, and timely (SMART)?

NOTE: No teaching plans are provided for this unit.

4	UNIT 4:	Models of curriculum planning
Week #	Session #	Topics/themes
9	1	Objective models (Taylor and Taba): Processes, strengths, and weaknesses
	2	Interaction models: Processes, strengths, and weaknesses
	3	Cyclical models: Processes, strengths, and weaknesses
10	1	Dynamic models: Processes, strengths, and weaknesses
	2	Haws process approach: Processes, strengths, and weaknesses
	3	Comparative study of all the models

Essential question

Which models should are the most appropriate and feasible for curriculum planning and development in Pakistan?

NOTE: In preparation for teaching this unit, refer to the Integrated Teaching Notes section, where there are many ideas for teaching about curriculum models. These may be useful in preparing overhead transparencies, mini-lecture notes, or PowerPoint presentations.

Additional teaching plan: Models of curriculum planning and development

Content	Method	Resources	Time
What is a model?	Brainstorming	Board	10 min.
Explanation of the term *model* in curriculum	Mini-lecture	Overhead transparency	10 min.
Rational and interaction models • What it is • How it works • Strengths and weaknesses	Give the class worksheets on the models and explain them (use an overhead transparency for reference). Write the main points on the board.	Worksheets	40 min.

Teaching plan: Cyclical models

Content	Method	Resources	Time
Cyclical models • Wheeler • Nicholls and Nicholls	Write the main points about these models on the board or on an overhead transparency. Explain the models while referring to the points written on the board or on the overhead transparency.	Board, overhead transparencies	35 min.
Strengths and weaknesses of cyclical models	Give the class handouts about the cyclical models. Ask the Student Teachers to read the strengths and weaknesses of the models. Encourage the class to ask questions and clarify any misconceptions they have while they are reading or after reading in a discussion.	Handout	25 min.

Materials

Prepare an overhead transparency that outlines the relationships within Wheeler's model of curriculum development, which follows the Tyler model and includes the following steps:

1) aims, goals, and objectives
2) selection of learning experiences
3) selection of content
4) organization and integration of learning experiences and content
5) evaluation.

Prepare a second transparency that outlines the relationships within Audrey and Howard Nicholls' cyclical model of curriculum development, which includes the following steps:

1) situational analysis
2) aims, goals, and objectives
3) selection and organisation of content
4) selection and organization of methods and evaluation.

A third transparency should be based on the charts in Print's *Curriculum development and design*.

Teaching plan: Dynamic models and Haws process approach

Content	Method	Resources	Time
Process model	Explain the process model concept with the help of a transparency. Give class members handouts about the process model. Ask them to read the provided handouts and answer the questions given on a worksheet.	Overhead transparency, handout, worksheet	30 min.
Dynamic models	Explain the dynamic models by arranging flash cards on the board.	Board Flash cards	20 min.
Strengths and weaknesses of dynamic models	Give the class handouts about dynamic models. Divide the class into small groups to discuss the information in the handouts and help them articulate the strengths and weaknesses of dynamic models.	Handout	10 min.

Assessment task: Curriculum models

Work in small groups and prepare a group presentation on a curriculum development model. The presentation should address the following questions:

- What is it?
- Who presented it?
- When was this model presented?
- How does it work?
- What are its strengths?
- What are its weaknesses?
- Is this model of curriculum development being used in Pakistan? Give reasons and include examples.

This is a group task, therefore:

- involve each group member in the presentation
- prepare a 10-minute presentation
- be creative in presenting your task using different resources
- be very clear about the content you are presenting
- be ready to answer any questions asked by class members.

5	UNIT 5:	The process of curriculum development in Pakistan
Week #	Session #	Topics/themes
11	1	Curriculum development process for primary and secondary education
	2	Principles of curriculum development in global and local contexts Trends and issues in curriculum development in Pakistan
	3	School-based and centrally based curriculum development
12	1	The role and responsibilities of the Higher Education Commission in curriculum development
	2	The role and responsibilities of the Ministry of Education in curriculum development
	3	Role and responsibilities of the textbook boards (e.g. the Sindh Textbook Board) in textbook development in primary and secondary education

NOTE: In preparing to teach this unit, refer to the Integrated Teaching Notes section for ideas to help develop notes, overhead transparencies, and PowerPoint presentations.

Teaching plan: National development and curriculum development

Content	Method	Resources	Time
History of progress and development in a country What is development? What is curriculum development?	Recount the history to the Student Teachers and then ask the following questions: • What happened to the country? • What process did it go through? Use these questions to bring class to the word *development*. Hold a brainstorming session about development.	Board	15 min.
Development and curriculum development	Explain these development and curriculum development with the help of an overhead transparency.	Overhead transparency	10 min.
How does the process of curriculum development take place in Pakistan?	Have Student Teachers work in pairs to create diagrams about the process of curriculum development in Pakistan . Pairs should join with other pairs to give each other feedback on their diagrams. Explain the process of curriculum development in Pakistan with the help of an overhead transparency.	Overhead transparency	25 min.
Strengths and weaknesses of the curriculum development process.	Hold a brainstorming session on the board. Give Student Teachers a handout about the strengths and weaknesses of curriculum development. Have them go through the handout and ask any questions that arise. Provide clarification as needed.	Board, handout	10 min.

Faculty notes

Notes may be used for teaching, for creating handouts, or other materials.

Curriculum priorities

- Central
- National
- Federal
- Provincial

Whole curriculum

A whole curriculum should address the following:

- pupils' physical, social, spiritual, and emotional development
- what students should know (knowledge, information, facts, and fiction)
- what skills students should acquire or possess
- what social, religious, societal, or family values should be transferred
- how the appropriate content should fall within the religious, social, spiritual, and societal parameters.

Subject-based curriculum

A subject-based curriculum addresses the following:

- what content pupils should know
- what values pupils should be taught
- what information pupils should be given
- how the selected content (subject) should be taught to pupils
- what resources and facilities schools and teachers should have to teach in schools and classrooms
- what resources and facilities the schools should have, acquire, or provide to help achieve the national educational goals of education.

Teaching plan: The role and responsibilities of the Ministry of Education in curriculum development

Content	Method	Resources	Time
Review the materials from the previous class	Brainstorming	Board	5 min.
The roles of the Federal Curriculum Wing and Provincial Bureau of Curriculum	Explain the roles of the Federal Curriculum Wing and Provincial Bureau of Curriculum with the help of an overhead transparency.	Overhead transparency	20 min.
The principles of curriculum development in Pakistan	Have the class work in groups of five to discuss what they think are the principles of curriculum development in Pakistan. Ask them to list their five principles and give reasons for their inclusion. Bring the class together and explain the principles of curriculum development in Pakistan, with the help of an overhead transparency.	Overhead transparency	25 min. 10 min.

Activities: Principles of curriculum development in Pakistan

The tasks below may be used in a number of ways. For example, Student Teachers may be asked to respond to them individually in a paper, to work in groups to create a presentation, or to address them in an assessment.

Activity 1

The newly elected government of Pakistan has appointed you Minister of Education. What steps, processes, and guiding principles will you follow in developing curriculum for the country?

Activity 2

After completing your Ph.D. studies abroad, you return home to Pakistan. The government offers you the position of Secretary of Education at the federal level. What steps, processes, and guiding principles will you follow in developing curriculum for Pakistan?

Activity 3

You dream of being able to offer a quality education to Pakistani students. After completing your B.Ed., you open a private school in Pakistan. Considering the ideology of the country, what steps, processes, and guiding principles will you follow in developing curriculum for students in your school?

Activity 4

You are an enthusiastic teacher and always search to improve your skills in teaching. Your school selects you to develop a new curriculum that should meet the challenges of the 21st century. Considering the ideology of Pakistan, what steps, processes, and guiding principles will you follow in developing curriculum?

Teaching plan: Factors responsible for influencing curriculum planning and development

Content	Method	Resources	Time
Scenario: Establishment of Bright Star Secondary School	Present the following question to the class: As the principal of Bright Star Secondary School, what are some of the factors you would consider in developing the curriculum for the school? Divide class into groups of five and have them discuss the given situation and provide reasons for their responses. Student Teachers will be asked to write the main points of their presentations on butcher sheets.	Butcher sheets	35 min.
Factors that influence curriculum planning and development	Explain the factors responsible for curriculum planning and development with the help of an overhead transparency. Encourage Student Teachers to ask questions, and provide clarification as needed.	Overhead transparency	25 min.

Materials

Prepare an overhead or a handout with the following information:

- Sociological factor
  - Decision-making about the content of the curriculum considering the social background of the students
  - Understanding the direction of social change and socialization of the individual
- Gender factor
  - The needs of each gender are considered in developing a bias-free curriculum
- Government directives
  - Directives provide guidance on issues such as the medium of instruction, the nature of the syllabus, and the kind of textbooks to use.
- Psychological factor
  - The nature of students, teaching and learning methods, motivation, individual differences, and personality of students are considered.
- Educational factor
  - Trained and skilled instructors
  - Co-curricular activities as an integral part of the curriculum
- Economic factor
  - Financial restraints result in a lack of equipment and good teachers.

Teaching plan: Role and responsibilities of Instructors in the curriculum development process

Content	Method	Resources	Time
The role and responsibilities of teachers in the curriculum development process	Divide class into six groups with four members each. Some groups will be assigned the same topic, but have each group prepare their presentations independently. Each group should be assigned one of the following questions: • Why is it necessary for a teacher to take part in curriculum development? • The real success of any subject's curriculum depends on the teacher. Do you agree? Why or why not? • As a teacher, what should be your role in the curriculum development process? Have class go to the library to work on the task. Have each group present their assigned topic. The Instructor should add comments to add to student understanding.	Library	60 min.

Teaching plan: School-based curriculum development

Content	Method	Resources	Time
School-based curriculum development (SBCD)	Hold a brainstorming session about SBCD and write the main points on the board. Ask Student Teachers to critically explain whether SBCD should take place. Provide additional information and clarify the points made by Student Teachers with the help of an overhead transparency. Give Student Teachers a handout on the features of centrally based curriculum development (CBCD). Have them review the handout and then discuss it in pairs. Bring the class together and discuss CBCD as a group.	Board, overhead transparency, handout	25 min.
Role of teachers in curriculum decision-making at the school level	Have Student Teachers work in triads. In their groups, they should imagine they have to develop a SBCD. They should consider how they would contribute to this process. Each group should write a response to report their discussion back to the class. Add additional information and explanations as each group responds. Use an overhead transparency.	Overhead transparency	15 min.
Advantages and disadvantages of SBCD	Divide the class into small groups to brainstorm the advantages and disadvantages of SBCD. Write *advantages* and *disadvantages* on the board. Then allow each group to write one advantage and one disadvantage on the board. Ensure that ideas are not duplicated. Add additional information and explanations with the help of an overhead	Board, overhead transparency	10 min.

Teaching plan: Centrally based curriculum development

Content	Method	Resources	Time
Explanation of centrally based curriculum development (CBCD)	Write *what*, *why*, *who*, and *how* on the board. Ask the class to discuss these words in relation to CBCD. Record their ideas on a chart or the board. Explain CBCD to the class with the help of an overhead transparency. The lecture should be followed by a discussion that considers the following questions: • Should control be centrally based? • Should a central body have the power to make these choices?	Board, overhead transparency	20 min.
What should be the characteristics of CBCD?	Brainstorm on the board. Fill in gaps from the brainstorm with an explanation with the help of an overhead transparency.	Board, overhead transparency	20 min.
Advantages and disadvantages of CBCD	Prepare an overhead transparency on the advantages and disadvantages of CBCD. Ask Student Teachers to review it. Then conduct a class discussion on the advantages and disadvantages.	Overhead transparency	20 min.

6 UNIT 6: Instructional technology and curriculum change and innovation

NOTE: There is no weekly breakdown or teaching plans for this unit.

Additional unit: Curriculum development in global perspectives

If time permits, this unit may be added during the final three weeks of the course. It is particularly recommended for faculty who are teaching a post-B.A. course. Teaching plans have been organized so that there are enough weeks to include this unit. However, given the practical nature of curriculum development, time needs to be reserved for actual development work either through analysis of an already completed unit of study or by developing a curriculum unit. This may be done by including steps towards completion of the assignment within other units or by reserving a separate unit.

Unit description

This unit will familiarize Student Teachers with the process of curriculum development in both advanced countries and South Asia.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- analyse, synthesize, and discuss the process of curriculum development in advanced countries
- identify the best practices of curriculum planning at the elementary and secondary levels in advanced countries.

Content

An overview of the elements of curriculum development (objectives, content, teaching, and assessment strategies) for:

- elementary and secondary levels in the USA
- primary and secondary levels in the UK
- primary and secondary levels in Singapore
- elementary and secondary levels in China
- elementary and secondary levels Japan
- primary and secondary levels in India
- primary and secondary levels in Sri Lanka

ADDITIONAL UNIT: **Curriculum development in global perspectives**		
Week #	Session #	Topics/themes
14	2	Curriculum development for elementary and secondary levels in the USA
	3	Curriculum development for primary and secondary levels in the UK
15	1	Curriculum development for primary and secondary levels in Singapore
	2	Curriculum development for elementary and secondary levels in China
	3	Curriculum development for elementary and secondary levels in Japan
16	1	Curriculum development for primary and secondary levels in India
	2	Curriculum development for primary and secondary levels in Sri Lanka
	3	Student reflections and evaluation of the course

Essential question

What are the existing practices regarding the elements of curriculum in prescribed countries?

REPRESENTATIVE SYLLABUS 2

By

Nabi Bux Samo and Ghulam Sarwar Soomro

Year, semester

Year 3, semester 5

Credit value

3 credits (48 contact hours)

Prerequisite

Successful completion of semesters 1–4

Course description

This course—Curriculum Development—is made up of two units. Unit 1 addresses the basic conceptual understanding of curriculum; the types of curriculum, instruction, and approaches to curriculum; and the foundations of curriculum. Unit 2 addresses the processes and procedure of curriculum design. It provides the learner with a conceptual understanding of the four basic elements of curriculum and how these elements are knit together to make a comprehensive syllabus for learning. Unit 1 supports Unit 2 by helping learners construct a conceptual understanding of the ideas of curriculum and instruction; their types and approaches; the fundamentals of the nature of knowledge and of learning; the influence of the theories of learning; and the influence of society and social forces. It is expected that a conceptual understanding of Unit 1 will benefit learners in understanding the complexities of Unit 2 and developing their ability to design a curriculum.

The purpose of this course is to build a theoretical understanding of curriculum, instruction, and curriculum design and to provide practical hands-on experience in designing a curriculum for. The course is designed to develop Student Teachers' abilities to interact and converse with the principle, procedure, and process of curriculum design. It intends to develop critical, analytical, and creative skills among the participants during the learning process and to emphasize the significance of curriculum in the teaching-learning process. This course enables participants to create their own definitions of curriculum and instruction; state their own aims, goals, and objectives; and select their own subject content, methods of teaching, and ways of assessment.

Course goal

The aim of this course is to equip Student Teachers with the knowledge and skills that will enable them to design their own curricula and provide instruction suited to their learners.

Semester outline

Unit 1: Introduction to curriculum and instruction

Unit 1 introduces Student Teachers to the idea of curriculum and instruction, develops their abilities to distinguish between the various types of curriculum, and enables them to conceptualize the basic concepts and definitions. The unit develops a basic understanding of how curriculum, instruction, and teaching are intricately linked with each other as well as the relationship between learner, knowledge, and society.

Content outline

- Week 1: Concepts and definitions of curriculum
- Week 2: Concepts and definitions of instruction and teaching
- Week 3: Types and approaches to curriculum
  - Overt or explicit curriculum
  - Hidden or covert curriculum
  - Planned curriculum
  - Implemented curriculum
  - Core curriculum
- Weeks 4–5: Foundations or bases of curriculum
  - Learners and theories of human development
  - Knowledge and the nature of learning
  - Society and social forces

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- construct their own definitions of curriculum and instruction
- differentiate between instruction and teaching, and state examples of instruction
- compare the subject-centred approach with the student-centred approach to curriculum
- select one approach to curriculum and give reasons for their selection
- examine the three bases of curriculum and show the intricate relationship between them.

Performance assessments

- In pairs, Student Teachers will construct their own definitions of curriculum and instruction
- In groups of three, Student Teachers will compare the subject-centred approach with the student-centred approach, select one approach to curriculum, and give reasons for the selection.
- Individually, Student Teachers will differentiate between instruction and teaching, and provide examples of instruction.
- Student Teachers will examine the three foundations of curriculum and provide examples of how these foundations have influenced Pakistan's education system.

Learning and teaching approaches

Teachers are advised to practise cooperative learning. It will develop social skills and help with mastery of learning models of teaching. Student Teachers should be exposed to a wide variety of readings, as this will help generate knowledge and ideas. Through study of this unit, they will be able to analyse and critique, ask and answer questions individually and in groups, and exchange ideas with each other.

Unit 2: Curriculum design

This unit is designed to help Student Teachers develop the ability to design their own curricula. Its aims to provide them with a conceptual understanding of how the four elements of the curriculum are integrated, interrelated, and interdependent on one another and that a logical and sequential blend of the four element results in a curriculum designed to model learning. It intends to familiarize Student Teachers with theoretical perspectives on curriculum design, curriculum models, and the significance of models in the curriculum design process. Its focus is to develop Student Teachers' ability to state aims, goals, and objectives. It also will help them learn to select and organize content, learning activities, and assessment procedures for their proposed curriculum design. Their involvement in this activity will help them recognize the intricate relationship and coherence between the four elements of curriculum.

Content outline

- Weeks 6–7: Curriculum designs
  - Backward design
  - Subject-centred design
  - Student-centred design
- Weeks 8–9: Models of curriculum
  - Tyler's objective model
  - Taba's rational model
  - Nicholls and Nicholls' cyclic model

- Weeks 10–11: Curriculum elements: Curriculum intent
  - Aims, goals, objectives
  - Sources of aims, goals, objectives
  - Functions of objectives
  - Types of objectives
    - General or unit objectives
    - Specific or instructional objectives
    - Behavioural objectives
- Weeks 12–13: Curriculum elements: Curriculum content
  - The nature of content
  - Selection of content
  - Organization of content
- Week 14: Curriculum elements: Methodology
  - Learning activities in the curriculum
  - Selecting learning activities
  - Organizing learning activities
- Weeks 15–16: Curriculum elements: Evaluation
  - The nature of evaluation
  - Functions of evaluation
  - Types of evaluation
    - Diagnostic evaluation
    - Formative evaluation
    - Summative evaluation
  - Measurement, assessment, and evaluation

Learning outcomes

At the end of this unit, Student Teachers will be able to do the following:

- understand elements of curriculum design
- be able to apply the elements in design of their own curricula
- use a selected model to develop a two–three-week curriculum.

Performance assessment

Student Teachers will use a selected model to frame a two–three-week curriculum unit of a subject area of their choice. The unit will address all four elements of curriculum.

Learning and teaching approaches

Instructors are advised to use these approaches in order to generate free flow of ideas; enhance ability to discuss, ask, and answer questions; develop social skills; and develop the ability to analyse and critique. These strategies will ensure a conceptual development of the unit and enhance Student Teachers' ability to evaluate and justify.

Assessments and assignments

Assignments will be listed on a separate handout. These assignments will contribute to your learning and count towards your final grade. In addition to assignments given in class, Student Teachers will work in groups or individually to create a curriculum unit. Pieces of the unit will be developed throughout Unit 2 as they are discussed in class. The choice of whether to complete a unit in small groups or individually will vary from semester to semester, depending on the Instructor's preference.

Grading policy

A variety of assessments will be used in the course, including midterm and final examinations.

Textbooks and references

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Resources

The following resources may be helpful for choosing appropriate readings. You may include your chosen list of readings on the syllabus or distribute it in class. However, readings should include only those resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

Oliva, F. P. (2009). *Developing the curriculum* (7th ed.). Boston: Pearson.

Parkay, W. F., Anctil, J. E., & Hass, G. (2006). *Curriculum planning: A contemporary approach* (8th ed.). Boston: Pearson.

Print, M. (1993). *Curriculum development and design* (2nd ed.). Crows Nest, Australia: Allen & Unwin.

Saylor, G. J., Alexander, M. W., & Lewis, J. A. (1981). *Curriculum planning for better teaching and learning* (4th ed.). New York: Holt, Rinehart and Winston.

Wiggins, G., & McTighe, J. (2005) *Understanding by design* (2nd ed., expanded). Alexandria, VA: Association for Supervision and Curriculum Development.

Teaching notes for representative syllabus 2

Unit 1: Introduction to curriculum and instruction

Topics

- Concepts and definitions of curriculum, instruction, and teaching
  - The various concepts of curriculum and instruction as conceptualized by theorists
  - Curriculum, instruction, and teaching as defined by theorists
  - The various forms of and approaches to curriculum
  - The relationships among curriculum, instruction, and teaching
- Foundations or bases of curriculum
  - The three bases of curriculum
  - The importance of curriculum and instruction in shaping understanding of the teaching learning process

Essential questions

- How do the three bases of curriculum influence curriculum design?
- Elaborate on the intricate relationships among the three bases of curriculum.
- What are the major differences and similarities between subject-centred curriculum and student-centred curriculum?
- What is the relationship between curriculum and instruction?
- What are the various forms of curriculum and how have they been defined?
- How does curriculum shape the teacher and the teaching-learning process?

Learning objectives

At the end of this unit, Student Teachers will be able to do the following:

- construct their own definitions of curriculum and instruction
- differentiate between instruction and teaching.

Terms to highlight

- Opportunities
- Experiences
- Decision-making
- Traditional curriculum

Activities

- In pairs, Student Teachers will read the definitions and concepts of the terms *curriculum*, *instruction*, and *teaching* from the given handouts. They will draw out the characteristics and then frame their own definitions of *curriculum*, *instruction*, and *teaching* around those characteristics.

- Through jigsaw and interactive lecture activities, Student Teachers will learn about the various types of and approaches to curriculum and will demonstrate their learning by sharing examples of each through a presentation (e.g. with PowerPoint).
- Instructors can create or ask Student Teachers to do a tree diagram (flowchart) that provides a pathway through important points with optional stopovers, tangents, useful illustrations, or examples.

The content

- Curriculum: Its definition and concepts
- Instruction and teaching of definitions and concepts
- Types of curriculum

Content to be covered through lectures or other activities

Introduction

The Instructor may introduce the terms *curriculum* and *instruction* by giving examples from daily life experiences, including planned and unplanned activities that occur in schools. Instructors can give examples of activities that are deliberately planned and designed for specific learning. Planned activities that the students are provided through different learning experiences interact with unplanned activities that the students encounter within the context of a school.

The term *curriculum* was originally defined as a course of study that was followed by pupils attending educational institutions. It comes from the idea of a racetrack, or the 'course', to be followed in a race.

Curriculum has also been defined as a plan. Plans have no impact until they are set in motion; thus, learning activities and learning opportunities remain only opportunities until learners become engaged with those opportunities or activities.

Instruction is defined as the actual engagement of learners with planned learning opportunities. Thus, instruction can be understood as the implementation of the curriculum plan. It is the interaction between a teacher and individuals who intend to learn. Instruction can also be understood as putting plans into operation.

The terms *curriculum* and *instruction* are interlocked—without a curriculum or plan there can be no effective instruction, and without instruction the curriculum has little meaning.

Development

The Instructor can share how the term *curriculum* has been perceived throughout history. The following major points should be shared:

- courses of studies
- intended learning outcomes or set of intentions
- organized knowledge
- instructional plan
- opportunities for engagement of learners

- curriculum as subject and subject matter
- curriculum as all planned opportunities for learning
- curriculum as the total learning experiences learners have in school
- curriculum as objectives.

Provide Student Teachers with handouts containing definitions and concepts of curriculum, instruction, and teaching. The handouts should contain scholarly definitions and concepts. In pairs, ask Student Teachers to read the handouts, draw out characteristics, and frame their own definitions of curriculum, instruction, and teaching.

Characteristics of a curriculum

- A deliberate plan
- Orderly
- Outcome oriented
- Deliberately engaging
- Planned organized opportunities
- Planned organized learning
- Planned organized experiences
- Decision-making

Characteristics of instruction

- Decision-making
- Teaching for understanding
- Engaging and leading in a variety of thought-provoking activities

Student Teachers will be required to separately construct their own definitions of curriculum and instruction by using the characteristics they have drawn out.

Next, the Instructor can explain the various types of curriculum.

Arrange Student Teachers in groups of four for a jigsaw exercise. This will enable them to gain a firm understanding of curriculum that they will then transfer to other groups. For this exercise the Instructor will have to prepare reading material, which might be a paragraph definition of each curriculum type or part of an article explaining the curriculum type.

Types of curriculum

- Overt or explicit curriculum
- Hidden or covert curriculum
- Planned curriculum
- Implemented curriculum
- Core curriculum

Hidden or covert curriculum. The hidden curriculum, understood as socialization of schooling, can be identified by the social interactions within an environment. Thus, it is in process at all times and serves to transmit tacit messages to students about values, attitudes, and principles. A hidden curriculum can be revealed through an evaluation of the environment and the unexpected, unintentional interactions between teachers and students, which reveal critical pedagogy.

When the hidden curriculum of schooling is examined, the focus should be on how pedagogical practices of schooling and the culture of the school inform and socialize students. The demands of upper and middle classes in society are dominant throughout schooling. In particular, the concepts of hegemony and resistance are significant in the evaluation of hidden curriculum. (Hegemony refers to the predominant influence of a social, cultural, ideological, or economic group)

Examples of hegemony include the following:

- When teachers call for volunteers to assist with classroom duties, boys are selected for heavier physical tasks while girls are asked to perform less-demanding tasks. Questions to consider about this scenario include (Print, 1993, p. 10, 11):
    - What message is the teacher passing on to the students?
    - What are the students learning unconsciously?
    - What values and attitudes are being indirectly transmitted to the learner?
- A student council, which assists with running the school, is formed by students who are elected by their peers. When the council meets, representatives elect a leader without teacher or principal interference. The council's advice is accepted and implemented by the principal. Questions to consider about this scenario include (Print, 1993, p. 11):
    - What does this tell us about how students are regarded at this school?
    - How does the principal treat students in this context?
    - What values and attitudes are being indirectly transmitted to the learner?

Core curriculum. The notion of a core curriculum refers to a set of common learnings (knowledge, skill, and values) that should be provided to all learners in order for them to function effectively in society. A curriculum may be organized around the idea of a core as learning that is essential for all students.

A core curriculum is often taught with an inquiry approach through major themes that cut across subject areas. With teacher guidance, students explore what they would like to know and what they need to know about a particular topic. When an integrated thematic approach is used, it is up to the teacher to make sure that as many related subject areas as possible (including skills and values) are covered through inquiry.

Student Teachers will be asked to provide three examples of hidden curriculum, implemented curriculum, and core curriculum their observations (Print, 1993, p. 103).

Characteristics of core curriculum

- A core curriculum is a portion of the curriculum that is required for all students.
- It involves the primary method of learning, which is problem-solving using all applicable subject matters (Oliva 2009, p. 249).

The core curriculum integrates, unifies, or fuses subject matter—for example Urdu and social studies, Sindhi and social studies, or English and social studies. However, a skilled teacher can bring in almost any subject. For example, a social theme might include Urdu, English, the social sciences, and mathematics as students explore how people live and the influences on their lives (from geography to language to economics).

When evaluating a core curriculum, consider the following questions:

- What is included in our core?
- Is this core required by all learners?
- How has the current core curriculum been reflected in the society?
- What can you do to improve the present core curriculum?

Overt, planned, and implemented curricula. Instructors can distribute the remaining types of curriculum among Student Teachers in groups of three and ask them to explore each of these, following the same pattern as previously explained. Each group can then present the material to the class (e.g. a PowerPoint presentation).

Approaches to curriculum

- Subject-centred approach
- Learner-centred approach
- Teacher-centred approach
- Problem-solving approach

The Instructor can use an interactive lecture to explain each of these approaches to curriculum. Involve class members during the lecture by encouraging them to share their opinions and provide examples from their experiences of the three approaches. Participants should be encouraged to both raise questions and answer questions. Later, participants in pairs will demonstrate their learning on each of the approaches through PowerPoint presentations.

Conclusion: Link to future learning

It is important to Student Teachers to understand the entire unit as they develop a clear understanding of curriculum, instruction, and teaching and their application in classroom situations.

Instructors can raise questions to assess the Student Teachers' learning.

Unit 2: Curriculum design

The Instructor will want to determine which model (e.g. backward design, rational planning model) should be the class's primary focus. Student Teachers will probably benefit more from a directive (or rational planning) model than from trying to design a curriculum around an emergent model.

Student Teachers should work in small groups to design a curriculum unit around a subject of their choice suitable for two-three weeks of instruction. As components of curriculum models are studied throughout the semester, groups will be assigned to create a draft of that component for their curriculum based on the chosen model. At the end of the unit, time for revision and completion of the unit should be allowed.

It will be critically important to spend more class time on design work and less time on theoretical explanations of design and design models. Student Teachers will have been exposed to various planning and assessment schemes in other classes, so time should not be spent in re-teaching lesson planning, Bloom's Taxonomy, and the like. Unit 1 should supply appropriate theoretical background so that students have an opportunity to focus on completing and critiquing their own design work in Unit 2.

Instructors might want to include a poster session at the end of the unit in which groups prepare a poster for their curriculum and share it with the class. Additionally, professionals and colleagues, including cooperating school administration and faculty, students in other classes, or university faculty, could be invited to attend the poster presentations.

In some situations, it may be possible for Student Teachers to actually pilot their unit in their practicum placement.

Topics

- various designs and design models
- curriculum elements (intent, content, methods, evaluation)
- components of a curriculum.

Essential questions

- What is the importance of curriculum design in the teaching-learning process?
- What are the sources of aims, goals, and objectives in education?
- What are some of the ways people have conceptualized curriculum design?
- How do curriculum design models differ from one another?
- Are some curriculum design models more suited for the education system in Pakistan than others?
- To what extent does the process of curriculum design and development in Pakistan address the four elements of curriculum?

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4

Integrated teaching notes

During the curriculum development process, contributing faculty were encouraged to keep notes that would be useful to others who may teach this course in the future. These were submitted along with the course syllabi. Teaching notes include ways to introduce the course, ideas for teaching units and sessions, sample lessons plans, and suggestions for reading and resource material. These have been integrated into a single section of this document to create a rich and varied collection of ideas that is easily accessible to others. This section is organized by theme. Except in cases where there is duplication of ideas, faculty are credited with their contribution.

Theme 1: Introducing the course

In addition to the activities suggested in the representative teaching notes accompanying the above syllabi, below are suggestions for introductory sessions. (Note that no option is better than another option. Choose ideas that fit your purpose and context.)

Option 1

Introduction to the course (15–20 minutes)

This course enables Student Teachers to not only gain knowledge of curriculum development, but to expand their knowledge and understanding of the broader national context in which curriculum is developed. Student Teachers engage in ongoing reflection on the practical implications of the philosophical, psychological, and social contexts, and explore the role of different organizations at school and higher education levels. An overview of what to expect from the course includes active learning and why we are using active methods.

A variety of instructional strategies will be employed to meet the needs of adult learners. Special emphasis will be given to active learning in the form of case studies, role play, and group work in order to ground theory in real-life problems of practice. Professional knowledge is, in large measure, a social construction in which active minds willingly and openly share their understanding for mutual benefit. Active participation in class discussions and activities is of paramount importance to learning in this course.

Brainstorming: Conceptions of curriculum and related terms and elements (10 minutes)

Start by asking one or more of the following questions and have participants write down the first ideas that come to mind:

- What were your experiences in school or college regarding curriculum?
- What differences have you observed here (teacher education institution) about curriculum?
- During previous courses, you may have encountered the following terms such as *curriculum*, *learning experiences*, and *objectives*. (Note: Instructor may add terms.) Can you define these terms?
- Can you describe anything you learned that was not intended or planned?
- What are the elements of curriculum?
- What is the relationship among the elements of curriculum?

Pair-share (5–10 minutes)

Have Student Teachers talk to the person next to them about how they answered the questions.

Whole-group discussion (20 minutes)

Take as many ideas from class members as time permits. (Consider writing these on chart paper, so that they can be reviewed later in the term.) Note ideas that are repeated or on which there is consensus.

Point out that during the semester the class will encounter different answers to these same questions.

Review of syllabus (10 minutes)

Hand out copies of the syllabus. Give the class an opportunity to look it over, and then highlight the various sections.

Point out that the approach to teaching and learning that will be used in the course may be very different than the Student Teachers' previous educational experiences. Some of them may find it uncomfortable at first. Encourage them to give it time and try to enter into activities and do their best.

Option 2

Contributed by Dr Saeed Khan

Introduction (15 minutes)

Have Student Teachers work in groups of three of four to brainstorm about what they expect from a course on curriculum development. Ask them to record their ideas on chart paper and post them around the room for all to see.

At the end of about 10 minutes, ask people to look at what others have listed. Save the charts for use at the end of the term.

Curriculum experiences (20 minutes)

Ask Student Teachers to work individually to respond to the following questions you have written on chart paper or the board:

- What is the earliest experience you can recall in school in which you were learning about a subject or a skill (e.g. class 1 arithmetic when the teacher drilled you on addition facts)? Describe the experience..
- What do you think the teacher intended to teach?
- What materials do you remember?
- What happened?

Allow about 10 minutes for writing. Have class members share their experiences in small groups of three or four. Take a few minutes at the end to elicit ideas from the whole class.

Group share (15 minutes)

Ask groups what their experiences had in common. Have as many groups share as time permits.

Ask them how they think these experiences relate to a course on curriculum development. (There are no right or wrong answers.) Accept as many speculations as time permits.

Hand out a list of common misconceptions of curriculum for the class to review later. Ask them to think about whether they share any of the misconceptions. Point out that misconceptions will be addressed as the semester progresses.

Looking at the syllabus (10–15 minutes)

Hand out the syllabus. Give students an opportunity to look at it before going over it with the class. Answer questions.

Option 3

Introduction (20 minutes)

Introduce the course by having Student Teachers look at a list of five-eight definitions of curriculum taken from the literature (see subsequent themes; choose definitions representative of different perspectives). Ask each participant to identify the definitions they like best and explain their choice. Go over each definition and have Student Teachers who chose it tell why it appeals to them. Point out that the course will deal with different perspectives on curriculum.

Examine curriculum documents (20 minutes)

Have a variety of curriculum documents on hand such as primary school textbooks, commercial teachers' guides for primary school subjects, social studies or science units written for teachers, or HEC Scheme of Studies. Have Student Teachers work in groups of three or four to examine a few textbooks and documents. Ask them what these documents have that can assist teachers in teaching.

Whole-class discussion (10 minutes)

Ask the class to talk about the curricula they have seen in schools. Point out that there are a variety of curriculum materials in schools ranging from textbooks to teacher guides and teacher-made materials.

Exploring the syllabus (10 minutes)

Use the remainder of the time to explore the syllabus and answer questions.

Theme 2: Definitions of curriculum

Activity: Understanding curriculum and related terms

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

The purpose of this activity is to review curriculum terms, concepts, and definitions.

Pair-share brainstorm

Prepare a handout for Student Teachers to read and discuss in a pair-share. The handout should include the following terms:

- subject
- course
- syllabus
- content
- instruction
- instructional strategies
- learning outcomes
- instructional plan.

Ask Student Teachers to tick the terms with which they are familiar and put a star next to the ones that they do not know.

Whole-class discussion

Give Student Teachers a few minutes to write their personal definition of curriculum.

Once they have finished writing, read several definitions from the handout 'Curriculum definitions', which can be found in the Resources section.

Ask Student Teachers which definitions they think are best. They should explain the reason for this answer.

After, ask how they would modify their own definitions of curriculum. Invite volunteers to share how their definitions have changed.

Resources

Consideration for curriculum development (a lecture on curriculum developing and planning)

➢ http://www.youtube.com/watch?v=SQbdbSbu95E&feature=related

This is a self-directed module on 'Curriculum theory, design, and assessment'.

➢ www.col.org/stamp/module13.pdf

Activity: What is curriculum?

Choose three or four definitions from the list below to make a handout. Have Student Teachers read the definitions and select the one they like the best or think is most representative of their own ideas. Ask them to meet in groups of three or four to compare their choices. Each Student Teacher should take a few minutes to explain the reasons for their choice.

Bring the whole class together and elicit a few comments by asking why people have different views and what difference a definition makes. If you have a favourite definition as the Instructor, share it and explain your rationale.

Follow with a mini-lecture on what the definitions have in common and how they differ. Point out that definitions represent different ideas about the nature of knowledge, how people learn, the role of the teacher, and the role of students.

Representative definitions of curriculum in the literature

The following definitions are drawn from scholarly work on curriculum over time. They represent a range of philosophies. Consideration of the whole range of definitions is more suitable for graduate students than for undergraduates, so giving the entire list as a handout is not recommended. They are included for your convenience. However, you might want to choose four or five definitions to prepare a handout for classroom use.

The curriculum is the means through which 'the finest treasures of civilization can be so mediated as to become a common inheritance of persons who are seeking to realize their essential humanness'. Phenix P. H. (1964). *Realms of meaning*. New York: McGraw-Hill.

'A curriculum of a classroom, school district, state (or nation) is a series of planned events intended for students to learn particular knowledge, skills, and values and organized to be carried out by administrators and teachers'. Cuban, L. (1992). Curriculum stability and change. In P. Jackson, *Handbook of research on curriculum*, New York: Macmillan.

'A sequence of potential experiences is set up in the school for the purpose of disciplining children and youth in group ways of thinking and acting. This set of experiences is referred to as the *curriculum*'. Smith, B. O., Stanley, W. O. & Shores, J. H. (1950). *Fundamentals of curriculum development*. New York: Harcourt, Brace & World.

Various studies, or the curriculum, will 'embody the cumulative outcome of the efforts, the striving, and the successes of the human race generation after generation'. Dewey, J. (1902). *The child and the curriculum*. Chicago: University of Chicago Press.

A changing and dynamic process that can 'be seen as both process and product, comprising all learning and other experiences that the school or education system plans for its learners. As education influences and reflects the values of society it is necessary to recognize a broad set of common values and purposes that underpin curriculum'. Nanzhou, Z. (n.d.). Four 'pillars of learning' for the reorientation and

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'All the experiences children have under the guidance of teachers...' Caswell, H.L. & Campbell, D.S. (1935). *Curriculum Development*. New York: American Book.

'All of the learning of students which is planned by and directed by the school to attain its educational goals'. Tyler, R. W. (1957). The Curriculum—Then and now. *Proceedings of 1956 Invitational Conference on Testing Problems*. Princeton, NJ: Educational Testing Service.

'An account of teachers' and students' lives over time...' Clandinin, D.J. & Connelly, F.M. Teacher as curriculum maker. In P. Jackson, (1992). *Handbook of research on curriculum*, NY: Macmillan.

'A document designed to be used as a point of departure for instructional planning...' Beauchamp, G.A. (1972). Basic components of a curriculum theory. *Curriculum Theory. Network* 10, 16–22.

Curriculum can be defined as 'the principles, underlying educational philosophy, goals, content and concrete functioning of the instructional program' in a classroom. Farah, S. & Ridge, N. (2009). Challenges to curriculum development in the UAE. Policy Brief 16. Dubai: Dubai School of Government.

'A sequence of content units arranged in such a way that the learning of each unit may be accomplished as a single act, provided the capabilities described by specified prior units (in the sequence) have already been mastered by the learner'. Gagné, R.M. (1967). Curriculum research and the promotion of learning. In R. Tyler, R. Gagné & M. Scriven (1991). *Perspectives of curriculum evaluation*. Chicago: Rand McNally.

Schoonmaker, F. (2012). Prepared for a Seminar on Curriculum Development in Lahore, USAID Teacher Education Program.

Theme 3: Curriculum aims, goals, and objectives and outcomes

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Aims

A useful way to think about educational aims is to consider them as statement of societal expectations and desires.

- Aims are broadly phrased statements of educational intent.
- Aims state what is to be hopefully achieved by the curriculum.
- Aims are general because they are at the general level of education and expectations of society.
- Aims are long term and developed at the system level.

Adapted from

➢ http://prr.hec.gov.pk/Chapters/776S-2.pdf

Goals

- Goals are more specific, derived from aims, usually phrased in non-technical language, and directed towards student achievement by emphasizing content and skill.
- Goals are also considered as the ways institutions and organizations within society facilitate the achievement of educational aims.
- Goals are medium to long term. They imply and state preferences, values, and judgements about the directions in which educational activities might go.

Adapted from

➢ http://prr.hec.gov.pk/Chapters/776S-2.pdf

Objectives

- Objectives are invariably devised by teachers, or groups of teachers, within the school or groups of educators within an institution.
- Objectives are short in nature; they may cover a lesson, a day, a week, a term, or a semester.
- Objectives can be used to plan the learning opportunities for students and to devise a means of assessing the context through which students have achieved the objectives.

Adapted from

➢ http://prr.hec.gov.pk/Chapters/776S-2.pdf

Different kinds of objectives

Schoonmaker, F. (2005). Personal notes. Used by permission. For classroom use only.

It is important for prospective teachers to understand that there are many ways of thinking about and writing objectives. The contrast between goals and behavioural objectives in the box below suggests a typical way of looking at statements to be used in writing behavioural objectives. But writing objectives in behavioural terms is only one way of going about writing objectives. For those who support behavioural statements of student outcomes, there is disagreement as to how specific verbs need to be. For example, some people disallow any verbs that do not suggest a concrete, measurable performance. Others believe that there are many behaviours that may not lend themselves to paper-and-pencil measurement and are too important to exclude on grounds that they cannot be written with specific action verbs. While it is useful to help Student Teachers understand that what students are learning is the object of our efforts in writing objectives, it is a disservice for them to leave the program thinking that there is one best way to write objectives.

The following material gives a quick overview of a range of objectives. It may be useful in preparing mini-lecture notes, handouts, or other instructional activities. Handing it to prospective teachers in its entirety might be suitable as a reading, but it does not include sufficient detail to be more than an overview of the topic.

Goals/aims	Behavioural objectives
• Broad statements of hopes or wishes for students • General in nature, representing intentions • Abstract, leaving room for interpretation • Emergent as well as predictable outcomes • Outcomes may be stated first, but there is room for outcomes to emerge as the result of experience • Not always measurable by standardised procedures, often represented by interpretation and synthesis of attitudes, values, knowledge, and skill	• Specific • Precise, stated in terms of measurable student outcome • Concrete • Predictable outcomes • Outcomes drive the process and are often stated first, before planning occurs • Easily measured by standardised procedures

A curriculum may have goals that are implemented through behavioural objectives, but there are other models of using goals and translating them into objectives, including holistic objectives, problem-solving objectives, and expressive objectives.

Holistic objectives

Holistic objectives are not concerned with precision of statement, but are focused on addressing the student's mental, physical, and emotional capacities.

An example: Students will treasure prehistoric cave paintings, appreciate efforts to preserve them, and be able to explain their importance to historians.

The advocate of behavioural objectives might dismiss this objective as too "ethereal" and un-measurable. An astute teacher who knows her students can tell if they treasure something, if they appreciate it, and if they can explain it. Subjective knowing is fully as demanding as objective knowing, but requires more intimate knowledge of the student and the material being learned. The teacher must be attuned to nuisances, noticing how students follow up on an activity and whether they integrate it into their lives. For example, if the above example of cave paintings were a holistic objective for kindergarten students (it might be appropriate for any age), the teacher would watch to see if cave-painting style shows up in spontaneous drawings and play. That teacher would also listen for conversation and questions, asking probing questions. The teacher of older children might watch for how interests are piqued by the study. Indicators such as choice of books, writing topics, and questions provide clues to what children are appreciating and treasuring. More targeted activities might be given to older children, requiring them to make choices that illustrate their commitments. "The government is considering a road that will connect remote parts of the country with important goods and services available in cities. The most direct, cost-effective route will be through mountains where prehistoric cave drawings are to be found. What information would you want the government to have in order to make a good decision?"

Problem-solving objectives

Problem-solving objectives are exemplified by the above problem-solving activity. Problem-solving objectives require students to creatively deal with issues and dilemmas. They integrate knowledge and skill across subject areas and may require days, weeks, or the length of a unit to complete. The statement of the objective is in the statement of the problem. For example, in the statement above, designed to assess student understanding and appreciation, a defensible solution to the problem is the objective.

Assessment may be subjective, or it may be concrete in the case of uncomplicated problems. Teachers often involve students in determining criteria for the solution of the problem: "How will we know if we have chosen the best solution from the alternatives? What criteria should we look for?"

Expressive objectives

Expressive objectives are seen as more artistic in form and are compatible with an emergent curriculum model. The teacher creates a situation that allows students to explore and determine outcomes that are of interest to them (and that the teacher has in mind based on larger school–government goals for education). The objective is to engage students in planning outcomes based on their interests and needs.

For example, if a social studies curriculum for the fifth grade has students studying island cultures, the teacher might plan well in advance to read to his class the chapter book *Call it Courage* by Armstrong Sperry. The book is about a Polynesian boy who is afraid of the sea. As the book unfolds (perhaps at a special read-aloud time when the teacher reads a chapter to the class), many questions may arise. The teacher notes these questions on chart paper and as the book comes to an end, points out that many cultures have developed on islands. Maftu, the main character in the book, is part of an island culture. The teacher might then ask, "What are some of the things we'd like to know about island cultures?" These are added to the list.

Later, the teacher posts the lists in the classroom and asks the class, "How could we organize ourselves to answer these questions?" The process of organizing leads children to arrive at some objectives. Some of these objectives will be problem-solving. Others may have to do with specific behaviours, such as being able to identify a number of island cultures.

Assessment of expressive objectives will take multiple forms and requires that teachers be good observers of students. Both formal tests and informal data can be used throughout the unit.

Goals, objectives, and outcomes

The following illustration is from the University of Connecticut, USA website and may be found at

- www.assessment.uconn.edu/primer/goals1.html.

It is designed for university faculty, but the explanation of differences between goals, objectives, and outcomes is clear. You can substitute 'University Mission' at the top of the pyramid with 'Provincial Education Mission' and 'School/College Mission' with School Mission' to adapt it for classroom use. It might be placed on a chart or handout or used in a presentation (e.g. PowerPoint or overhead transparency).

Assessment Primer: Goals, Objectives, and Outcomes

Outcomes Pyramid

The assessment literature is full of terminology such as 'mission', 'goals', 'objectives', 'outcomes', etc., but lacking in a consensus on a precise meaning of each of these terms. Part of the difficulty stems from changes in approaches to education—shifts from *objective*-based, to *competency*-based, to *outcomes*-based, etc. education have taken place over the years with various champions of each espousing the benefits of using a different point of view. The *Outcomes Pyramid* shown below presents a pictorial clarification of the *hierarchical* relationships among several different kinds of goals, objectives, and outcomes that appear in assessment literature.

The 'pyramid' image is chosen to convey the fact that increasing complexity and level of specificity are encountered as one moves downward. The pyramid structure also reinforces the notion that learning flows from the mission of the institution down to the units of instruction.

Used by permission. For classroom use only.

University of Connecticut. Assessment Primer: Goals, Objectives and Outcomes. Retrieved from

- http://assessment.uconn.edu/primer/goals1.html

The University of Connecticut website, above, has articles on assessment, learning taxonomies, and the like. It is a service provided to faculty to help them with course design and may be useful in your own work.

The pyramid represents one approach to thinking about goals and objectives. You might want to ask Student Teachers if they can figure which curriculum definition is most compatible with this scheme. (It is clearly a top-down perspective that sees purposes as driven by the organization.) What kind of organizational chart or pyramid would Student Teachers create to show teacher–student-generated outcomes based on the interests of children, school curriculum, and provincial/government curricular goals? (This curriculum, an enacted model, begins with student interests and the materials at hand. To illustrate this kind of process, Student Teachers might create an inverted pyramid or they could show a diagram indicating both 'bottom-up' and 'top-down' goals and outcomes.)

Theme 4: Taxonomies of educational objectives

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

The classification of objectives (Bloom's Taxonomy)

Bloom and colleagues set out to develop a way of evaluating curriculum outcomes. They developed a classification scheme that soon became the criteria for writing educational objectives: Bloom's Taxonomy. They developed objectives in three domains: cognitive, affective, and psychomotor.

Cognitive	Affective	Psychomotor
1. Knowledge	1. Receiving	1. Imitation
2. Comprehension	2. Responding	2. Manipulation
3. Application	3. Valuing	3. Precision
4. Analysis	4. Organization	4. Articulation
5. Evaluation	5. Characterization	5. Naturalization
6. Synthesis		

Cognitive domain

Educational objectives that are cognitive in nature are often categorized as lower mental (1–3) and higher mental (4–6) functions (Bloom et al, 1956). These have to do with what we traditionally think of as 'thinking'.

Affective domain

Many educators do not concern themselves with anything other than cognitive objectives because it is difficult to evaluate affective behaviour such as attitudes, values, and interests (see Krathwohl et al, 1964).

Psychomotor domain

A classification scheme of psychomotor skills was developed by Dave (1969). The scheme is based on the concept of coordination between psychic and muscular actions and between different muscular actions performed by various parts of the body.

From Slides of concept-nature-and-purposes-of-curriculum

- http://www.slideshare.net/lourise/concept-nature-and-purposes-of-curriculum/download

References (cited in the Slides of Concept-Nature-and-Purposes-of-Curriculum)

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Dave, R. H. (1969). *Taxonomy of educational objectives and achievement testing*. London: University of London Press.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1973). *Taxonomy of educational objectives, the classification of educational goals. Handbook II: Affective domain*. New York: David McKay.

The Feisel-Schmitz technical taxonomy of learning outcomes

The following taxonomy appears on the Massachusetts Institute of Technology (USA) website, and offers an additional way of thinking about educational objectives. Taxonomies of educational objectives were originally designed to help assess the results of curriculum and teaching. They may also be helpful in planning and act as a screen in determining if the curriculum draws on a range of knowledge, skills, and affective dispositions.

Judge: To be able to critically evaluate multiple solutions and select an optimum solution

Solve: Characterize, analyze, and synthesize to model a system (provide appropriate assumptions)

Explain: Be able to state the outcome or concept in their own words

Compute: Follow rules and procedures (substitute quantities correctly into equations and arrive at a correct result; Plug & Chug)

Define: State the definition of the concept or is able to describe in a qualitative or quantitative manner

For classroom use only. Made available by: Sonderholm, D. (2005). Instructional Designer, MIT Department of Aeronautics & Astronautics.

Retrieved from

- http://web.mit.edu/tll/teachingmaterials/learning-objectives/taxonomies.html

This will take you to the MIT website. Select 'Intended Learning Outcomes' from the menu and type 'Feisel-Schmitz technical taxonomy of learning outcomes' in the search box. It will provide two examples, Bloom's and Feisel-Schmitz.

Theme 5: Curriculum design

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

What is curriculum design?

Curriculum design refers to the process of planning and creating a curriculum document or set of experiences for teaching something to someone.

It involves thinking about the following questions:

- What is to be taught? (the content question)
- To whom is it to be taught? (the audience question)
- Why do they need to know this? (the rationale)
- Why do they need to know it? (the assessment question)
- Who says that they need to know it? (the authority question)

Once the answers to these questions have been established, design is a process of deciding on goals, ways of meeting the goals (activities and experiences and their sequence), and assessments.

Concept of curriculum design

Regardless of the model used, curriculum design will include a rationale (or argument for the value of the curriculum), goals, objectives or purposes, the audience for whom it is intended, a timeline, chosen subject matter, ideas or plans for teaching, suggestions for instructional materials to be used, assessments, and suggested resources. Some curriculum design models are highly prescriptive and insist that curriculum begins with a statement of outcomes that become the driving force for choosing objectives, specific subject content, strategies, and the like. Other curriculum design models are more emergent. That is, they assume the curriculum designer will have a general purpose in mind, but will leave room for objectives, subject content, strategies, and assessments to emerge in the process of teacher–student planning.

Examples of design schemes

In 'Curriculum Theory: Meaning, Development and Use', Beauchamp says the following should be included in curriculum design:

- content to be taught
- a statement of goals and objectives
- ways in which the objectives will be attained
- adequacy of the curriculum.

From Beauchamp, G. A. (1986). Curriculum theory: Meaning, development and use. *Theory Into Practice*, 21, 23–27.

In *Curriculum development: Theory and practice*, Taba notes that curriculum design is a statement that identifies the elements of curriculum. A design needs to be supported with and to make explicit a curriculum theory that establishes the sources to consider and the principles to apply.

Taba identifies essential elements of design as both theoretical and practical:

- objectives
- content
- learning experience
- teaching strategies
- evaluation.

From Taba H. (1962). *Curriculum development: Theory and practice*. New York: Harcourt, Brace, Jovanovich.

Theme 6: Curriculum design models and steps

Lecture: Models (40 minutes)

Make a PowerPoint presentation based on the information below or use this content to plan other activities.

Prepared by Schoonmaker, F. (2012). Seminar on Curriculum Development. Lahore, USAID Teacher Education Program.

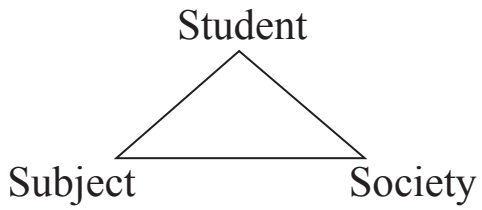
Slide 1

Three models of development

- The Tyler Model for rational curriculum planning
- Backward Design (based on Tyler)
- Enacted Curriculum, a responsive model for enacted curriculum planning (curriculum jointly planned and experienced by teacher and student)

Slide 2

Tyler rationale (one of the most widely used models)



Slide 3

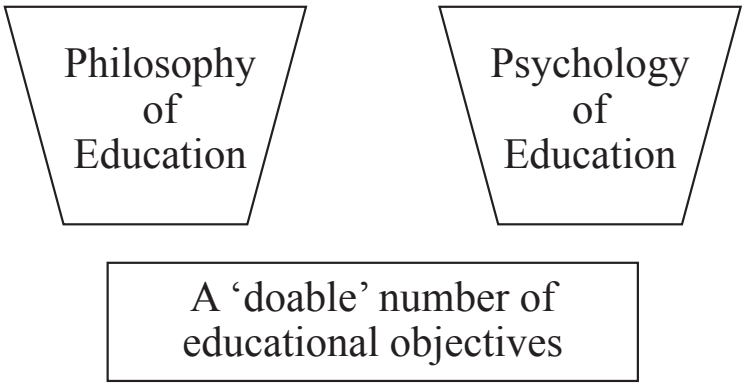
Tyler's four key questions

- What educational purposes should the schools seek to attain?
- What educational experiences can be provided that are likely to attain these purposes?
- How can these educational experiences be effectively organized?
- How can we determine whether these purposes are being attained?

Slide 4

What educational purposes should the schools seek to attain?

The two screens



Slide 5

What educational experiences can be provided that are likely to attain these purposes?

Selection of learning experiences likely to meet these objectives

Slide 6

Organization

- How can these educational experiences be effectively organized?
- Scope and sequence

Slide 7

Assessment and evaluation

- How can we determine whether these purposes are being attained?
- Behavioural objectives

Slide 8

Backward Design

- Identify the results desired (goals)
- Determine acceptable levels of evidence to support achievement of the desired results (assessment)
- Design activities that will make desired results happen (learning plan)

Slide 9

Goals

- The established goals (usually national or local standards to meet)
- The essential questions to consider
- The enduring understandings that students should have (Students will understand...)
- Content knowledge acquired (Students will know...)
- Skills acquired (Students will be able to...)

Slide 10

Assessment

- Determine acceptable evidence
  - How will you know that they got it?
  - How will you assess that they got it?
  - What counts as understanding in your class?

Slide 11

Learning plan for Backward Design

What activities will you use to make sure that they got there?

Slide 12

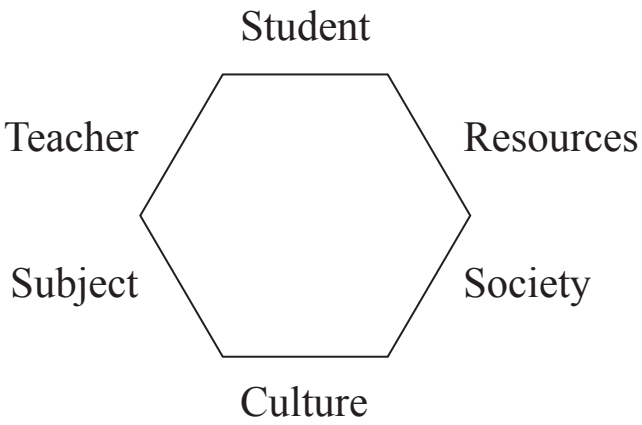
Another set of questions (beyond Tyler and Backward Design Models)

- What do students need to know?
- How do we know they need to know?
- Who says so?
- How do we know when they have learned what they need to know?

The student needs to be a part of the answer to these questions.

Slide 13

An Enacted Model considers…



Slide 14

Design can start anywhere

- Student interest: The teacher notices and builds on student interest.
- Teacher interest: The teacher invites students to learn about something that interests them, helping them to broaden their interests.
- Where to begin is answered by looking at what the teacher has to work with.

Slide 15

Design can start anywhere

- Resource: The teacher studies what is available and creates curriculum around materials at hand (including natural and 'junk' materials).
- Society: The teacher is aware of community needs, interests, and capacities and builds on them to create a curriculum with the students.
- Subject: The teacher is always aware of the subject to be taught and how to bring students into relationship with ideas and concepts of a subject.
- Culture: The teacher considers dominant and minority cultural values and resources, bringing them in as sources of curriculum and using them to critique and enrich the curriculum.

Slide 16

The Enacted Model

The teacher uses:

- formal curriculum documents as a resource in responding to student and teacher interests
- available resources
- community (society) resources, talents, and skills

Slide 17

In an Enacted Model

- Teachers' work is shaped in response to their perception of context.
- Learning objectives, teaching, and assessment may look like those in rational planning models
- The process of arriving at learning objectives involves teacher and student.

Curriculum models activity (45 minutes)

Chart paper, markers, and artefacts (described below) will be required for this activity.

Divide the class into groups of four or five. Most Student Teachers will imagine that design starts with subject and subject matter objectives. To broaden their perspective, give each group an artefact (e.g. a cricket bat, bottle of water, natural objects such as a pile of small stones or leaves from several different trees) and ask them to create a map or graphic suggesting a curriculum that could be built around the artefact. They may choose any subject (e.g. mathematics, social studies, literacy, science) or an interdisciplinary curriculum. You might be more specifically focused on student or society. For example, as student artefacts, you could give one group any of the following: a one-page case description of a class, a list of student names with a description of their interests, or a set of pictures of children or youth engaged in activities. For society artefacts, you could use clippings from a newspaper describing local or national events.

Allow the groups about 30 minutes to discuss their plan and create the graphic. Either have them post their map/graphic for a gallery walk or take turns sharing them. Make the point that design can start anywhere. It can move from an activity to a specific purpose or be driven by specific objectives. The teacher's role is to thoroughly know subject matter, understand how curriculum planning occurs, and be able to make experiences educationally fruitful.

This activity was conducted with participants in the USAID Teacher Education Project seminar on curriculum development held in Lahore, January 2012.

Curriculum models critical debate activity

Submitted by Dr Shaheen Pasham

People have very different ideas about models of development. To help Student Teachers understand differences in models and the commitments they represent, have them choose one model to defend. It may be stated as a debate motion; for example, backward design should be adopted for development of school curriculum in Pakistan. Propose the motion to the class. By a show of hands ask Student Teachers to volunteer to work on a team that is preparing arguments to support the motion or a team that is preparing arguments to oppose the motion.

Before the debate, announce that all those who have prepared to work on the team to draft arguments to support the motion will now comprise the team to draft arguments to oppose the motion. Similarly, all those who have prepared to work on the team to draft arguments to oppose the motion will now comprise the team to draft arguments to support the motion.

Conduct the debate. Each team chooses one person to present their arguments. After initial presentations, the teams reconvene to draft rebuttal arguments and choose one person to present these. The Instructor debriefs the debate and discusses with students their experience of this exercise.

Three models of curriculum development

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Eisner (1979)

Eisner talks about five basic orientations to curriculum:

- **development of cognitive processes**, a view that curriculum should help children learn how to learn and provide opportunities for them to use and strengthen their intellectual abilities and skills (p. 51)
- **academic rationalism**, focusing on subjects most worthy of study (p. 54)
- **personal relevance**, in which the programmes of the school should emerge from interactions between teachers and students (p. 57)
- **social adaptation and social reconstruction**, emphasizing the needs of society and the role of the schools in serving society's interests, whether in helping students adjust to or challenge social arrangements (p. 62)
- **curriculum as technology** is a means-ends model in which the curriculum task is to 'operationalize' objectives of a curriculum (p. 67).

Macdonald (1975)

Macdonald offers another view that looks at curriculum from the perspective of human interests. Drawing on the philosopher Jurgen Habermas, Macdonald identifies three approaches to curriculum design that are an outgrowth of the categories of Habermas's basic cognitive human interest: control, consensus, and emancipation. In a control-oriented curriculum the design task is to have maximum control over student outcomes. In a consensus approach, the task is for those who will be using the curriculum to be involved in design. An emancipatory curriculum is designed by those who will use it with a teacher serving as one who helps clarify through critical questioning. In this sense, curriculum design can be seen as 'a form of "utopianism", a form of political and social theorizing' (Macdonald, 1975, p. 293).

Tyler (1949, 1969)

Tyler does not concern himself with how people view curriculum, but argues that any curriculum and plan of instruction can be developed in a systematic way that accounts for differences in perspective by answering four fundamental questions:

- What educational purposes should the schools seek to attain?
- What educational experiences can be provided that are likely to attain these purposes?
- How can these educational experiences be effectively organized?
- How can we determine whether these purposes are being attained? (p. 1)

Answering the questions become steps in designing curriculum. To Tyler these steps are not linear. It was Hilda Taba who took Tyler's work and built on it, making design a linear process.

Curriculum development as problem solving

The following model presents a series of steps in which curriculum development is seen as a problem-solving or research activity.

Feyereisen and colleagues suggest the following steps in curriculum design in institutional settings:

1) Identify the problem (that a new curriculum is supposed to solve).
2) Diagnose of the problem (the nature and causes of the problem).
3) Search for alternative solutions (find practical alternatives that can be implemented).
4) Select the best solutions (critically examine alternatives and choose the best).
5) Ratify the solution (organization agrees to support the solution).
6) Authorize the solution (it becomes institutional policy).
7) Use the solution on a trial basis.
8) Prepare to adopt the solution (find out what implementation requires).
9) Adopt the solution (official action by the institution or organization).
10) Direct and guide the staff (training, professional development).
11) Evaluate of the effectiveness of the solution.

From Feyereisen, K. V., Fiorino, A. J. & Nowak, A .T. (1970). *Supervision and curriculum renewal: A systems approach*. New York: Appleton-Century-Crofts.

Curriculum models analysed in terms of student outcomes

Drawing on the Macdonald's description, the following table is designed to help curriculum thinkers compare curriculum models in terms of control. Those who favour minimum control over student outcomes would quickly point out that linear control models merely provide the illusion of control, as it is impossible to determine whether students have really integrated learning into their lives beyond the time required to repeat it for a test. Those who favour more control-oriented approaches would suggest that you don't get anywhere if you don't know where you are going. The difference is how much input students have in the planning and execution of curriculum. What they choose to learn and remember will be up to them, regardless of the model used.

The table below might be used as a student handout to guide class discussion.

Comparing curriculum models by desired control over student outcomes		
Maximum control over student outcomes...to Minimum control over student outcomes		
Linear/Control Models	Consensus Models	Dialogical/Freedom Models
Identification of purposes for curriculum by experts.	Teacher–student discussion to identify needs, interests, and concerns of students.	Teacher–'community' (or student) dialogue to name concerns and issues.
Specification of objectives by experts.	Creating conditions for cooperative group work.	Teacher critically questions students to help them decide on purposes.
Design of learning experiences by experts.	Teacher–student dialogue to establish scope and direction of learning activities.	Critical questioning and dialogue to choose activities and experiences.
Pre-testing by teacher to establish skill levels.	Cooperative engagement in learning activities.	Student engagement in learning activities with teacher observation and support as requested.
Implementation of learning experiences and activities by Teacher.		
Formative and summative evaluation based on objectives.	On-going teacher–student observation and reporting on what has been learned.	Critical dialogue with teacher and community about what is being learned.
Evaluation and re-specification of objectives based on outcomes.	Authentic assessment, evaluation.	Authentic assessment, evaluation as agreed with students.
The Essential Task of the Teacher		
Instruct students to perform precisely delineated learning responses or outcomes as specified in the curriculum.	Guide students in developing knowledge, values, and skills identified by the school or government as well as those identified by students.	Facilitate and support students in achieving their goals through critical dialogue within the 'community'.

Schoonmaker, F. (n.d.). Based on Macdonald, J. B. (1971). Curriculum and human interests. In W. Pinar (Ed.), *Curriculum theorizing: The reconceptualists*. Berkley: McCutchan.

What studies of implementation tell us about curriculum models

Fidelity models

These are curriculum models created to be implemented exactly as they have been designed. The assumption is that the role of the teacher is to thoroughly understand and install the curriculum, being true to it in every detail. Success or failure of the curriculum is often seen as related to the degree to which teachers actually implemented it.

Mutual adaptation models

These curriculum models are designed with the idea that teachers will bring something to the design. That is, they will thoroughly understand and adapt the curriculum to their particular context and students. Success or failure of the curriculum is related to multiple factors rather than to adherence to the design.

Enactment models

Enactment is more of a process than a model. It refers to teachers and students co-constructing classroom events and knowledge. The teacher's role is to thoroughly understand the subject, child development, and pedagogy in order to make educational experiences fruitful. Both formal and informal curriculum materials are used in creating curriculum.

For discussion of implementation studies, see: Snyder, J., Bolin, F. S & Zumwalt, K. K. (1992). Curriculum implementation, In P. Jackson, *Handbook of research on curriculum*, (pp. 402–435). New York: Macmillan.

Suggested reading

The Tyler Rationale

Tyler, R. (1949). *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.

Kliebard, H. M. (1970). The Tyler Rationale. *The School Review*, 78, 259–272. Retrieved from

- www.jstor.org/stable/1084240 (This is a critique of the Tyler rationale.)

Hlebowitsh, P. S. (1995). Interpretations of the Tyler Rationale: A Reply to Kliebard. *Journal of Curriculum Studies*, 27, 89–94. Retrieved from

- www.tandfonline.com/doi/abs/10.1080/0022027950270108

Backward Design

Wiggins, G. & McTighe J. (2001). What is Backward Design? In G. Wiggins & J. McTighe (Eds.), *Understanding by design*. Upper Saddle River, NJ: Merrill Prentice Hall. Retrieved from

- http://www.flec.ednet.ns.ca/staff/What%20is%20Backward%20Design%20etc.pdf

Enacted Curriculum Model

Snyder, J., Bolin, F. S & Zumwalt, K. K. (1992). Curriculum implementation, In P. Jackson (Ed.), *Handbook of research on curriculum*, (pp. 402–435). New York: Macmillan.

Core curriculum

Sudermann, D. P. (1992). Toward a definition of core curriculum. Retrieved from

- http://www.eric.ed.gov/PDFS/ED351951.pdf

This paper addresses the issue of defining the concept of core curriculum by first examining some of the literature on the subject, discussing why there is resistance to defining 'core', citing common uses for the term 'core curriculum', and exploring the historical roots of core curriculum. Next, the paper describes eight characteristics of core curriculum in general education. These characteristics provide that: (1) student needs and learning experience take precedence over subject matter; (2) courses form a coherent whole, integrated either through disciplines, themes, content, skills, ways of knowing, modes of teaching and learning, or a combination of these; (3) core courses emphasize discussion and group problem-solving; (4) learning is not restricted to the classroom; (5) core courses offer the study of many types of original materials, not only great books; (6) core course emphasize practice over subject matter in the disciplinary arts as they are applied to original sources; (7) core programs weave common elements together for common reflection and discussion; and (8) almost without exception, core curriculum involves a special program of faculty development. The paper concludes that a short simple definition of core curriculum is largely unobtainable, since the features that distinguish core curriculum show a complicated network of similarities characterized by many overlapping qualities. Contains 25 references and a list of works cited. (GLR)

Theme 7: Curriculum development in Pakistan: Suggested readings

Curriculum process and development in secondary school

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Akhtar, M. (2004). *Analysis of curriculum process and development of a model for secondary level in Pakistan*. University of Arid Agriculture, Rawalpindi. PhD Thesis. Available at

➢ http://eprints.hec.gov.pk/580/1/292.html.htm

Chapter 2, entitled 'Literature Review', describes the important aspects of curriculum and curriculum planning, the forces influencing curriculum planning, characteristics of a good curriculum, and historical perspectives on curriculum development in Pakistan. It discusses how curriculum has remained a part of the teacher education programme in Pakistan. The roles of national commissions, several national policies, the textbook boards, and the Cambridge University Syndicate are highlighted. The centralized administrative structure in Pakistan has had a deep impact on curriculum design, development, and change.

The chapter also highlights the importance of teacher involvement in the process of curriculum development, along with other professional educators and subject specialists. It argues that students, parents, and other stakeholders should also take

part at the planning stage of curriculum development. The chapter concludes that the role of head teachers and teachers in curriculum development should be re-examined in Pakistan. There should be both top-down and bottom-up approaches in curriculum development in which the specialists and the classroom teachers share their practical experiences and the challenges of curriculum development.

A timeline of curriculum development in Pakistan

Proceedings of the Pakistan Educational Conference 1947

The conference emphasized that the education system of Pakistan should be inspired by Islamic ideology, especially universal brotherhood, tolerance, and justice.

Report of Commission on National Educational 1959

The commission focused on secondary education and stressed that it should be realized as a complete stage in itself.

Report of Curriculum Commission for Secondary Education 1960

The report considered the educational problems from a national perspective and emphasised curriculum development at the secondary level of education.

Report on the Progress of Education in Pakistan 1964–65

Secondary education had two distinguishing features by the mid-1960s: a new orientation towards science and a large number of optional vocational and technical subjects. The report also put new emphasis on Islamic studies.

Commission on Students' Problems and Welfare 1966

The commission insisted that education must be treated as a factor in economic growth.

New Education Policy 1970

This policy emphasized the need for a pronounced scientific, technical, and vocational base at the secondary level of education.

The Education Policy 1972–80

The National Curriculum Bureau was strengthened to update the curriculum for primary, secondary, and tertiary levels of education; to review them constantly; and to modernize them.

National Educational Policy and Implementation Program 1979

This policy emphasized the quantitative improvement of education.

The National Education Policy 1992–2002

This policy envisaged a new cycle of curriculum development and delivery, with a special emphasis on enquiry, creativity, and progressive thinking through a project-based approach.

The National Education Policy 1998–2010

This policy emphasized the importance of secondary education not only as a mid-level work force for the nation's economy, but also as a feeder for the higher levels of education.

Summary and conclusions

Education reforms have been part of the national agenda since the birth of Pakistan in 1947. The 1960s and 1970s were considered to be decades of innovation and experimentation in education, in both Pakistan and other developing countries. However, most of the objectives remained on paper and did not transfer into practice. None of the above-mentioned policies proved to be completely successful in achieving its targets. The initiatives needed both top-down and bottom-up approaches.

Curriculum concepts

Submitted by: Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, Bushra Salahuddin

Akhtar, M. (2004). *Analysis of curriculum process and development of a model for secondary Level in Pakistan*. University of Arid Agriculture, Rawalpindi. PhD Thesis. Available at

- http://eprints.hec.gov.pk/580/1/292.html.htm

Chapter 2, entitled 'Literature Review' looks at the forces influencing curriculum planning, characteristics of a good curriculum, and historical perspectives on curriculum development in Pakistan. It discusses how curriculum has remained a part of the teacher education programme in Pakistan, as it increases perspective teachers' knowledge about the development, nature, content, process, and issues of curriculum development and elaborates on curriculum models. The chapter also provides a short history of the process of curriculum development and change in Pakistan, highlighting the role of national commissions, several national policies, the textbook boards and the Cambridge University Syndicate. The centralized administrative structure in Pakistan has had a deep impact on curriculum design, development, and change in Pakistan.

The chapter also highlights the importance of teacher involvement in curriculum development, along with professional educators and subject specialists. Students, parents, and other stakeholders should also take part at the planning stage of curriculum development. The chapter concludes that the role of head teachers and other teachers in curriculum development should be re-examined in Pakistan. Both a top-down and bottom-up approach should be applied to curriculum development, in which the specialists and the classroom teachers share their practical experiences and the challenges of curriculum development.

Curriculum design and development in Pakistan

Submitted by: Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

UNESCO (1998). *Pakistan: Curriculum design and development*. Retrieved from

- http://www.ibe.unesco.org/curriculum/Asia%20Networkpdf/ndreppk.pdf

The article discusses how and why education has remained both a provincial and federal responsibility in Pakistan. It elaborates on the history of curriculum development in Pakistan since its birth in 1947, curriculum reforms, the development of objectives, the scheme of studies, the development of syllabi, textbook

development, review, and approval, and teachers' training procedures. It also discusses a number of obstacles in the process of curriculum development, including lack of expertise, the poor quality of textbooks, and implementation and follow-up issues. However, it does not critically evaluate the effectiveness of several reforms nor does it provide any conclusive remarks on its description of reforms.

Curriculum change

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Cheng, Y. C. (1994). Change in school: An organizational perspective. *National Journal of Education Management*, 8, 26–34.

The article discusses effective approaches to curriculum, such as the simplistic curriculum change approach, the teacher competence development curriculum change approach, and the dynamic curriculum change approach.

Curriculum reforms in Pakistan

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Jamil, B. R. (2009) *Curriculum reforms in Pakistan—A glass half full or half empty?* Paper presented at the Seminar on School Curriculum Policies and Practices in South Asian Countries. Dehli: NCERT. Retrieved from

➢ http://itacec.org/document/nep09/NCERT%20Pakistan%20paper%20BRJ.pdf

The paper consists of four parts:

- Part I: Curriculum Reforms: Institutional Process and Scope of the Reforms
- Part II: The Wider Context of Education Reforms
- Part III: Curriculum Wing's Adjectival Education Initiatives
- Part IV: The Challenges of Implementing the National Curriculum and Curriculum Reforms.

The article points out the words *curriculum* and *syllabus* are on the concurrent list of the Constitution of Pakistan. The federal Ministry of Education has remained responsible for the supervision of curriculum, textbooks, and other learning materials since 1976. Jamil believes that the process of curriculum development remained sporadic until the 2000s, when it began to receive special attention. The paper elaborates the three concurrent initiatives of the Ministry of Education in 2005. It also traces the curriculum reforms, scope, and implementation challenges of the National Curriculum 2006–7. The National Curriculum 2006–7 focused on standards and competencies, how learning objectives correspond to student learning outcomes, life skills, vertical and horizontal connections, and creative and analytical writing skills. However, the hallmark of the National Curriculum was the detailed guidelines for textbook writers and teachers, curriculum delivery, and assessment and evaluation. The paper concludes

that several challenges and threats remain in curriculum development in Pakistan. However, the citizens have a right to and should demand a creative and innovative curriculum, compatible with the requirements of the modern age.

Implementing curriculum change

Submitted by: Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

EdQual (June 2007) Midterm review implementing curriculum change project literature reviews: Pakistan, South Africa and Rwanda. Available from

- r4d.dfid.gov.uk/PDF/Outputs/ImpQuality_RPC/icclitreview.pdf and
- www.edqual.org/publication/workingpaper/edqual.wp6.pdf

The 116-page report provides a comprehensive literature review on the process of curriculum change, gender equity in curriculum, and poverty alleviation through curriculum change in Pakistan, South Africa, and Rwanda, with special reference to the teaching of mathematics and science. It is useful reading material for teachers who seek to understand the history of curriculum change throughout Pakistan, various issues in curriculum change, and how to introduce meaningful curriculum change at the primary and secondary levels. It consists of three sections: Section 1, Executive summary of the literature review; Section 2, Mathematics and Science Education in Pakistan: A Review; and Section 3, Implementation of Curriculum Change to Fight Poverty and Promote Gender Equity: Mathematics and Science Education in South Africa.

Mathematics and Science Education in Pakistan: A Review

Context and background

This section covers topics on policy contexts and curriculum development as well mathematics and science text and examinations, mathematics and science education in Pakistan, and the profile of mathematics and science teachers in Pakistan.

It argues that curriculum change should focus on the quality of education and include a change in instructional approaches, an introduction to problem-solving, and the development of higher cognitive skills among the learners. Textbooks have remained the sole materials for teaching and for student reading. Examinations are based on the content of the textbooks and promote knowledge, recall, and reproduction. Teacher profiles show a shortage of mathematics and science teachers at all levels of schooling in all provinces of Pakistan.

Review of development and change projects in Pakistan

This section includes a short description of the following projects, mainly focused on curriculum change in Pakistan:

- Sindh Primary Education Development Programme
- Girls Primary Education Development Project GPEDP 2005-Phase II, Sindh Component
- Teachers' Training and Material Development Cell (TIMDC)

- Primary Education Programme–Improvement of Learning Environment (PEP-ILE)
- Middle School Project (1994–2004)
- Science Education Project (SEP) 1986–1994
- Teachers' Training Project (TTP 2001)
- Aga Khan Educational Services, Pakistan
- Aga Khan University Institute for Educational Development Programme in Teacher Education; Education Sector Reforms Assistance (ESRA).

Review of science and maths education in Pakistan

A comprehensive literature review of science and mathematics education in Pakistan based on 82 books, research papers, reports, and government documents included the following:

- topics on curriculum development and implementation, including political empowerment and social change through science education and the nature of science as part of the curriculum
- improving teaching and learning in mathematics and science by promoting discussion and student social interaction, discrepant events and alternate conceptions in science, and strategies for cognitive acceleration and conceptual change
- student achievement in mathematics and science, particularly as it is affected by gendered perceptions of mathematics and science as well as gender bias in textbooks)
- language of instruction in mathematics and science.

Theme 8: Curriculum change

Activity: Tracking changes in curriculum

Have Student Teachers interview older members of their family and community to find out what they remember about school (either as students or as observers). They should ask questions about what was taught and how it was taught.

They should then compare the interviewee's response with their own school experiences and with the curriculum currently taught.

If any Student Teachers have old primary school textbooks at home or if there are books available in local libraries or schools, compare these with the newest editions and consider the following questions.

- What do interviews and older textbooks tell us about how the curriculum of schools changes over time?
- How do class members explain change?
- What do they think brings about change?

Notes for faculty

Curriculum change implementation

The following is an excerpt from 'What Drives Curriculum Change?' by Gruba and colleagues (p. 2). The full article is available from

➢ http://crpit.com/confpapers/CRPITV30Gruba2.pdf.

Ewell (1997) suggests that most curriculum changes are implemented piecemeal and, in fact, "without a deep understanding about what collegiate learning really means and the specific circumstances and strategies that are likely to promote it." Ideally, according to Lachiver & Tardif (2002), curriculum change is managed in a logical five-step process:

1) an analysis of the current offerings and context
2) the expression of key program aims in a mission statement
3) a prioritization of resources and development strategies
4) the implementation of the targeted curricula change
5) the establishment of monitoring tools and processes.

Our perception is that the messy realities associated with change are somewhat different from this ideal.

Three major influences on curriculum change

The following is an excerpt from 'Principles of Effective Change: Curriculum Revision That Works' by J. A. Johnson (2001). The full article is available from

➢ http://www2.education.uiowa.edu/archives/jrel/fall01/Johnson_0101.htm.

First, the society and culture served by an educational community dictate the needs, obligations, and responsibilities expected of the educational program. Second, society perpetuates itself with educational programming, i.e. the content and methodology of instruction referenced as educational curriculum. Third, systemic change, as in the form of transitioning educational curriculum, is often difficult at best and controversial at worst. These three elements combine to offer a strong foundation from which educators can begin to address what is taught at all levels, the needs of a respondent society, and the changing roles of classroom practitioners.

The challenge of implementation

Researchers who study curriculum change often refer to failed change efforts as a failure in curriculum implementation. This summary, drawn from a review of literature on curriculum implementation, identifies key factors in implementation.

Fidelity models

These models expect implementation to the highest degree. Implementation of fidelity models is affected by:

- teachers' lack of clarity about the innovation
- teachers' lack of skills and knowledge needed to conform to the new role/model

- the unavailability of required instructional materials
- the incompatibility of organizational arrangements with the innovation
- the staff's lack of motivation.

Mutual adaptation models

These models assume there will be adaptation by users that may, in turn, affect the design of the model. Mutual adaptation is affected by the following:

- The process of planned change is a complex process.
- Conflicts between individual and institutional goals/ideals will occur; open-mindedness and freedom to experiment are not sufficient to bring about change.
- Invention demands an inordinate amount of time.
- Life and death of an innovation depend on the unique configuration of social, historical, political, and ideological factors of a particular school context.

Enactment models

These models are created by the teacher and students where the curriculum is based on the needs and interests of students and use a variety of formal curriculum documents and other materials. Implementation of enactment models is affected by the following:

- outside influences that differ depending upon their proposed function (supportive or limiting)
- experimental curricula that are only implemented within a unique context, which and cannot be duplicated without removing their experimental essence.

See Snyder, Bolin, and Zumwalt (1992). Curriculum Implementation. In P. Jackson (Ed.), *Handbook of research on curriculum*. New York: Macmillan.

Theme 9: Curriculum and evaluation

Activity: What is curriculum evaluation?

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Brainstorming (5 minutes)

Write the word *evaluation* on the board and have the class think of as many related words as possible.

Then have Student Teachers work in small groups of four or five to develop a concept map.

Group discussion (15 minutes)

Have each small group work with another group to compare concept maps.

Concept maps may include words such as judge, appraise, assess, calculate, check, check out, class, classify, criticize, decide, estimate, figure out, gauge, grade, look over, rank, rate, size, size up, measure, value, and weigh.

Bring the class back together and point out the root word of evaluation: *value*. Then ask the following questions and invite responses:

- How do we place value on a curriculum?
- How do we know what does or does not work?

Definitions of curriculum evaluation

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

The following definitions from curriculum literature show slightly different views about evaluation.

'Curriculum evaluation is an attempt to throw light on two questions: Do planned learning opportunities, programs, courses, and activities as developed and organized actually produce desired results? How can the curriculum offerings best be improved?' McNeil, J. D. (1990). *Curriculum: a comprehensive introduction*. Los Angeles: Harper Collins.

Curriculum evaluation is 'a process or cluster of processes that people perform in order to gather data that will enable them to decide whether to accept, change, or eliminate something—the curriculum in general or an educational textbook in particular'. Ornstein, A. C., & Hunkins, F. P. (1988). *Curriculum: Foundations, principles, and issues*. Upper Saddle River, NJ: Prentice Hall.

Evaluation is the process of examining a programme or process to determine what is working, what is not, and why. Evaluation determines the value of programmes and acts as a blueprint for judgment and improvement. Rossett, A., & Sheldon, K. (2001). *Beyond the podium: Delivering training and performance to a digital world*. San Francisco: Jossey-Bass.

Curriculum evaluation is 'the formal determination of the quality, effectiveness, or value of a program, product, project, process, objective of curriculum'. Worthen, B. R. & Sanders, J. R. (1987). *Educational evaluation: Alternative approaches and practical guide-lines*. New York: Longman.

Gay (1985) argues that the aim of curriculum evaluation is to identify its weaknesses and strengths as well as problems encountered in implementation; to improve the curriculum development process; and to determine the effectiveness of the curriculum and the returns on the finances allocated. Gay, L. R. (1985). *Educational evaluation and measurement: competencies for analysis and application*. Princeton, NC: C. E. Merrill.

Curriculum evaluation is a way of providing information for decision-making. Results of evaluation may be used to decide whether to maintain the curriculum as it is, to modify it, or to eliminate the curriculum. Oliva, P. F. (2009). *Developing the curriculum* (7th ed.). Boston: Allyn & Bacon.

Notes for faculty

Formative evaluation (internal evaluation)

This is a method of judging the worth of a programme while the programme's activities are forming (in progress). This part of the evaluation focuses on the process.

The role formative evaluation plays in society is basically to permit curriculum developers, learners, and instructors to monitor how well instructional goals and objectives are being met. Its main purpose is to catch deficiencies so that appropriate interventions are in place at every level of the process. For instance, at the planning stage, formative evaluations of curriculum design and syllabi help developers take important decisions before the documents are used for developing instructional materials.

Summative evaluation (external evaluation)

This is a method of judging the worth of a programme at the end of the programme's activities (summation). The focus is on the outcome. That is, at every stage of curriculum development, there must be a summative evaluation to judge the worth of the outcome of that stage. For example, in the piloting stage, the process is evaluated at the end of the cycle to decide whether the curriculum met the set standards. All assessments can be summative (i.e. have the potential to serve a summative function), but only some have the additional capability of serving formative functions (Scriven 1967).

Scriven (1967) suggests that formative evaluation is intended to foster development and improvement within an ongoing activity (or person, product, programme, etc.). Summative evaluation, in contrast, is used to assess whether the results of the object being evaluated (programme, intervention, person, etc.) met stated goals. Saettler concludes that formative evaluation is used to refine goals and evolve strategies for achieving goals, while summative evaluation is undertaken to test the validity of a theory or to determine the impact of an educational practice so that future efforts may be improved or modified.

Both formative and summative evaluation activities help provide feedback to curriculum developers to help them take collective decisions for perceived deficiencies and refine the curriculum.

Additional resources

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Theme 10: Future trends in curriculum

Technology in the classroom

Packard, N. & Race, P. (2000). *2000 tips for teachers*. London: Kogan Page Limited.

Although the major content of the book is very much based on some of the particular developments in the education system of England and Wales, nonetheless it provides a general guideline on how to make best use of modern technologies in the classrooms. Part 3, entitled 'Information Technology' (pp. 173–243), provides practical suggestions to help teachers use computers to get connected to and make the best use of the information and communication revolution. It provides details of hardware and software programs, managing IT in classrooms or computer laboratories, effective use of support materials, planning appropriate activities, and last but not least, integrating IT with the school curriculum.

Computers in the classroom

Sharp, V. K. (2002). *Computer education for teachers: Integrating technologies into classroom teaching*. Boston: McGraw-Hill.

The 557-page book may be used as a guide for computer use in the classroom. It provides a detailed history of computers and how computers have emerged as an important tool in society and in education since the 1990s. It provides detailed descriptions of the basics of computers, hardware and software programs for classrooms, word processing, desktop publishing, spreadsheets, use of the Internet, integrating the World Wide Web into the classrooms, and use of computers in major curriculum areas.

5

Curriculum resources and materials

Suggested faculty reading

Submitted by Aliya Jawed, Aroona Hashmi, Asima Indrees Raja, and Bushra Salahuddin

Mohammad, R. F. & Roshni, K. (2007). Effective use of textbooks: A neglected aspect of education in Pakistan. *Journal of Education for International Development*, 3, 1–12.

The research study highlights various issues related to the limited use of textbooks, especially in rural schools in Pakistan. It also offers some suggestions to improve the quality of textbooks with a view that teachers, teacher educators, textbook writers, and policymakers will review and reflect on their role in bringing reforms to the existing curricula.

The study found that there was a lack of clarity of language in the textbooks. Moreover, the science equipment suggested in the textbooks was not available in rural schools, and teachers did not fully appreciate many of the potential benefits offered by the textbooks, including the richness of the content, detailed and colourful illustrations, or explanations of important concepts imbedded in the text. One of the reason for this non-acknowledgement of textbooks as a useful instructional material was the teachers' training, which emphasized the poor quality of the textbooks. Furthermore, they were told that books should not be the only resource used as instructional materials in the classrooms.

Books are written on basis of some basic assumptions about teachers and learners. However, these assumptions are not workable in all situations. The study suggests that the textbooks should be reviewed for their language clarity, adequate information, and any misprinting errors. Books should be accompanied by teachers' guides, specifying the teaching-learning philosophy, the learning outcomes, methods of assessment, and a link between teaching and assessment methods. Guides should also include information on how to begin, conduct, and end each lesson. Textbooks should also contain suggestions for adapting activities and resources relevant to the text.

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6

Articles

In this section you will find selected readings that may be useful in preparing for sessions or for student readings. Intellectual property rights are respected throughout. All materials are either free-use or are used with permission of the author/publisher. In some cases, original pieces written specifically for this course are included. All readings and materials in this section are for classroom use and, unless otherwise noted, may be duplicated for distribution to Student Teachers. The materials in this document may not be used in other publications without securing permission for their use.

Student reading

Curriculum theory and practice

M.K. Smith

The organization of schooling and further education has long been associated with the idea of a curriculum. But what actually is curriculum, and how might it be conceptualized? We explore curriculum theory and practice and its relation to informal education.

The idea of curriculum is hardly new — but the way we understand and theorize it has altered over the years — and there remains considerable dispute as to meaning. It has its origins in the running/chariot tracks of Greece. It was, literally, a course. In Latin curriculum was a racing chariot; *currere* was to run. A useful starting point for us here might be the definition offered by John Kerr and taken up by Vic Kelly in his standard work on the subject. Kerr defines curriculum as, 'All the learning which is planned and guided by the school, whether it is carried on in groups or individually, inside or outside the school. (quoted in Kelly 1983: 10; see also, Kelly 1999). This gives us some basis to move on — and for the moment all we need to do is highlight two of the key features:

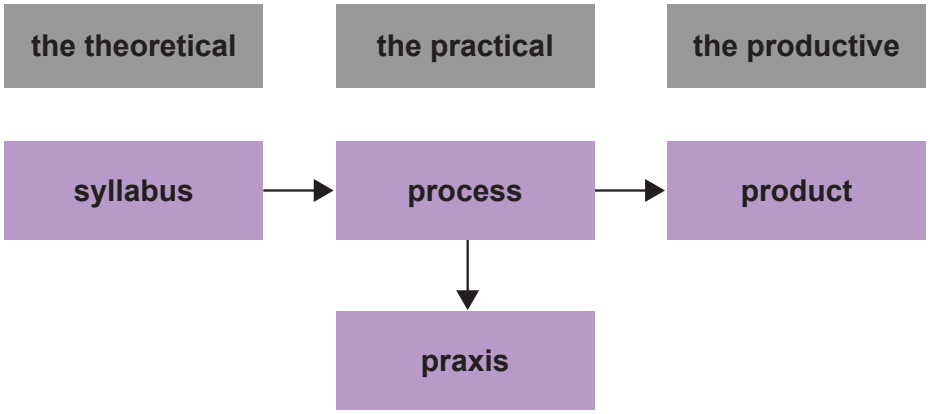
Learning is planned and guided. We have to specify in advance what we are seeking to achieve and how we are to go about it.

The definition refers to schooling. We should recognize that our current appreciation of curriculum theory and practice emerged in the school and in relation to other schooling ideas such as subject and lesson.

In what follows we are going to look at four ways of approaching curriculum theory and practice:

1) Curriculum as a body of knowledge to be **transmitted**.
2) Curriculum as an attempt to achieve certain ends in students — **product**.
3) Curriculum as **process**.
4) Curriculum as **praxis**.

It is helpful to consider these ways of approaching curriculum theory and practice in the light of Aristotle's influential categorization of knowledge into three disciplines: the theoretical, the productive and the practical.



Here we can see some clear links — the body of knowledge to be transmitted in the first is that classically valued as 'the canon'; the process and praxis models come close to practical deliberation; and the technical concerns of the outcome or product model mirror elements of Aristotle's characterization of the productive. More this will be revealed as we examine the theory underpinning individual models.

Curriculum as a syllabus to be transmitted

Many people still equate a curriculum with a syllabus. Syllabus, naturally, originates from the Greek (although there was some confusion in its usage due to early misprints). Basically it means a concise statement or table of the heads of a discourse, the contents of a treatise, the subjects of a series of lectures. In the form that many of us will have been familiar with it is connected with courses leading to examinations — teachers talk of the syllabus associated with, say, the Cambridge Board French GSCE exam. What we can see in such documents is a series of headings with some additional notes which set out the areas that may be examined.

A syllabus will not generally indicate the relative importance of its topics or the order in which they are to be studied. In some cases as Curzon (1985) points out, those who compile a syllabus tend to follow the traditional textbook approach of an 'order of contents', or a pattern prescribed by a 'logical' approach to the subject, or — consciously or unconsciously — a the shape of a university course in which they may have participated. Thus, an approach to curriculum theory and practice which focuses on syllabus is only really concerned with content. Curriculum is a body of knowledge-content and/or subjects. Education in this sense, is the process by which these are transmitted or 'delivered' to students by the most effective methods that can be devised (Blenkin et al 1992: 23).

Where people still equate curriculum with a syllabus they are likely to limit their planning to a consideration of the content or the body of knowledge that they wish to transmit. 'It is also because this view of curriculum has been adopted that many teachers in primary schools', Kelly (1985: 7) claims, 'have regarded issues of curriculum as of no concern to them, since they have not regarded their task as being to transmit bodies of knowledge in this manner'.

Curriculum as product

The dominant modes of describing and managing education are today couched in the productive form. Education is most often seen as a technical exercise. Objectives are set, a plan drawn up, then applied, and the outcomes (products) measured. It is a way of thinking about education that has grown in influence in the United Kingdom since the late 1970s with the rise of vocationalism and the concern with competencies. Thus, in the late 1980s and the 1990s many of the debates about the National Curriculum for schools did not so much concern how the curriculum was thought about as to what its objectives and content might be.

It is the work of two American writers Franklin Bobbitt (1918; 1928) and Ralph W. Tyler (1949) that dominate theory and practice within this tradition. In *The Curriculum* Bobbitt writes as follows:

The central theory [of curriculum] is simple. Human life, however varied, consists in the performance of specific activities. Education that prepares for life is one that prepares definitely and adequately for these specific activities. However numerous and diverse they may be for any social class they can be discovered. This requires only that one go out into the world of affairs and discover the particulars of which their affairs consist. These will show the abilities, attitudes, habits, appreciations and forms of knowledge that men need. These will be the objectives of the curriculum. They will be numerous, definite and particularized. The curriculum will then be that series of experiences which children and youth must have by way of obtaining those objectives. (1918: 42)

This way of thinking about curriculum theory and practice was heavily influenced by the development of management thinking and practice. The rise of 'scientific management' is often associated with the name of its main advocate F. W. Taylor. Basically what he proposed was greater division of labour with jobs being simplified; an extension of managerial control over all elements of the workplace; and cost accounting based on systematic time-and-motion study. All three elements were involved in this conception of curriculum theory and practice. For example, one of the attractions of this approach to curriculum theory was that it involved detailed attention to what people needed to know in order to work, live their lives and so on. A familiar, and more restricted, example of this approach can be found in many training programmes, where particular tasks or jobs have been analyzed — broken down into their component elements — and lists of competencies drawn up. In other words, the curriculum was not to be the result of 'armchair speculation' but the product of systematic study. Bobbitt's work and theory met with mixed responses. One telling criticism that was made, and can continue to be made, of such approaches is that there is no social vision or programme to guide the process of curriculum construction. As it stands it is a technical exercise. However, it wasn't criticisms such as this which initially limited the impact of such curriculum theory in the late 1920s and 1930s. Rather, the growing influence of 'progressive', child-centred approaches shifted the ground to more romantic notions of education. Bobbitt's long lists of objectives and his emphasis on order and structure hardly sat comfortably with such forms.

The Progressive movement lost much of its momentum in the late 1940s in the United States and from that period the work of Ralph W. Tyler, in particular, has made a

lasting impression on curriculum theory and practice. He shared Bobbitt's emphasis on rationality and relative simplicity. His theory was based on four fundamental questions:

1) What educational purposes should the school seek to attain?
2) What educational experiences can be provided that are likely to attain these purposes?
3) How can these educational experiences be effectively organized?
4) How can we determine whether these purposes are being attained? (Tyler 1949: 1)

Like Bobbitt he also placed an emphasis on the formulation of behavioural objectives. Since the real purpose of education is not to have the instructor perform certain activities but to bring about significant changes in the students' pattern of behaviour, it becomes important to recognize that any statements of objectives of the school should be a statement of changes to take place in the students. (Tyler 1949: 44)

We can see how these concerns translate into a nicely-ordered procedure: one that is very similar to the technical or productive thinking set out below.

Step 1: Diagnosis of need
Step 2: Formulation of objectives
Step 3: Selection of content
Step 4: Organization of content
Step 5: Selection of learning experiences
Step 6: Organization of learning experiences
Step 7: Determination of what to evaluate and of the ways and means of doing it.
(Taba 1962)

The attraction of this way of approaching curriculum theory and practice is that it is systematic and has considerable organizing power. Central to the approach is the formulation of behavioural objectives — providing a clear notion of outcome so that content and method may be organized and the results evaluated.

There are a number of issues with this approach to curriculum theory and practice. The first is that the plan or programme assumes great importance. For example, we might look at a more recent definition of curriculum as: 'A programme of activities (by teachers and pupils) designed so that pupils will attain so far as possible certain educational and other schooling ends or objectives (Grundy 1987: 11). The problem here is that such programmes inevitably exist prior to and outside the learning experiences. This takes much away from learners. They can end up with little or no voice. They are told what they must learn and how they will do it. The success or failure of both the programme and the individual learners is judged on the basis of whether pre-specified changes occur in the behaviour and person of the learner (the meeting of behavioural objectives). If the plan is tightly adhered to, there can only be limited opportunity for educators to make use of the interactions that occur. It also can deskill educators in another way. For example, a number of curriculum programmes, particularly in the USA, have attempted to make the student experience 'teacher proof'. The logic of this approach is for the curriculum to be designed outside of the classroom or school, as is the case with the National Curriculum in the UK. Educators then apply programmes and are judged by the products of their actions. It turns educators into technicians.

Second, there are questions around the nature of objectives. This model is hot on measurability. It implies that behaviour can be objectively, mechanistically measured. There are obvious dangers here — there always has to be some uncertainty about what is being measured. We only have to reflect on questions of success in our work. It is often very difficult to judge what the impact of particular experiences has been. Sometimes it is years after the event that we come to appreciate something of what has happened. For example, most informal educators who have been around a few years will have had the experience of an ex-participant telling them in great detail about how some forgotten event (forgotten to the worker that is) brought about some fundamental change. Yet there is something more.

In order to measure, things have to be broken down into smaller and smaller units. The result, as many of you will have experienced, can be long lists of often trivial skills or competencies. This can lead to a focus in this approach to curriculum theory and practice on the parts rather than the whole; on the trivial, rather than the significant. It can lead to an approach to education and assessment which resembles a shopping list. When all the items are ticked, the person has passed the course or has learnt something. The role of overall judgment is somehow sidelined.

Third, there is a real problem when we come to examine what educators actually do in the classroom, for example. Much of the research concerning teacher thinking and classroom interaction, and curriculum innovation has pointed to the lack of impact on actual pedagogic practice of objectives (see Stenhouse 1974; and Cornbleth 1990, for example). One way of viewing this is that teachers simply get it wrong — they ought to work with objectives. I think we need to take this problem very seriously and not dismiss it in this way. The difficulties that educators experience with objectives in the classroom may point to something inherently wrong with the approach — that it is not grounded in the study of educational exchanges. It is a model of curriculum theory and practice largely imported from technological and industrial settings.

Fourth, there is the problem of unanticipated results. The focus on pre-specified goals may lead both educators and learners to overlook learning that is occurring as a result of their interactions, but which is not listed as an objective.

The apparent simplicity and rationality of this approach to curriculum theory and practice, and the way in which it mimics industrial management have been powerful factors in its success. A further appeal has been the ability of academics to use the model to attack teachers:

I believe there is a tendency, recurrent enough to suggest that it may be endemic in the approach, for academics in education to use the objectives model as a stick with which to beat teachers. 'What are your objectives?' is more often asked in a tone of challenge than one of interested and helpful inquiry. The demand for objectives is a demand for justification rather than a description of ends... It is not about curriculum design, but rather an expression of irritation in the problems of accountability in education. (Stenhouse 1974: 77)

So what are the other alternatives?

Curriculum as process

We have seen that the curriculum as product model is heavily dependent on the setting of behavioural objectives. The curriculum, essentially, is a set of documents for implementation. Another way of looking at curriculum theory and practice is via process. In this sense curriculum is not a physical thing, but rather the interaction of teachers, students and knowledge. In other words, curriculum is what actually happens in the classroom and what people do to prepare and evaluate. What we have in this model is a number of elements in constant interaction. It is an active process and links with the practical form of reasoning set out by Aristotle.

Curriculum as process

Teachers enter particular schooling and situations with an ability to think critically, -in-action an understanding of their role and the expectations others have of them, and a proposal for action which sets out essential principles and features of the educational encounter. Guided by these, they encourage conversations between, and with, people in the situation out of which may come thinking and action. They continually evaluate the process and what they can see of outcomes.

Perhaps the two major things that set this apart from the model for informal education are first, the context in which the process occurs ('particular schooling situations'); and second, the fact that teachers enter the classroom or any other formal educational setting with a more fully worked-through idea of what is about to happen. Here I have described that as entering the situation with 'a proposal for action which sets out essential principles and features of the educational encounter'.

This form of words echoes those of Lawrence Stenhouse (1975) who produced one of the best-known explorations of a process model of curriculum theory and practice. He defined curriculum tentatively: 'A curriculum is an attempt to communicate the essential principles and features of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice'. He suggests that a curriculum is rather like a recipe in cookery.

It can be criticized on nutritional or gastronomic grounds — does it nourish the students and does it taste good? — and it can be criticized on the grounds of practicality — we can't get hold of six dozen larks' tongues and the grocer can't find any ground unicorn horn! A curriculum, like the recipe for a dish, is first imagined as a possibility, then the subject of experiment. The recipe offered publicly is in a sense a report on the experiment. Similarly, a curriculum should be grounded in practice. It is an attempt to describe the work observed in classrooms that it is adequately communicated to teachers and others. Finally, within limits, a recipe can varied according to taste. So can a curriculum. (Stenhouse 1975: 4-5)

Stenhouse shifted the ground a little bit here. He was not saying that curriculum is the process, but rather the means by which the experience of attempting to put an educational proposal into practice is made available. The reason why he did this, I suspect, is that otherwise there is a danger of widening the meaning of the term so much that it embraces almost everything and hence means very little. For example, in a discussion of the so-called 'youth work curriculum' (Newman & Ingram 1989), the

following definition was taken as a starting point: 'those processes which enhance or, if they go wrong, inhibit a person's learning'. This was then developed and a curriculum became: 'an organic process by which learning is offered, accepted and internalized' (Newman & Ingram 1989: 1). The problem with this sort of definition, as Robin Barrow (1984) points out, is that what this does is to widen the meaning of the term to such an extent that it just about becomes interchangeable with 'education' itself. More specifically, if curriculum is process then the word curriculum is redundant because process would do very nicely! The simple equation of curriculum with process is a very slap-happy basis on which to proceed.

We also need to reflect on why curriculum theory and practice came into use by educators (as against policy-makers). It was essentially as a way of helping them to think about their work before, during and after interventions; as a means of enabling educators to make judgments about the direction their work was taking. This is what Stenhouse was picking up on.

Stenhouse on curriculum

As a minimum, a curriculum should provide a basis for planning a course, studying it empirically and considering the grounds of its justification. It should offer:

A. In planning:

1) Principle for the selection of content — what is to be learned and taught
2) Principles for the development of a teaching strategy — how it is to be learned and taught.
3) Principles for the making of decisions about sequence.
4) Principles on which to diagnose the strengths and weaknesses of individual students and differentiate the general principles 1, 2 and 3 above, to meet individual cases.

B. In empirical study:

1) Principles on which to study and evaluate the progress of students.
2) Principles on which to study and evaluate the progress of teachers.
3) Guidance as to the feasibility of implementing the curriculum in varying school contexts, pupil contexts, environments and peer-group situations.
4) Information about the variability of effects in differing contexts and on different pupils and an understanding of the causes of the variation.

C. In relation to justification:
A formulation of the intention or aim of the curriculum which is accessible to critical scrutiny.

Stenhouse 1975: 5

There are a number of contrasts in this model of curriculum theory and practice as compared with the product model. First, where the product model appeals to the workshop for a model, this process model looks to the world of experimentation.

The idea is that of an educational science in which each classroom is a laboratory, each teacher a member of the scientific community... The crucial point is that the proposal is not to be regarded as an unqualified recommendation but rather as a provisional specification claiming no more than to be worth putting to the test of practice, Such proposals claim to be intelligent rather than correct. (Stenhouse 1975: 142)

Thus, in this sense, a curriculum is a particular form of specification about the practice of teaching. It is not a package of materials or a syllabus of ground to be covered. 'It is a way of translating any educational idea into a hypothesis testable in practice. It invites critical testing rather than acceptance' (Stenhouse 1975: 142).

Second, and associated with the above, given the uniqueness of each classroom setting, it means that any proposal, even at school level, needs to be tested, and verified by each teacher in his/her classroom (*ibid*: 143). It is not like a curriculum package which is designed to be delivered almost anywhere.

Third, outcomes are no longer the central and defining feature. Rather than tightly specifying behavioural objectives and methods in advance, what happens in this model of curriculum theory and practice is that content and means develop as teachers and students work together.

Fourth, the learners in this model are not objects to be acted upon. They have a clear voice in the way that the sessions evolve. The focus is on interactions. This can mean that attention shifts from teaching to learning. The product model, by having a pre-specified plan or programme, tends to direct attention to teaching. For example, how can this information be got over? A process approach to curriculum theory and practice, it is argued by writers like Grundy (1987), tends towards making the process of learning the central concern of the teacher. This is because this way of thinking emphasizes interpretation and meaning-making. As we have seen each classroom and each exchange is different and has to be made sense of.

However, when we come to think about this way of approaching curriculum in practice, a number of possible problems do arise. The first is a problem for those who want some greater degree of uniformity in what is taught. This approach to the theory of curriculum, because it places meaning-making and thinking at its core and treats learners as subjects rather than objects, can lead to very different means being employed in classrooms and a high degree of variety in content. As Stenhouse comments, the process model is essentially a critical model, not a marking model.

It can never be directed towards an examination as an objective without loss of quality, since the standards of the examination then override the standards immanent in the subject. This does not mean that students taught on the process model cannot be examined, but it does mean that the examinations must be taken in their stride as they pursue other aspirations. And if the examination is a by-product there is an implication that the quality the student shows in it must be an under-estimate of his real quality. It is hence rather difficult to get the weak student through an examination using a process model. Crammers cannot use it, since it depends upon a commitment to educational aims. (Stenhouse 1975: 95)

To some extent variation is limited by factors such as public examinations. The exchange between students and teachers does not float free of the context in which it arises. At the end of the day many students and their families place a high premium on exam or subject success and this inevitably enters into the classroom. This highlights a second problem with the model we have just outlined — that it may not pay enough attention to the context in which learning takes place (more of this later).

Third, there is the 'problem' of teachers. The major weakness and, indeed, strength of the process model is that it rests upon the quality of teachers. If they are not up to much then there is no safety net in the form of prescribed curriculum materials. The approach is dependent upon the cultivation of wisdom and meaning-making in the classroom. If the teacher is not up to this, then there will be severe limitations on what can happen educationally. There have been some attempts to overcome this problem by developing materials and curriculum packages which focus more closely on the 'process of discovery' or 'problem-solving', for example in science. But there is a danger in this approach. Processes become reduced to sets of skills — for example, how to light a bunsen burner. When students are able to demonstrate certain skills, they are deemed to have completed the process. As Grundy comments, the actions have become the ends; the processes have become the product. Whether or not students are able to apply the skills to make sense of the world around them is somehow overlooked (Grundy 1987: 77).

Fourth, we need to look back at our process model of curriculum theory and practice and what we have subsequently discussed, and return to Aristotle and to Freire. The model we have looked at here does not fully reflect the process explored earlier. In particular, it does not make explicit the commitments associated with phronesis. And it is to that we will now turn.

Curriculum as praxis

Curriculum as praxis is, in many respects, a development of the process model. While the process model is driven by general principles and places an emphasis on judgment and meaning making, it does not make explicit statements about the interests it serves. It may, for example, be used in such a way that does not make continual reference to collective human well-being and to the emancipation of the human spirit. The praxis model of curriculum theory and practice brings these to the centre of the process and makes an explicit commitment to emancipation. Thus action is not simply informed, it is also committed. It is praxis.

Critical pedagogy goes beyond situating the learning experience within the experience of the learner: it is a process which takes the experiences of both the learner and the teacher and, through dialogue and negotiation, recognizes them both as problematic... [It] allows, indeed encourages, students and teachers together to confront the real problems of their existence and relationships... When students confront the real problems of their existence they will soon also be faced with their own oppression. (Grundy 1987: 105)

We can amend our 'curriculum as process' model to take account of these concerns.

Curriculum as praxis

Teachers enter particular schooling and situations with a personal, but shared idea of the good and a commitment to human emancipation, an ability to think critically, -in-action an understanding of their role and the expectations others have of them, and a proposal for action which sets out essential principles and features of the educational encounter.

Guided by these, they encourage conversations between, and with, people in the situation out of which may come informed and committed action. They continually evaluate the process and what they can see of outcomes.

In this approach the curriculum itself develops through the dynamic interaction of action and reflection. 'That is, the curriculum is not simply a set of plans to be implemented, but rather is constituted through an active process in which planning, acting and evaluating are all reciprocally related and integrated into the process' (Grundy 1987: 115). At its centre is *praxis*: informed, committed action.

How might we recognize this? First, I think we should be looking for practice which does not focus exclusively on individuals, but pays careful attention to collective understandings and practices and to structural questions. For example, in sessions which seek to explore the experiences of different cultural and racial groups in society, we could be looking to see whether the direction of the work took people beyond a focus on individual attitudes. Are participants confronting the material conditions through which those attitudes are constituted, for example?

Second, we could be looking for a commitment expressed in action to the exploration of educators' values and their practice. Are they, for example, able to say in a coherent way what they think makes for human well-being and link this with their practice? We could also be looking for certain values — especially an emphasis on human emancipation.

Third, we could expect practitioners committed to praxis to be exploring their practice with their peers. They would be able to say how their actions with respect to particular interventions reflected their ideas about what makes for the good, and to say what theories were involved.

Curriculum in context

To round off this discussion of curriculum we do need to pay further attention to the social context in which it is created. One criticism that has been made of the praxis model (especially as it is set out by Grundy) is that it does not place a strong enough emphasis upon context. This is a criticism that can also be laid at the door of the other approaches. In this respect the work of Catherine Cornbleth (1990) is of some use. She sees curriculum as a particular type of process. Curriculum for her is what actually happens in classrooms, that is, 'an ongoing social process comprised of the interactions of students, teachers, knowledge and milieu' (1990: 5). In contrast, Stenhouse defines curriculum as the attempt to describe what happens in classrooms rather than what actually occurs. Cornbleth further contends that curriculum as practice cannot be understood adequately or changed substantially without attention

to its setting or context. Curriculum is contextually shaped. While I may quibble about the simple equation of curriculum with process, what Cornbleth does by focusing on the interaction is to bring out the significance of context.

First, by introducing the notion of milieu into the discussion of curriculum she again draws attention to the impact of some factors that we have already noted. Of especial significance here are examinations and the social relationships of the school — the nature of the teacher-student relationship, the organization of classes, streaming and so on. These elements are what are sometimes known as the hidden curriculum. This was a term credited to Philip W. Jackson (1968) but it had been present as an acknowledged element in education for some time before. For example, John Dewey in *Experience and Education* referred to the 'collateral learning' of attitudes that occur in schools, and that may well be of more long-range importance than the explicit school curriculum (1938: 48). A fairly standard (product) definition of the 'hidden curriculum' is given by Vic Kelly. He argues it is those things which students learn, 'because of the way in which the work of the school is planned and organized but which are not in themselves overtly included in the planning or even in the consciousness of those responsible for the school arrangements (1988: 8). The learning associated with the 'hidden curriculum' is most often treated in a negative way. It is learning that is smuggled in and serves the interests of the status quo. The emphasis on regimentation, on bells and time management, and on streaming are sometimes seen as preparing young people for the world of capitalist production. What we do need to recognize is that such 'hidden' learning is not all negative and can be potentially liberating. 'In so far as they enable students to develop socially valued knowledge and skills... or to form their own peer groups and subcultures, they may contribute to personal and collective autonomy and to possible critique and challenge of existing norms and institutions' (Cornbleth 1990: 50). What we also need to recognize is that by treating curriculum as a contextualized social process, the notion of hidden curriculum becomes rather redundant. If we need to stay in touch with milieu as we build curriculum then it is not hidden but becomes a central part of our processes.

Second, by paying attention to milieu, we can begin to get a better grasp of the impact of structural and socio-cultural process on teachers and students. As Cornbleth argues, economic and gender relations, for example, do not simply bypass the systemic or structural context of curriculum and enter directly into classroom practice. They are mediated by intervening layers of the education system (Cornbleth 1990: 7). Thus, the impact of these factors may be quite different to that expected.

Third, if curriculum theory and practice is inextricably linked to milieu then it becomes clear why there have been problems about introducing it into non-schooling contexts like youth work; and it is to this area which we will now turn.

Curriculum as the boundary between formal and informal education

Jeffs and Smith (1990; 1999) have argued that the notion of curriculum provides a central dividing line between formal and informal education. They contend that curriculum theory and practice was formed within the schooling context and that there are major problems when it is introduced into informal forms of pedagogy.

The adoption of curriculum theory and practice by some informal educators appears to have arisen from a desire to be clear about content. Yet there are crucial difficulties with the notion of curriculum in this context. These centre around the extent to which it is possible to have a clear idea, in advance (and even during the process), of the activities and topics that will be involved in a particular piece of work.

At any one time, outcomes may not be marked by a high degree of specificity. In a similar way, the nature of the activities used often cannot be predicted. It may be that we can say something about how the informal educator will work. However, knowing in advance about broad processes and ethos isn't the same as having a knowledge of the programme. We must, thus, conclude that approaches to the curriculum which focus on objectives and detailed programmes appear to be incompatible with informal education. (Jeffs & Smith 1990: 15)

In other words, they are arguing that a product model of curriculum is not compatible with the emphasis on process and praxis within informal education.

However, process and praxis models of curriculum also present problems in the context of informal education. If you look back at at our models of process and compare them with the model of informal education presented above then it is clear that we can have a similar problem with pre-specification. One of the key feature that differentiates the two is that the curriculum model has the teacher entering the situation with a proposal for action which sets out the essential principles and features of the educational encounter. Informal educators do not have, and do not need, this element. They do not enter with a clear proposal for action. Rather, they have an idea of what makes for human well-being, and an appreciation of their overall role and strategy (strategy here being some idea about target group and broad method e.g. detached work). They then develop their aims and interventions in interaction. And what is this element we have been discussing? It is nothing more nor less than what Stenhouse considers to be a curriculum!

The other key difference is context. Even if we were to go the whole hog and define curriculum as process there remain substantive problems. As Cornbleth (1990), and Jeffs and Smith (1990, 1999) have argued, curriculum cannot be taken out of context, and the context in which it was formed was the school. Curriculum theory and practice only makes sense when considered alongside notions like class, teacher, course, lesson and so on. You only have to look at the language that has been used by our main proponents: Tyler, Stenhouse, Cornbleth and Grundy, to see this. It is not a concept that stands on its own. It developed in relation to teaching and within particular organizational relationships and expectations. Alter the context and the nature of the process alters . We then need different ways of describing what is going on. Thus, it is no surprise that when curriculum theory and practice are introduced into what are essentially informal forms of working such as youth work and community work, their main impact is to formalize significant aspects of the work. One of the main outcome of curriculum experiments within youth work has been work, for example in the field of health promotion, which involve pre-specified activities, visiting workers, regular meetings and so on. Within the language of youth work these are most often called programmes or projects (Foreman 1990). Within a school they would be called a course.

What is being suggested here is that when informal educators take on the language of curriculum they are crossing the boundary between their chosen specialism and the domain of formal education. This they need to do from time to time. There will be formal interludes in their work, appropriate times for them to mount courses and to discuss content and method in curriculum terms. But we should not fall into the trap of thinking that to be educators we have to adopt curriculum theory and practice. The fact that so many have been misled into believing this demonstrates just how powerful the ideas of schooling are. Education is something more than schooling.

Conclusion

We have explored four different approaches to curriculum theory and practice:

Curriculum as a body of knowledge to be **transmitted**.
Curriculum as an attempt to achieve certain ends in students — **product**.
Curriculum as **process**.
Curriculum as **praxis**.

In a number of respects these different bodies of curriculum theory and practice link to the four main forces in North American curriculum-making in the twentieth century: the liberal educators; the scientific curriculum makers; the developmental/person-centred; and the social meliorists (those that sought more radical social change) (after Kliebart 1987).

	the liberal educators	the scientific curriculum makers	the developmentalists	the social meliorists
Orientation	Guardians of an ancient tradition tied to the power of reason and the finest elements of the Western cultural heritage	Human life consists in the performance of specific activities. Education that prepares for life is one that prepares definitely and adequately for these specific activities.	The natural order of development in the child was most significant and scientifically defensible basis for determining what should be taught	Schools as a major, perhaps the, principal force for social change and social justice
Curriculum	Systematic development of reasoning power and the communication of 'the canon'.	Influenced by the rise of scientific management and notions of social efficiency. Focus on setting objectives (the statement of changes to take place in the students) and the organization of schooling to meet these.	Sought a curriculum in harmony with the child's 'real' interests, needs and learning patterns	Corruption and vice, inequalities of race and gender, and the abuse of privilege and power should be addressed directly with the aim of raising a new generation equipped to deal effectively with these abuses.
Key thinkers	Charles W. Taylor	Franklin Bobbitt and Ralph W. Tyler	G. Stanley Hall	Lester Frank Ward
Linked to	transmission	product	process	praxis

We shouldn't push the similarities too far — but there are some interesting overlaps — and this does alert us both to the changing understanding and to shifting policy orientations over time.

For the moment we are having to operate within a policy environment that prizes the productive and technical. Furthermore, the discourse has become so totalizing that forms of education that do not have a curricula basis are squeezed. The temptation is always there to either be colonized by curriculum theory or adopt ways of describing practice that do not make sense in terms of the processes and commitments involved. Kleibart's analysis provides us with some hope — things will change. However, there is no guarantee that they will move in a more edifying direction.

Further reading and references

I have picked out some books that have the greatest utility for those concerned with informal education and lifelong learning.

Caffarella, R. S. (1994) *Planning Programs for Adult Learners. A practical guide for educators, trainers and staff developers*, San Francisco: Jossey-Bass. 248 pages. Just what the title says — but has the advantage of many manuals in this area in that the underlying model is dynamic and interactive and avoids some of the problems with linear planning models. Clearly written with plenty of worksheets etc.

Griffin, C. (1987) *Curriculum Theory in Adult and Lifelong Education*, London: Croom Helm. 218 pages. Explores the use of curriculum theory and practice in non-school settings. Particular attention is paid to Illich, Freire, Gelpi etc.

Grundy, S. (1987) *Curriculum: Product or Praxis*, Lewes: Falmer. 209 + ix pages. Good discussion of the nature of curriculum theory and practice from a critical perspective. Grundy starts from Habermas' theorisation of knowledge and human interest and makes use of Aristotle to develop a models of curriculum around product, process and praxis.

Houle, C. O. (1972) *The Design of Education*, San Francisco: Jossey-Bass. 323 pages. Influential statement of theory and practice with regard to a fundamental structure for program design. Identifies basic situations (eleven in all) in which programs are planned and discusses their operation.

Kliebard, H. M. (1987) *The Struggle for the American Curriculum 1893–1958*, New York: Routledge. 300 + xvii pages. A cracker of a book which charts the development of different curricula traditions and the political and social context in which they arose. He unpicks suspect notions such as 'progressive education' and demonstrates how Dewey in particular is positioned outside the main competing traditions. The movement between mental discipline, child centredness, scientific curriculum making (Taylorism) and social meliorism provides a very helpful set of insights into the theory and process of curriculum making within adult education.

Knowles, M. S. (1980) *The Modern Practice of Adult Education. From pedagogy to andragogy* 2e, Englewood Cliffs, N. J.: Cambridge/Prentice Hall. 400 pages. Pretty much the standard US work on practical program design in the 1970s and 1980s. Based around Knowles' assumptions concerning the way adults learn with some leanings to behaviouralism. Part one explores the emerging role and technology of adult education; Part two organizing and administering comprehensive programs of adult education; and Part three reflects on helping adults learn. Extensive appendices provide various exhibits and additional models. See also Knowles (1950) *Informal Adult Education. A guide for administrators, leaders and teachers*, New York: Association Press (272 pages) for an early but still useful review of program design and implementation within an NGO (Chicago YMCA).

Langenbach, M. (1988) *Curriculum Models in Adult Education*, Malibar: Krieger. 228 pages. Argues that adult educators must have a sound understanding of program design. Reviews different models of curriculum theory and practice (largely US) and assesses some specific areas of practice such as continuing professional education and literacy education.

Ross, A. (2000) *Curriculum: Construction and critique*, London: Falmer Press. 187 + xiii pages. Helpful overview of the history of curriculum development in Britain

Stenhouse, L. (1975) *An Introduction to Curriculum Research and Development*, London: Heinemann. 248 + viii pages. Classic statement of a process approach to the theory and practice of curriculum making. Chapters explore the nature of the curriculum problem; the content of education; teaching; the school as an institution; behavioural objectives and curriculum development; a critique of the objectives model; the process model; evaluation; a research model of curriculum development; the teacher as researcher; and the school and innovation.

Thornton, S. J. and Flinders, D. J. (eds.) (1997) *The Curriculum Studies Reader*, London: Routledge. 416 pages. Excellent collection of 30 readings that provides both a sample of enduring work and more recent material around curriculum theory and practice. Includes: Bobbitt, Dewey, Counts, Kliebard, Eisner, Jackson, Schwab, Greene, Freire, McLaughlin, Ravitch, Glazer, Apple, Lieberman and more.

Tyler, R. W. (1949) *Basic Principles of Curriculum and Instruction*, Chicago: University of Chicago Press. 128 pages. Important discussion of product-oriented curriculum building. The process is clear from the chapter titles: what educational purposes should the school seek to attain? How can learning experiences be selected which are likely to be useful in attaining these objectives? How can learning experiences be organized for effective instruction? How can the effectiveness of learning experiences be evaluated? How a school or college staff may work on curriculum building.

Wragg, T. (1997) *The Cubic Curriculum*, London: Routledge. 120 + x pages. Put aside the naff tittle — this book provides an accessible model of curriculum building that attempts to incorporate a 'vision of the future'; a recognition that there are escalating demands on citizens, a belief that (children's) learning must be inspired by several influences; and lastly that it is essential to see the curriculum as much more than a mere collection of subjects and syllabuses. Wragg's 'cubic curriculum' has three dimensions: subject matter; cross-curricular themes and issues that influence children's general development; and the different methods of teaching and learning that can be employed. The concern is to provide a model for practice — so the book is a bit lightweight with regard to competing conceptualizations of curriculum and alternatives to curriculum thinking.

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Student reading

An overview of curriculum models

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Available at:

- http://www.ucd.ie/t4cms/ucdtlp00631.pdf

Curriculum models help designers to systematically and transparently map-out the rationale for the use of particular teaching, learning and assessment approaches. This resource from University College Dublin provides a brief and accessible overview of curriculum models. As appropriate, you are encouraged to download this and to share the link, or the resource, with Student Teachers.

Student reading

Integrated Curriculum

School Improvement Research Series (SIRS)
Research You Can Use

Kathy Lake

Introduction

The integrated curriculum is a great gift to experienced teachers. It's like getting a new pair of lenses that make teaching a lot more exciting and help us look forward into the next century. It is helping students take control of their own learning.

– M. Markus, media specialist, quoted in Shoemaker, September 1991, p. 797

I'm learning more in this course, and I'm doing better than I used to do when social studies and English were taught separately.

– Student, quoted in Oster 1993, p. 28

This teacher and student express an increasingly widespread enthusiasm for curriculum integration. While not necessarily a new way of looking at teaching, curriculum integration has received a great deal of attention in educational settings. Based both in research and teachers' own anecdotal records of success, educational journals are reporting many examples of teachers who link subject areas and provide meaningful learning experiences that develop skills and knowledge, while leading to an understanding of conceptual relationships.

Definitions

Integrated curriculum, interdisciplinary teaching, thematic teaching, synergistic teaching.... When attempting to define integrated curriculum, it is also necessary to look at related terms. Several definitions are offered here. As this paper is narrowed to K-12 integrated curriculum, definitions from vocational and higher education are not included, although there is a growing interest in both of those areas in the interdisciplinary, integrated curriculum. The reader interested in specifics about interdisciplinary work in those fields is invited to consult the General References at the end of this report.

A basic definition is offered by Humphreys (Humphreys, Post, and Ellis 1981) when he states, "An integrated study is one in which children broadly explore knowledge in various subjects related to certain aspects of their environment" (p. 11). He sees links among the humanities, communication arts, natural sciences, mathematics, social studies, music, and art. Skills and knowledge are developed and applied in more than one area of study. In keeping with this thematic definition, Shoemaker defines an integrated curriculum as

...education that is organized in such a way that it cuts across subject-matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas of study. It views learning and teaching in a holistic way and reflects the real world, which is interactive. (1989, p. 5)

Within this framework there are varied levels of integration, as illustrated by Palmer (1991, p. 59), who describes the following practices:

- Developing cross-curriculum subobjectives within a given curriculum guide
- Developing model lessons that include cross-curricular activities and assessments
- Developing enrichment or enhancement activities with a cross-curricular focus including suggestions for cross-curricular "contacts" following each objective
- Developing assessment activities that are cross-curricular in nature
- Including sample planning wheels in all curriculum guides.

Further description is provided by Glatthorn (1994, pp. 164-165).

Dressel's definition goes beyond the linking of subject areas to the creation of new models for understanding the world:

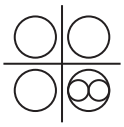
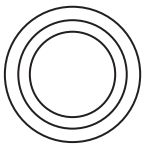
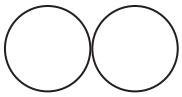
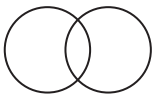
In the integrative curriculum, the planned learning experiences not only provide the learners with a unified view of commonly held knowledge (by learning the models, systems, and structures of the culture) but also motivate and develop learners' power to perceive new relationships and thus to create new models, systems, and structures. (1958, pp. 3-25)

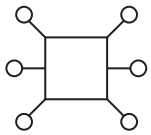
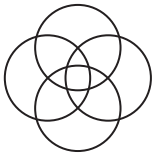
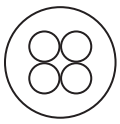
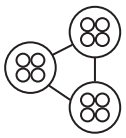
Another term that is often used synonymously with integrated curriculum is *interdisciplinary curriculum*. Interdisciplinary curriculum is defined in the *Dictionary of Education* as "a curriculum organization which cuts across subject-matter lines to focus upon comprehensive life problems or broad based areas of study that brings together the various segments of the curriculum into meaningful association" (Good 1973). The similarity between this definition and those of integrated curriculum is clear. Jacobs defines interdisciplinary as "a knowledge view and curricular approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience" (1989, p. 8). This view is supported by Everett, who defines interdisciplinary curriculum as one that "combines several school subjects into one active project since that is how children encounter subjects in the real world-combined in one activity."

These definitions support the view that integrated curriculum is an educational approach that prepares children for lifelong learning. There is a strong belief among those who support curriculum integration that schools must look at education as a process for developing abilities required by life in the twenty-first century, rather than discrete, departmentalized subject matter. In general, all of the definitions of integrated curriculum or interdisciplinary curriculum include:

- A combination of subjects
- An emphasis on projects
- Sources that go beyond textbooks
- Relationships among concepts
- Thematic units as organizing principles
- Flexible schedules
- Flexible student groupings.

Several authors have gone beyond a single definition of curriculum integration to a continuum of integration. Fogarty has described ten levels of curricula integration. Fogarty has described ten levels of curricula integration (1991). The following chart summarizes some of her work. The reader who is interested in a more complete explanation is referred to Fogarty's book, *The Mindful School*.

Name	Description	Advantages	Disadvantages
Fragmented 	Separate and distinct disciplines	Clear and discrete view of a discipline	Connections are not made clear for students; less transfer of learning
Connected 	Topics within a discipline are connected	Key concepts are connected, leading to the review, reconceptualization and assimilation of ideas within a discipline	Disciplines are not related; content focus remains within the discipline
Nested 	Social, thinking, and content skills are targeted within a subject area	Gives attention to several areas at once, leading to enriched and enhanced learning	Students maybe confused and lose sight of the main concepts of the activity or lesson
Sequenced 	Similar ideas are taught in concert, although subjects are separate	Facilitates transfer of learning across content areas	Requires ongoing collaboration and flexibility, as teachers have less autonomy in sequencing curricula
Shared 	Team planning and/or teaching that involves two disciplines focuses on shared concepts, skills or attitudes	Shared instructional experiences; with two teachers on a team it is less difficult to collaborate	Requires time, flexibility, commitment and compromise

Name	Description	Advantages	Disadvantages
Webbed 	Thematic teaching, using a theme as a base for instruction in many disciplines	Motivating for students, helps students see connections between ideas	Theme must be carefully and thoughtfully selected to be meaningful, with relevant and rigorous content
Threaded 	Thinking skills, social skills, multiple intelligences, and study skills are "threaded" throughout the disciplines	Students learn how they are learning, facilitating future transfer of learning	Disciplines remain separate
Integrated 	Priorities that overlap multiple disciplines are examined for common skills, concepts, and attitudes	Encourages students to see interconnectedness and interrelationships among disciplines, students are motivated as they see these connections	Requires interdepartmental teams with common planning and teaching time
Immersed 	Learner integrates by viewing all learning through the perspective of one area of interest	Integration takes place within the learner	May narrow the focus of the learner
Networked 	Learner directs the integration process through selection of a network of experts and resources	Pro-active, with learner stimulated by new information, skills or concepts	Learner can be spread too thin, efforts become ineffective

This work has been supported by others involved with the implementation of curriculum integration (Jacobs 1989; Shoemaker 1989). These differentiations may move from two teachers teaching the same topic but in their own separate classes (e.g., both English and history teachers teaching about the same period of history), to team design of thematic units, to interdisciplinary courses or thematic units, to a fully integrated curriculum, which is also referred to as synergistic teaching. Bonds, Cox, and Gantt-Bonds (1993) write:

> Synergistic teaching goes beyond the blurring of subject area lines to "a process of teaching whereby all the school subjects are related and taught in such a manner that they are almost inseparable. What is learned and applied in one area of the curriculum is related and used to reinforce, provide repetition, and expand the knowledge and skills learned in other curriculum areas. This process of synergistic teaching allows the student to quickly perceive the relationships between learning in all curriculum areas and its application throughout each of the school subjects.... Synergistic teaching does more than integrate; it presents content and skills in such a manner that nearly all learning takes on new dimensions, meaning, and relevance because a connection is discerned between skills and content that transcends curriculum lines. In a synergistic classroom, simultaneous teaching of concepts and skills without regard to curriculum areas would have a greater effect that the sum of learning skills and concepts in individual subject areas.

Background

It is taken for granted, apparently, that in time students will see for themselves how things fit together. Unfortunately, the reality of the situation is that they tend to learn what we teach. If we teach connectedness and integration, they learn that. If we teach separation and discontinuity, that is what they learn. To suppose otherwise would be incongruous. (Humphreys 1981, p. xi).

The subject of curriculum integration has been under discussion off and on for the last half-century, with a resurgence occurring over the past decade. The "explosion" of knowledge, the increase of state mandates related to myriad issues, fragmented teaching schedules, concerns about curriculum relevancy, and a lack of connections and relationships among disciplines have all been cited as reasons for a move towards an integrated curriculum (Jacobs 1989). Almost every teacher has experienced the feeling that "there just isn't enough time to get it all in" or "the school day just isn't long enough for all that I'm supposed to do; it seems that every year there are more things added to the curriculum." This feeling of frustration is one of the motivations behind development of an integrated curriculum. Teachers see this as part of the solution to the requirements that pull teachers in different ways.

These forces in contemporary schools are reinforced by Benjamin (1989, pp. 8–16), when he cites the trends towards global interdependence and the interconnectedness of complex systems, the increase in pace and complexity of the twenty-first century, the expanding body of knowledge, and the need for workers to have the ability to draw from many fields and solve problems that involve interrelated factors.

Each of these trends is relevant to the discussion of integrated curriculum, as schools move away from teaching isolated facts toward a more constructivist view of learning, which values in-depth knowledge of subjects. This view finds its basis in the work of Piaget, Dewey, Bruner, and others who hold a holistic view of learning. Each of these theorists is concerned with children having an understanding of concepts and underlying structures. Proponents of the progressive education movement of the 1930s advocated an integrated curriculum, sometimes identified as the "core curriculum" (Vars 1987). The movement towards integrated curriculum is a move away from memorization and recitation of isolated facts and figures to more meaningful concepts and the connections between concepts. The twenty-first century requirement for a flexible use of knowledge goes beyond a superficial understanding of multiple isolated events to insights developed by learning that is connected-or *integrated*. Perkins advocates teaching for transfer and thoughtful learning when he states:

A concern with connecting things up, with integrating ideas, within and across subject matters, and with elements of out-of-school life, inherently is a concern with understanding in a broader and a deeper sense. Accordingly there is a natural alliance between those making a special effort to teach for understanding and those making a special effort toward integrative education (1991, p.7).

This view supports the notion of curriculum integration as a way of making education more meaningful. Concerns about national achievement levels and high dropout rates have put the spotlight on any educational change that can lead to increased student success. In addition to the realization that curriculum integration may be an effective element in making education both manageable and relevant, there is a body of research related to *how children learn* that supports curriculum integration. Cromwell (1989) looks at how the brain processes and organizes information. The brain organizes new knowledge on the basis of previous experiences and the meaning that has developed from those experiences. The brain processes many things at the same time, and holistic experiences are recalled quickly and easily. "The human brain," writes Shoemaker, "actively seeks patterns and searches for meaning through these patterns" (p. 13).

This research is supported by Caine and Caine (1991) when they connect neuro-psychology and educational methodologies and state that the search for meaning and patterns is a basic process in the human brain. In fact, the brain may resist learning fragmented facts that are presented in isolation. Learning is believed to occur faster and more thoroughly when it is presented in meaningful contexts, with an experiential component. Of course, every brain-every student-is unique. While the search for patterns and context may be universal, every learner will have his/her own learning style. To meet these diverse needs means providing choices for students.

Put to use in the classroom, the brain research points toward interdisciplinary learning, thematic teaching, experiential education, and teaching that is responsive to student learning styles. These finding are summarized by Shoemaker (1991, pp. 793–797).

The current movement toward an integrated curriculum, then, has its basis in learning theorists who advocate a constructivist view of learning. There is a body of brain research that supports the notion that learning is best accomplished when information is presented in meaningful, connected patterns. This includes

interdisciplinary studies that link multiple curricular areas. There are many examples in the literature of such efforts by K-12 teachers, as well as those teachers involved in vocational education and higher education.

Another rationale for curriculum integration finds its basis in the commonsense wisdom of teachers, who are coping with an increased body of knowledge, large classes, and many mandates related to everything from drug awareness to AIDS to bus safety. When all of these requirements are added to the traditional body of knowledge for which teachers feel responsible, integration is seen as one way to meet both the needs of the students and the requirements of the state. The integration of curricular areas and concepts allows teachers to assist students as they prepare for the next century.

Finally, the movement toward a global economy and international connections, as well as the rapid changes in technology, are pushing education toward integration. The ability to make connections, to solve problems by looking at multiple perspectives, and to incorporate information from different fields, will be an essential ingredient for success in the future.

An enduring argument for integration is that it represents a way to avoid the fragmented and irrelevant acquisition of isolated facts, transforming knowledge into personally useful tools for learning new information (Lipson, et al. 1993, p. 252).

Nature of the Research Literature

The research related to curriculum integration is centered around three major categories, which overlap to some extent. The largest body of reports are descriptions of thematic units or other types of integrated curricula that the authors have actually used in their classrooms, or that an observer has documented. Most of these resources are listed in the General References section of this report. Most of these articles are grade specific and integrate two or three content areas. Some include actual lesson plans, while others are more descriptive. Some also include the teachers' perceptions of the effect of the integrated curriculum. Others include comparisons, either a comparison of two classes taught differently the same year or two classes taught in consecutive years.

The sources listed in the Key References section of this report fall into several categories. Fifty-three documents were reviewed for this report, many of which consider multiple aspects of curriculum integration. An initial look at the literature included eight resources that offer definitions of curriculum integration or interdisciplinary curriculum. These references include many variations on the term, including those that look at integration on a continuum. Definitions came from this writers' own observations, as well as from conversations with teachers and curriculum developers.

Three resources consider the issue of curriculum integration from a historical perspective, looking at the core curriculum movement and other educational innovations. This perspective tends to look at the middle or junior high school as a place where innovations were designed to meet the many needs of the young adolescent. Beyond a historical look at curriculum integration, eight articles discuss why this is an important part of education. These articles include those that cite brain research and its relation to learning, as well as those articles that describe current and future educational and societal conditions that require an integrated perspective.

Thirteen articles describe in part or whole the impact of an integrated curriculum on achievement and attitude. These articles span the grades, from primary through high school. Teachers' attitudes and perceptions are also considered in these references. The other area of research of great interest to teachers is the literature on how to establish an integrated curriculum. Ten resources present information about ways in which curriculum integration has effectively been put into practice.

Many resources describe examples from classrooms in which the curriculum has been integrated. Thirteen examples from elementary school were considered, along with eleven from middle or high school. These examples include those that looked at the curriculum as a whole and those that focused on specific areas, such as writing.

While not reviewed for this report, the reader may want to pursue the literature on curricular integration in vocational education and higher education. For that reason four references are included about vocational education and two are included that relate specifically to higher education.

Many of the articles are written by classroom teachers or by researchers who have spent time in a specific classroom. For this reason, there are a multitude of examples included in these references. While most are not spelled out in detail, they serve as a snapshot of what goes on in the classroom on a daily basis.

Research Findings

Research findings on the topic of curriculum integration fall into three majors divisions. There are a minority of research reports documenting comparison studies that were designed to determine the effectiveness of an integrated curriculum on content learning and attitude. There are also a large number of reports on how to implement an integrated curriculum successfully. These reports are frequently written by teachers or researchers who have been involved in programs they believe to be successful at enhancing learning. The largest body of information about curriculum integration describes teachers' experiences in the form of descriptions of thematic units they have taught or collaborations with other teachers. It is the conviction of these writers that an integrated curriculum meets the needs of their students, although they have not conducted a specific study to document this. The General References section of this paper includes citations of examples from elementary, secondary, and vocational school, as well as higher education.

Even those research reports that document the effect of an integrated curriculum, when compared with a more traditional, subject-bound curriculum, have involved small numbers of students. It is very difficult to determine all of the variables that come into play when looking at student achievement. For these reasons, the findings emerging from these studies should be regarded as provisional rather than definite conclusions based on research. It is necessary to keep in mind that a multitude of factors come into play when one considers the success or failure of a program, a class, a school year or a unit. Despite these difficulties, the data reported support the implementation of an integrated curriculum in both elementary and secondary schools.

Effect on Content Knowledge

Research reviewed for this report indicates no detrimental effects on learning when students are involved in an integrated curriculum. The areas of integration included: 1) art, mathematics, and reading; 2) writing across the curriculum; 3) history, science, and mathematics; 4) history and literature; 5) integrated humanities; 6) health and reading; 7) areas of mathematics; 8) social studies, health, and the arts; 9) physical education, the arts, health, and literature; and 10) science, social studies, health, and the arts (Aschbacher 1991; Edgerton 1990; Greene 1991; MacIver 1990; Shoemaker 1991; Vars 1965; Vye 1990; Williams 1991).

Vars (1965) summarized five major research studies and reported that in middle school programs that adhered to block time and core programs-both forerunners of the current integrated curriculum discussion-there was no loss of learning of subject matter and that, overall, students in the integrated programs did as well or better than students in separate-subject programs. The fact that teachers who plan and teach together have the same expectations across subject areas is a factor in the overall performance of the students.

The Humanitas program, an interdisciplinary, thematic, team-based approach to high school humanities in Los Angeles (Aschbacher 1991) has been compared to 16 other schools which are more traditional in their approach. Performance-based assessments; surveys of teachers, students, and administrators; classroom observations; teacher and student interviews; analysis of assignments and examinations; analysis of portfolios; records of student attendance; records of discipline incidents; and records of college-oriented behavior and standardized tests were all considered in this research, making it one of the most thorough explorations of curriculum integration.

The findings show that the Humanitas program has a statistically significant effect on writing and content knowledge, even after students have been enrolled for only one year. The largest gains were shown in conceptual understanding. The control groups of students made no gains in conceptual understanding during the same timeframe.

Students in the Humanitas program stay in school longer, work harder (by objective measures and their own report), and like school better. The expectations are higher in this interdisciplinary program, and the students are involved in more complex discussions that require them to make connections between content areas and the real world. These same expectations hold true for the students' written work, as students may be asked to write an essay that includes a discussion of the beliefs of more than one culture and the way those beliefs are influenced by cultural factors and values. The students are to include perspectives from art history, literature, and social institutions and make links to their own lives.

While the evaluation of the Humanitas project involved large numbers of students and a control group, there are also many smaller-scale studies reporting positive achievement outcomes for students who participate in an integrated curriculum. Levitan (1991) reports that a change from a literature-based language arts program to a science-literature-based program for sixth graders resulted in achievement increases for the majority of the students. Similar results are reported by Willett (1992) in a study of 87 fifth graders. Integrating the study of math with art resulted

in higher posttest scores than those students who were taught mathematical concepts in isolation by the regular classroom teacher. "The data indicate that the integration of art activities into mathematics and reading can enhance the learning of specific concepts" (Levitan, 1991, p. 12). Similar results were reported by Friend (1984) in a study of mathematics and science integration with seventh grade students.

These findings seem very logical when one considers the work of Schmidt (1983), who found that in integrated language arts classrooms the amount of time spent in art and literature is more than double the amount of time spent on these subjects in classrooms where integration is not a priority.

Effect on Attitude

There is a small body of research related to the impact of an integrated curriculum on student attitudes. MacIver (1990) found that integrated program students developed team spirit and improved their attitudes and work habits. This was attributed, in part, to the fact that teachers met in teams and were able to quickly recognize and deal with a student's problem. Vars (1965) also reports that motivation for learning is increased when students work on "real" problems-a common element in integrated programs. When students are actively involved in planning their learning and in making choices, they are more motivated, reducing behavior problems. Jacobs (1989) also reports that an integrated curriculum is associated with better student self-direction, higher attendance, higher levels of homework completion, and better attitudes toward school. Students are engaged in their learning as they make connections across disciplines and with the world outside the classroom.

Students are not the only ones who respond favorably to the learning experiences that are part of an integrated curriculum. In a study of an integrated mathematics curriculum, Edgerton (1990) found that after one year 83 percent of the teachers involved preferred to continue with the integrated program rather than return to the traditional curriculum. MacIver (1990) found that teachers appreciate the social support of working together and feel that they are able to teach more effectively when they integrate across subjects and courses. They discover new interests and teaching techniques that revitalize their teaching.

When teachers who participated in the Mid-California Science Improvement Program were interviewed by an independent evaluator, the findings indicated a dramatic increase in science instruction time and comfort with science teaching. The teachers involved in this program taught year-long themes, with a blend of science, language arts, social studies, mathematics, and fine arts. Improvements were noted in student attitudes, teacher attitudes, and student achievement. These findings were consistent for both gifted and "educationally disadvantaged" students (Greene 1991).

Research on Implementation

The research findings related to implementation have several common elements. One factor that comes through loud and clear is that *curriculum integration takes time*. Common planning time is needed to allow teachers to select themes, explore resources, discuss student learning styles and needs, and coordinate teaching schedules. Broad strands, such as community, change, or systems have been found to be effective thematic organizers (Shoemaker 1991). Based on an extensive review of the literature

and discussions with teachers, Shoemaker lists the following as essential components of an integrated curriculum:

- **Core skills and processes.** These include basic skills, such as reading and mathematics, as well as social skills and problem solving.
- **Curriculum strands and themes.** These are the organizing principles around which the curriculum is built. They are broad — e.g., Human Societies — and integrate content from multiple areas.
- **Major themes.** Each curriculum strand is further divided into major themes, e.g., Environments or Diversity.
- **Questions.** Questions are used to further define major themes and focus activities.
- **Unit development.** From the major theme and the questions, knowledge, and skills related to the concepts, teachers plan activities that will lead to the development of knowledge and skills which will answer the questions. Teachers also collect resources and develop actual lesson plans and assessment strategies.
- **Evaluation.** Through an assessment of student progress the unit is evaluated.

When considering Shoemaker's essential components, teachers give broad definitions to her terms. For example, major themes may be drawn from existing structures within a school, such as works of literature or cross-subject areas.

Successful efforts toward integration tend to include the above elements or a variation. Palmer (1991) suggests that teachers and curriculum supervisors work together to identify common goals, objectives, skills, and themes. From these lists, the teachers work together to find appropriate connections to content areas. For example, research skills may be a part of science, math, music, language arts, and social studies. From this discussion, teachers devise plans for teaching. Any plan takes time, empowered teachers, flexible schedules, and teams whose members are able to work together (Brandt 1991).

Just as curriculum integration changes the way instruction looks, it may also lead to a change in assessment strategies. As students are involved in "real" tasks, teachers find that they need to design performance assessments that give a true picture of student understanding of concepts.

When beginning an implementation plan, Jacobs's experience has led her to identify four steps that are integral to success (1991, p. 27). They are:

1) Conduct action research to learn about current resources and best practices.
2) Develop a proposal for integration.
3) Implement and monitor the pilot program, with continual assessment of students and the program.
4) Adopt a program and continue to assess.

Summary of Research Findings

The findings support the positive effects of curriculum integration. Lipson (1993) summarizes the following findings:

- Integrated curriculum helps students apply skills.
- An integrated knowledge base leads to faster retrieval of information.
- Multiple perspectives lead to a more integrated knowledge base.

- Integrated curriculum encourages depth and breadth in learning.
- Integrated curriculum promotes positive attitudes in students.
- Integrated curriculum provides for more quality time for curriculum exploration.

Recommendations

Factors that need to be considered in an integrated curriculum are (Gehrke 1991; Jacobs 1989; Lipson 1993; MacIver 1990):

- Common definitions of terms (such as theme, strand, or outcome)
- Available resources
- Flexibility in scheduling
- Support services
- Subjects and concepts that will be integrated
- Links between integration and broader outcomes
- Curricular scope and sequence
- How evaluation will occur
- Parent and community support
- Themes that promote the transfer of learning and connections
- Team planning time that is used to exchange information about content, students, special areas of teacher expertise, and teaching methods.

When teachers select themes, it is important that they avoid themes of convenience that have no meaningful, larger concepts. While an individual teacher may or may not have expertise in each content area, members of teacher teams are able to work together to find connections that cut across single content areas (Lipson 1993). Themes that promote the linking of concepts and lead to deeper understanding are more effective. A theme is more than a series of activities; it is a way to facilitate student learning and understanding of conceptual connections. Activities that are arbitrarily connected are not helpful (Brophy and Alleman 1991). Thus, an integrated curriculum is a means, not the end result. Poorly designed units do not achieve this end of deeper understanding and thorough learning.

Each of these elements needs to be considered as teachers look at curriculum integration. It is necessary for each school to determine the best procedure to meet the needs of the particular student body. A secondary school may face different constraints than an elementary school. Rather than move from a traditional, subject-specific curriculum to an integrated curriculum in one sudden sweep, schools find more success when they make gradual changes, making sure that everyone involved feels a sense of ownership of and commitment to the changes.

Some areas may lend themselves more naturally to integration, such as math and science or language arts and social studies. However, as reported above, there have been very successful efforts in nontraditional alliances, e.g., art and math. As teachers are more and more involved in integration, they find that they see connections that they had not seen initially. As teachers see these connections and develop learning experiences and assessments built around the connections, students also understand them. This understanding leads to more successful learning.

Areas for Further Research

An integrated curriculum may not address a logical sequence within a discipline such as mathematics. Further research into the effect of this will be needed if teachers are to look at the role of sequence in curriculum selection decisions. It may be that sequence decisions currently held are more a product of textbooks than actual necessity for understanding. When the curriculum is based on broad concepts linked in thematic units, students may acquire knowledge in very different ways, making the traditional sequence less meaningful. This is an area that has not been fully explored in the research on integrated curriculum.

Another implication, cited by Humphreys (1981), revolves around assessment of student learning. If themes are guided, in part, by student and teacher interest, there will be less consistency of experience than many teachers currently strive for. This may impact performance on standardized tests and require alternative methods of assessing student understanding of essential concepts.

Teachers who are not provided with adequate inservice or time to thoughtfully develop an integrated curriculum may go to an unstructured, "a little of everything" approach (Jacobs 1989), rather than a truly integrated approach to learning. This does not facilitate the kinds of understanding and achievement that integrated programs discussed in this report have documented. Best practices for initial and ongoing inservice training need to be explored more fully.

A related issue is the extent to which preservice teachers are prepared to teach in settings that are committed to curriculum integration.

A final word of caution is for the teacher who feels that this must be an all-or-nothing scenario. There may well be instances in which curriculum integration is not the most appropriate way to go. A careful examination of successfully integrated programs may suggest the extent to which integration can or should be implemented.

The following article may be retrieved at

- http://educationnorthwest.org/webfm_send/528

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Student reading

Curriculum: Different types

By Leslie Owen Wilson (2005)

When I ask my students what curriculum means to them, they always indicate that it means the overt or written curriculum. However, the word "curriculum" as it is defined from its early Latin origins means literally "to run a course." If one thinks of a marathon with mile and direction markers, signposts, water stations, and officials and coaches along the route, this beginning definition is a metaphor for what the curriculum has become in the education of our children.

Here are multiple definitions of curriculum, from Oliva (1997).

Curriculum is:

- That which is taught in schools
- A set of subjects.
- Content
- A program of studies.
- A set of materials
- A sequence of courses.
- A set of performance objectives
- A course of study
- Is everything that goes on within the school, including extra-class activities, guidance, and interpersonal relationships.
- Everything that is planned by school personnel.
- A series of experiences undergone by learners in a school.
- That which an individual learner experiences as a result of schooling. p 4

What are the different kinds of curriculum?

The answer to this question is subject to interpretation. Since curriculum reflects the models of instructional delivery chosen and used, some might indicate that curriculum could be categorized according to the common psychological classifications of the four families of learning theories ***"Social, Information Processing, Personalist, and Behavioral."*** Longstreet and Shane have dubbed divisions in curricular orientations as: child-centered, society-centered, knowledge-centered, or eclectic. Common philosophical orientations of curriculum parallel those beliefs espoused by different philosophical orientations: Idealism, Realism, Perennialism, Essentialism, Experimentalism, Existentialism, Constructivism, Reconstructivism and the like.

Whatever classification one gravitates to, the fact remains that at one time or another curriculum in the United States has, at some level, been impacted by all of the above. In essence, American curriculum is hard to pin down because it is layered and highly eclectic.

My personal definition (Wilson, 1990) of curriculum is:

> Anything and everything that teaches a lesson, planned or otherwise. Humans are born learning, thus the learned curriculum actually encompasses a combination of all of the below -- the hidden, null, written, political and societal etc.. Since students learn all the time through exposure and modeled behaviors, this means that they learn important social and emotional lessons from everyone who inhabits a school – from the janitorial staff, the secretary, the cafeteria workers, their peers, as well as from the deportment, conduct and attitudes expressed and modeled by their teachers. Many educators are unaware of the strong lessons imparted to youth by these everyday contacts.

The following represent the many different types of curricula used in schools today.

Type of Curriculum and Definition

1. Overt, explicit, or written curriculum

Is simply that which is written as part of formal instruction of schooling experiences. It may refer to a curriculum document, texts, films, and supportive teaching materials that are overtly chosen to support the **intentional instructional agenda** of a school. Thus, the overt curriculum is usually confined to those written understandings and directions formally designated and reviewed by administrators, curriculum directors and teachers, often collectively.

2. Societal curriculum

As defined by Cortes (1981). Cortes defines this curriculum as:

> ...[the] massive, ongoing, informal curriculum of family, peer groups, neighborhoods, churches organizations, occupations, mass, media and other socializing forces that "educate" all of us throughout our lives. 24

3. The hidden or covert curriculum

That which is implied by the very structure and nature of schools, much of what revolves around daily or established routines.

Longstreet and Shane (1993) offer a commonly accepted definition for this term.

> . . . the "hidden curriculum," which refers to the kinds of learnings children derive from the very nature and organizational design of the public school, as well as from the behaviors and attitudes of teachers and administrators...." 46

Examples of the hidden curriculum might include the messages and lessons derived from the mere organization of schools — the emphasis on: sequential room arrangements; the cellular, timed segments of formal instruction; an annual schedule that is still arranged to accommodate an agrarian age; disciplined messages where concentration equates to student behaviors were they are sitting up straight and are continually quiet; students getting in and standing in line silently; students quietly raising their hands to be called on; the endless competition for grades, and so on. The

hidden curriculum may include both positive or negative messages, depending on the models provided and the perspectives of the learner or the observer.

In what I term floating quotes, popularized quotes that have no direct, cited sources, David P. Gardner is reported to have said: *We learn simply by the exposure of living. Much that passes for education is not education at all but ritual. The fact is that we are being educated when we know it least*.

4. The null curriculum

That which we do not teach, thus giving students the message that these elements are not important in their educational experiences or in our society. Eisner offers some major points as he concludes his discussion of the null curriculum.

The major point I have been trying to make thus far is that schools have consequences not only by virtue of what they do not teach, but also by virtue of what they neglect to teach. What students cannot consider, what they don't processes they are unable to use, have consequences for the kinds of lives they lead. 103

Eisner (1985, 1994) first described and defined aspects of this curriculum. He states:

> There is something of a paradox involved in writing about a curriculum that does not exist. Yet, if we are concerned with the consequences of school programs and the role of curriculum in shaping those consequences, then it seems to me that we are well advised to consider not only the explicit and implicit curricula of schools but also what schools do not teach. It is my thesis that what schools do not teach may be as important as what they do teach. I argue this position because ignorance is not simply a neutral void; it has important effects on the kinds of options one is able to consider, the alternatives that one can examine, and the perspectives from which one can view a situation or problems. ...97

From Eisner's perspective the null curriculum is simply that which is not taught in schools. Somehow, somewhere, some people are empowered to make conscious decisions as to what is to be included and what is to be excluded from the overt (written) curriculum. Since it is physically impossible to teach everything in schools, many topics and subject areas must be intentionally excluded from the written curriculum. But Eisner's position on the "null curriculum" is that when certain subjects or topics are left out of the overt curriculum, school personnel are sending messages to students that certain content and processes are not important enough to study.

Unfortunately, without some level of awareness that there is also a well-defined implicit agenda in schools, school personnel send this same type of message via the hidden curriculum.

5. Phantom curriculum

The messages prevalent in and through exposure to any type of media. These components and messages play a major part in the enculturation of students into the predominant meta-culture, or in acculturating students into narrower or generational subcultures.

6. Concomitant curriculum

What is taught, or emphasized at home, or those experiences that are part of a family's experiences, or related experiences sanctioned by the family. (This type of curriculum may be received at church, in the context of religious expression, lessons on values, ethics or morals, molded behaviors, or social experiences based on the family's preferences.)

7. Rhetorical curriculum

Elements from the rhetorical curriculum are comprised from ideas offered by policymakers, school officials, administrators, or politicians. This curriculum may also come from those professionals involved in concept formation and content changes; or from those educational initiatives resulting from decisions based on national and state reports, public speeches, or from texts critiquing outdated educational practices. The rhetorical curriculum may also come from the publicized works offering updates in pedagogical knowledge.

8. Curriculum-in-use

The formal curriculum (written or overt) comprises those things in textbooks, and content and concepts in the district curriculum guides. However, those "formal" elements are frequently not taught. The curriculum-in-use is the actual curriculum that is delivered and presented by each teacher.

9. Received curriculum

Those things that students actually take out of classroom; those concepts and content that are truly learned and remembered.

10. The internal curriculum

Processes, content, knowledge combined with the experiences and realities of the learner to create new knowledge. While educators should be aware of this curriculum, they have little control over the internal curriculum since it is unique to each student.

11. The electronic curriculum

Those lessons learned through searching the Internet for information, or through using e-forms of communication. (Wilson, 2004)

This type of curriculum may be either formal or informal, and inherent lessons may be overt or covert, good or bad, correct or incorrect depending on ones' views. Students who use the Internet on a regular basis, both for recreational purposes (as in blogs, wikis, chatrooms, listserves, through instant messenger, on-line conversations, or through personal e-mails and sites like Facebook, My Space, Youtube) and from personal online research and information are bombarded with all types of media and messages. Much of this information may be factually correct, informative, or even entertaining or inspirational, but other information may be very incorrect, dated, passé, biased, perverse, or even manipulative.

The implications of the electronic curriculum for educational practices are that part of the overt curriculum needs to include lessons on how to be wise consumers of information, how to critically appraise the accuracy and correctness of e-information,

as well as the reliability of electronic sources. Also, students need to learn how to be artfully discerning about the usefulness and appropriateness of certain types of information. And, like other forms of social interaction, students need to know that there are inherent lessons to be learned about appropriate and acceptable "netiquette" and online behavior, to include the differences between "fair usage" and plagiarism.

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Oliva, P. (1997) The curriculum: Theoretical dimensions. New York: Longman.

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Further information available at:

- www4.uwsp.edu/education/lwilson/curric/curtyp.htm

7

Methods and strategies to use in planning

The following is a list of some of the strategies used in this course to encourage active learning.

Active lecturing. An active lecture is not too different from any good lecture, but it attempts to directly involve listeners.

There is no one best way to give an active lecture, but it involves any of the following techniques

Give information in small chunks (about 10 minutes), and then have class members do something with that information for a few minutes. Here are some examples of activities, which you can repeat or vary:

- Write a one-minute reaction to what you have just heard.
    - Talk to the person next to you about what you heard and see how your perspectives differ. Do you agree? Do you have questions?
- List as many key points as you can remember.
- Compare notes taken during the chunk. Help each other fill in gaps or determine if crucial information is missing. (Some people do not allow note taking during the lecture, but this is up to the Instructor.)

Give out cards or slips of paper in three different colours. When class members are listening to your comments, have them hold up a colour for 'I understand', 'I don't understand', or 'I disagree'. Then either stop and allow questions or adjust what you are saying so there are more 'understand' colours showing. This is particularly effective with large groups of 50 or more people.

Ambassadors. This is a useful way to get groups or individuals to exchange information. Two or more members move from one group to another to share/compare discussion etc. You may wish to have half of each group move to another group. This is especially useful if you do not have ample time for a whole-class discussion.

Brainstorming. This is a technique for generating creative ideas on a topic. It may be an individual activity or organized as a group activity. Give people a limited amount of time (e.g. one minute) to say or write as many ideas as they can on a topic. No matter how unrelated an idea seems, write it down. (Alternatively, the Instructor might ask the whole class to brainstorm and write all the ideas on the board.) After the brief period of brainstorming, ideas may then be analysed, organized, and discussed. This is often used as a problem-solving technique. Ideas are then analysed in light of how useful they might be in solving the problem.

Gallery walk. This is a strategy that borrows its name from a visit to an art gallery. Students walk through an exhibit of posters, artefacts, or display of items they have completed. They can be directed to take notes. The idea is to thoughtfully look at what is displayed.

Graffiti wall. A graffiti wall may be displayed in the classroom for use all term. Students may write their thoughts, feelings, or expressions before or following each session and sign their name. Anonymous comments are not suitable. Ideas generated in class may

be posted on the 'wall'. Use paper from a large roll of craft or newsprint paper or join several cardboard boxes together to make a wall that can be stored between sessions. Students can take turns getting and putting away the wall each session.

Group work: some tips for forming instructional groups. There is no one best way to form groups. The best way for you is the way that suits your purpose. Use a more complicated strategy if students need a break or need to be energized. Use a simple technique if time is short. Ways to form groups include the following:

- Ask people to count off from one to five (depending on the number of people you want in a group). Groups will form based on their number (e.g. all of the ones will gather together).
- Before class, determine how many people you want in a group or how many groups you need. Give each class member a different coloured sticker, star, or dot as they enter the class. Then when it is time to form groups, ask them to find people with the same sticker etc. and sit together.
- Put different coloured bits of paper in a cup or jar on each table. Have people take one and find people in the room with the same colour to form a group.
- Have students get together with everybody born in the same month as they were. Make adjustments to the groups as needed.

Mini-lecture. A mini-lecture contains all the components of a good lecture. It is sharply focused. It begins with an introduction that provides an overview of what you will talk about.

It offers examples and illustrations of each point. It concludes with a summary of the main point(s).

One-minute paper. Ask class members to write for one minute on a particular topic (e.g. their reflections on a topic, an assigned subject). They are to focus on writing their ideas, without worrying about grammar and spelling. A one-minute paper differs from brainstorming because there is more focus.

Pair-share. Use this technique when you want two class members to work together to share ideas or accomplish a task. Simply ask them to work with a neighbour or have them find a partner based on some other criteria. It is very useful when you want people to quickly exchange ideas without disrupting the flow of the class. (Sharing in triads and foursomes are also small group techniques.)

Poster session. This is useful when you want students to organize their thoughts on a topic and present it to others in a quick but focused way. Have individuals or small groups work to create a poster to explain or describe something. For example, if they have been doing an inquiry on a particular topic, they would want to include their focus, methods, and outcomes, along with colourful illustrations or photographs. The poster can be self-explanatory or students can use it to explain their work. As an in-class tool, a poster session is often combined with a gallery walk so that the class may review a number of posters in a short time.

Readers' theatre. Readers' theatre is a group dramatic reading from a text. Readers take turns reading all or parts of a passage. The focus is on oral expression of the part being read rather than on acting and costumes. Readers' theatre is a way to bring a text to life.

It is a good idea to go over passages to be read aloud with students so they are familiar with any difficult words.

Sometimes readers' theatre is used to get student interested in a text. They hear passages read first and then read the longer text.

KWL. This is a strategy that provides a structure for recalling what students know (K) about a topic, noting what students want to know (W), and finally listing what has already been learned and is yet to be learned (L).

The KWL strategy allows students to take inventory of what they already know and what they want to know. Students can categorize information about the topic that they expect to use as they progress through a lesson or unit.

Text-against-text. This is a way of helping students learn to analyse and compare written documents. The idea is to look at two documents and search for overlap, confirmation, or disagreement. It is a way of looking at different perspectives. Sometimes it is useful to give students readings prior to class and ask them to compare the readings based on a set of study questions, such as:

1) Look at each author separately. What do you think the author's main point is?
2) How does the author support his/her argument?
3) Look at the authors together. In what ways do the authors agree?
4) What are their points of disagreement?
5) What is your opinion on the issue?

Text against text may be used to compare a new reading or new information with material that has already been covered.

In classrooms where the whole class uses a single textbook, Instructors often find they are teaching against what is in the textbook. Sometimes it is hard for students to accept that a textbook can and should be questioned. Putting together a text against text activity using the textbook and outside materials (e.g. an article) can help them understand that there are legitimate differences of opinion on a subject. Articles need not contradict each other. They may be about the same topic, but offer students different ways of seeing a subject.

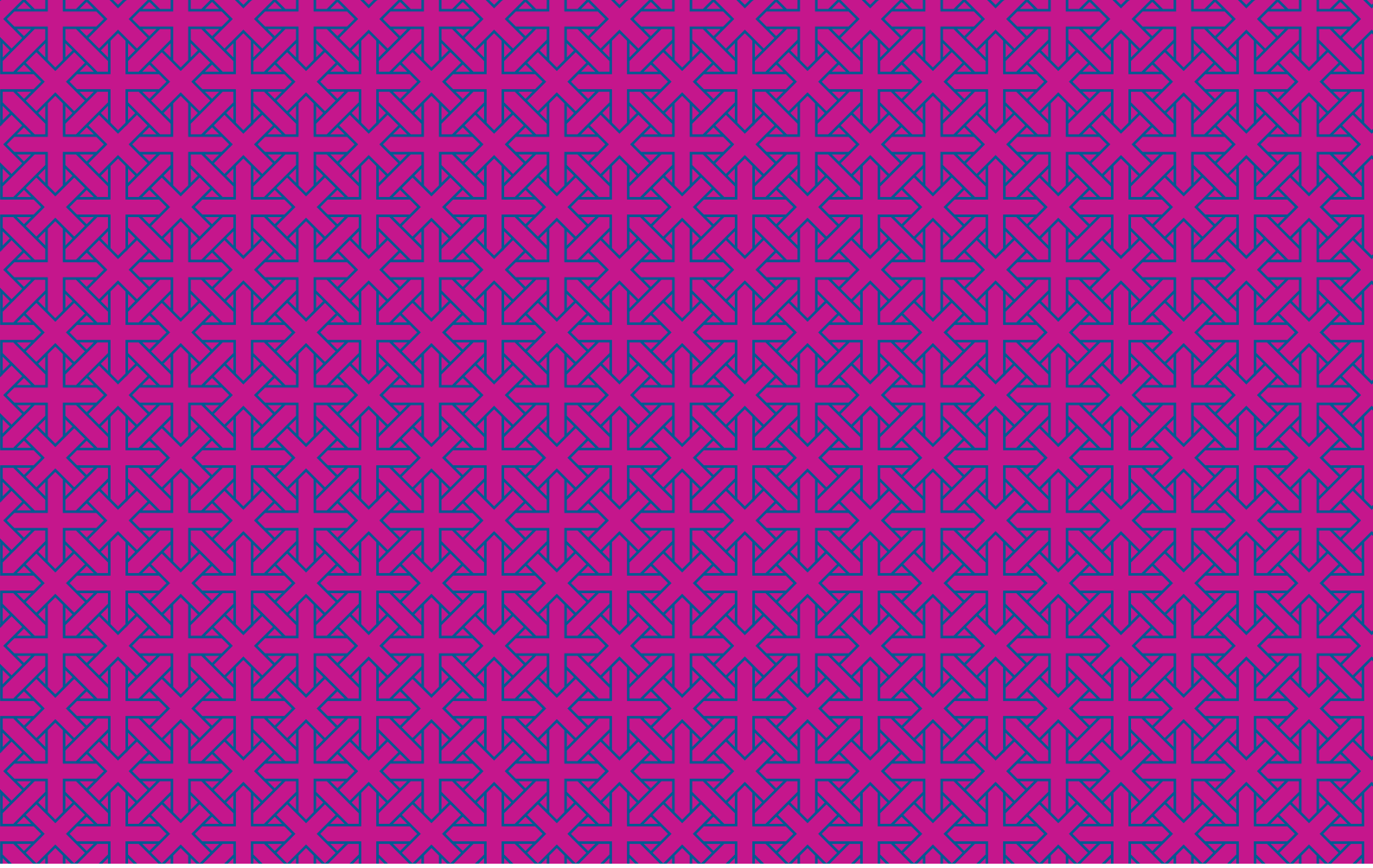
Another way to use the activity is divide the class into groups, give each a set of materials, and have them debate the texts. Some university faculty like to put together text sets that include both scholarly and non-scholarly works and have students to think about differences. For example, you might provide all students—regardless of their reading level or learning style—with easy-to-read materials as a way to introduce themselves to a topic. Even competent adult learners seek out 'easy' books

or materials to learn about a new or complex topic. Providing a picture, newspaper article, or even a children's book in a text set might give everyone the means of connecting to or understanding some aspect of the larger subject.

Roundtable technique. For this technique, divide the class into small groups (i.e. four to six people), with one person appointed as the recorder. A question that has many possible answers is posed, and class members are given time to think about the answers. After the thinking period, members of the team share their responses with one another. The recorder writes the group's answers. The person next to the recorder starts and each person in the group (in order) gives an answer until time is called.

Quizzes. Prepare and give a short quiz (15 minutes) over the different aspects of curriculum development covered in the unit. As students take the quiz, ask them to circle items they are unsure of. They can review and discuss their work in the following ways:

- **Triads.** Have students meet in groups of three to review the quizzes so that they can help each other with their weak areas. (10 minutes)
- **Review.** Go over the quiz with students, and have them look at their own work and make corrections. (30 minutes)
    - Notice points class members had difficulty remembering and take time to review them. You may ask students to assist with this and discuss how they were able to remember.
    - Use this time to correct any misconceptions.
    - Have students save their quiz for future study.



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