

Level: Curriculum Development (6406)
Semester: Autumn, 2021

Assignment No.2

Q.1 Write notes on the following

- **Conservative liberal arts**

The concept of liberal arts dates back to Hellenistic Greece, but the name comes from the Roman Empire. It was called “liberalia studia”, meaning “free studies”. It was called that because it was thought to be important studies for a free (non-slave) member of society to be a participant in civic life.

It typically includes a rounded education in language, law, debate, logic, as well as some art and math. The actual context has changed over the years, but typically refers to most things that aren’t science, engineering, or math focused.

A slightly longer answer is there is no such thing as “conservative arts.” Liberal arts means those areas of academic endeavor which seek to broaden the education of a college level student. There is no such thing really as a liberal arts degree. I have a degree in English, which is one of the classic liberal arts.

The term “liberal” in liberal arts doesn’t have anything to do with current politics, but rather to those subjects that the Greeks and Romans considered that a free person (liberalis—”worthy of a free person”) needed to know to participate in public life. A liberal arts education can be distinguished from vocational, professional, or technical education.

- **Educational technology**

One important definition of educational technology focuses on “the technological tools and media that assist in the communication of knowledge, and its development and exchange.”

Take **augmented reality and virtual reality**, for example. Writing about the “Top 6 Digital Transformation Trends In Education” in Forbes.com, technology innovation specialist Daniel Newman discusses using AR and VR to “enhance teacher instruction while simultaneously creating immersive lessons that are fun and engaging for the student.” He invites us to imagine using virtual reality to transport students to ancient Greece.

Gamification combines playing and learning by utilizing gaming as an instructional tool, according to Newman, who explains that incorporating gaming technology into the classroom “can make learning difficult subject matter more exciting and interactive.”

Regarding **artificial intelligence**, Newman notes that a university in Australia used IBM’s Watson to create a virtual student advisory service that was available 24/7/365. Apparently Watson’s virtual advisors fielded more than 30,000 questions in the first trimester, freeing up human advisors to handle more complex issues.

ProwdigyGame.com, whose free curriculum-aligned math game for Grades 1-8 is used by millions of students, teachers and parents, offers specific tips for leveraging educational technology tools in a report titled “25 Easy Ways to Use Technology in the Classroom.” Their ideas include:

- **Running a Virtual Field Trip:** Explore famous locations such as the Empire State Building or the Great Barrier Reef; or preview actual field trips by using technology to “visit” the locations beforehand.

Level: Curriculum Development (6406)

Semester: Autumn, 2021

- **Participating in a Webquest:** These educational adventures encourage students to find and process information by adding an interesting spin to the research process. For example, they could be placed in the role of detective to solve a specific “case,” collecting clues about a curriculum topic by investigating specified sources and web pages.
- **Podcasting:** Playing relevant podcasts — or assisting students in creating their own — can be a great way to supplement lessons, engage auditory learners and even empower students to develop new creative skills.

Educational technology strategist David Andrade reports in EdTechMagazine.com (“What Is on the Horizon for Education Technology?”) that current tools and trends include online learning and makerspaces, “with robotics and virtual reality expected to be widely adopted in the near future.” Peeking a little further into the future, Andrade says studies indicate that “artificial intelligence and wearable technology will be considered mainstream within four to five years.”

In practice, future innovation will come from the hearts and minds of the teachers who develop the knowledge and skills needed to discover the most engaging, effective ways to use educational technology strategies in classrooms, and virtual classrooms, far and wide.

Another essential definition of educational technology focuses on the theory and practice of utilizing new technology to develop and implement innovative educational approaches to learning and student achievement.

Behind all the high-tech tools, the digital bells and whistles, are the teachers who possess the skill — and the inspiration — to use these new technologies to expand the educational universe of their students.

According to a report by the International Society for Technology in Education (“11 Hot EdTech Trends to Watch”), “the most compelling topics among educators who embrace technology for learning and teaching are not about the tech at all, but about the students.”

Benefits for students include expanded opportunities for personalized learning, more collaborative classrooms and new strategies such as so-called “flipped learning,” in which students are introduced to the subject material outside the classroom (often online), with classroom time then being used to deepen understanding through discussion and problem-solving activities with peers.

For teachers who aspire to make an impact in this discipline, earning a master’s in educational technology is obviously about learning new tools, strategies and practices, but it’s also about understanding the supporting structures that must be in place to ensure the most successful outcomes. These include:

- Policy and legal issues
- Ethical issues (student privacy, etc.)
- Funding, grants and budgets
- Real-world applications (the world of work, partnership opportunities, etc.)
- Networking basics, hardware, learning management software
- Equity (community/school access and assets, student access)

Level: Curriculum Development (6406)

Semester: Autumn, 2021

- Ability to complete a school or district needs assessment/site tech survey analysis

Therefore, for educators who are inspired by the immense potential of educational technology, the value of a master's degree cannot be overstated.

- **Vocational curriculum design**

Vocational education is a different learning option from the path of college or universities. It offers a path that imparts the skills and knowledge needed to work in a given occupation. It is coordinated with the requirements of the labor market and is an integral part of the education system.

Vocational training vs. academic training

While college education often provides theoretical or broad knowledge that could be applied to a variety of professions within a certain field, vocational training teaches students the precise skills and knowledge needed to carry out a specific craft, technical skill or trade, such as plumbing or cooking.

College education often includes courses on a variety of subjects that may not directly relate to a student's major and that a graduate may not use in their career. Vocational school, on the other hand, skips this type of broad academic study and instead provides direct knowledge and instruction for a specific field or position.

Work-ready training

The vocational type of education is designed to make students "work ready" upon graduation. It provides practical education, so students develop specific industry skills that allow them to jump right into your profession and get started. Key features of vocational education and training are classroom training combined with hands-on training, providing students with a complete understanding of concepts in their field and how to carry out the duties of their trade.

Certain positions and fields

Vocational education is designed for more technical fields and for trades or crafts, which are positions that involve hands-on, manual work such as working with plumbing pipes, making a cake or repairing a car. These careers are seen differently from college- and university-trained careers because they are thought of as non-academic. Nonetheless, vocational training also educate on managerial skills or job functions, such as computer programming or prepare for a supervisory role in a hotel or restaurant.

What is practical education?

It teaches skills and knowledge for the everyday skills and duties you carry out in your particular field. It is skill based learning rather than learning that focuses on ideas and theories.

Vocational programs exist for a variety of careers. Students could choose this type of educational pathway for technical training to learn computer skills. Students can learn the skills needed for many creative fields this way, such as dressmaking, photography, culinary arts, fashion design, interior design or cosmetology. Vocational school also provides training for many hands-on trades that are necessary to the functioning of society, such as masonry, carpentry, heating and air conditioning, automotive repair, plumbing or electrical

Level: Curriculum Development (6406)

Semester: Autumn, 2021

work. It can also provide the means for learning certain professional fields such as bookkeeping, medical assisting or court reporting.

Vocational training settings

The vocational training system includes a variety of settings for students to carry out their education. It may vary by the type of trade students plan to get into, but vocational training can take place through one or a combination of these:

- Vocational or trade schools
- Technical secondary schools
- Community colleges
- High school vocational programs
- On-the-job training
- Apprenticeships
- Standalone courses

While it is not yet common, some colleges and universities are beginning to incorporate vocational programs into their educational offerings in addition to their traditional academic options.

Students might complete their vocational training with a certification or a diploma. In some cases, they may receive an associate's degree. Some schools offer a range of professional areas, while some are specific to certain subjects, such as culinary schools or technology schools.

Continuing education

Vocational training also helps people move forward in their careers. These programs are often shorter and more flexible than college or university programs. This makes it easier for people to go back to school or take continuing education to help them move to the next step. Through further education with vocational training, you could have the opportunity to:

- Advance to a higher level position in the same company or field.
- Gain the skills and knowledge needed to change careers.
- Ask for higher pay to fit a credential or specialty skill.

Key features of vocational education and training

Vocational training has some key features that set it apart from academic education. When you look at formal education vs practical experience, you see that formal college or university training includes a lot of classroom education filled with knowledge that is often vague or theoretical. It may cover a lot of subjects, including ones that are not fully relevant to the major. Vocational training is different because it focuses on practical experience instead through hands-on training.

In addition, there are specific features that set vocational training apart. Key components are:

1. It makes a student job-ready

Vocational training provides skill based learning and focuses on how to teach practical skills. This means that upon completion of the program a student has gained the necessary knowledge and hands-on skills needed to perform specific tasks of an occupation. This is the importance of practical knowledge as compared to theoretical.

2. It is based on competency

Instead of receiving a passing or failing grade as is done in college, student performance is based on competence that is defined by meeting certain criteria. The training provided focuses on preparing a student to meet these criteria. By the end of the vocational program, a student must demonstrate satisfactory performance on each of these criteria to be considered competent in their chosen profession. For example, a culinary arts student would need to show competence in certain cooking methods and skills to show they could work in this field upon completion of the program.

Q.2 Explain any two teaching-learning strategies.

Applied learning refers to an educational approach whereby students learn by engaging in direct application of skills, theories and models. Students apply knowledge and skills gained from traditional classroom learning to hands-on and/or real-world settings, creative projects or independent or directed research, and in turn apply what is gained from the applied experience to academic learning. The applied learning activity can occur outside of the traditional classroom experience and/or be embedded as part of a course.

All manner of experiences including high-impact practices and traditional applied learning education can be considered approved applied learning activities if, and only if, they meet the criteria listed.

When applied learning is embedded in a course, these criteria refer to the activity rather than the course as a whole. Regardless of the activity, both the experience and the learning are fundamental.

The Activity is Structured, Intentional and Authentic - All parties must be clear from the outset why this specific experience was chosen as the approach to the learning, and intentional about defining the knowledge that should result from it. The activity needs to be a structured experience with a formal process, which includes a course syllabus or learning contract between parties (students, faculty, and other supervisors as appropriate) and/or defined assessable learning outcomes. Roles and responsibilities must be clearly defined. Faculty and site supervisors (as appropriate) are expected to take the lead in ensuring both the quality of the learning experience and of the work produced. The applied learning activity should have hands-on and/or real world context and should be designed in concert with those who will be affected by or use it, or in response to a real situation.

The Activity Requires Preparation, Orientation and Training - Participants and mentors must ensure that students enter the experience with sufficient background and foundational education, as well as a plan to support a successful outcome. The training and plan should include learning expectations and be referred to (and potentially updated) on an ongoing basis by all parties.

The Activity Must Include Monitoring and Continuous Improvement - Applied learning activities are dynamic. Therefore all facilitators in the activity share responsibility for ensuring that the experience, as it is in process, continues to provide a rich learning environment and is meeting learning outcomes. Activities include a defined and flexible method for feedback related to learning outcomes and quality performance for all parties.

The Activity Requires Structured Reflection and Acknowledgment - There must be a structured opportunity for students to self-assess, analyze, and examine constructs/skills/insights from their experience and to evaluate the outcomes. Reflection should demonstrate the relevance of the experience to student learning, including the student's articulation of how the experience draws on and improves this learning and meets defined objectives.

Post-experience learning should include a formal debriefing. All facilitators and students engaged in the experience should be included in the recognition of progress and accomplishment.

The Activity Must be Assessed and Evaluated - Outcomes and processes should be systematically documented with regard to initial intentions and quality outcomes. Students must receive appropriate and timely feedback from all facilitators.

Q.3 Explain experimental research approach to effectiveness of a new curriculum.

The curriculum problems, notes that our present generation is learning the same knowledge that previous two/or may be three generations have learnt. As students from different parts of the **world** get difficult mathematical and scientific knowledge by activity-based learning, our students are forced to know scientific concepts through cramming. For example, in school textbooks there are many scientific and factual mistakes. It is sad situation that experts designing school textbooks of sciences/mathematics at secondary level do not pay attention to the concept of scientific and factual correctly. Secondly, the involvement of government officers in the development of Afghani curriculum is proving harmful to our education system.

Someone could suggest that the current process of curriculum development is based on a uniform policy for the whole country that has its particular aims and goals, but I think that it is not possible to apply national educational policy to different regions of the country with equality.

For example, there are many underdeveloped areas of Pakistan, where parents do not have adequate resources to send their children to schools. The drop-out rate from schools is high, because parents cannot afford the expense of education easily.

Hence, a new educational policy has to be made by government officers for poor students, so that their problems of education can be solved.

One way of doing this is to build schools, where students are allowed to study in evening time, and where books having basic knowledge about core subjects such as English, Mathematics, Science, **Pashto**, Dari and Islam as well as comparative studies are taught by trained teachers. Thirdly, the problem that the process of curriculum development faces in Pakistan is improper academic research for writing school textbooks. We can point out those experts sitting in the curriculum development boards use materials of their own choice for instruction in schools.

I must say that most of the times the chosen content is not up to the mark. This should go through textbooks approved by a board system in the country, it becomes clear that no suitable research/evaluation system is created to revise curriculum. Fourthly, it is seen that the academic experience of teachers from different schools is also not considered in designing and revising school curriculum. Daniel Tanner and Laurel N. Tanner in their book, "Curriculum Development: Theory into Practice," suggest that without intelligent participation of school teachers, meaningful curriculum development will not be achieved. Tanner and Tanner say that teachers, who are involved in bringing out educational change, accept and adopt the new ideas more quickly than those teachers who are not involved in carrying out change.

Useful evidence suggests that in countries where well-educated teachers were not involved in the curriculum development process, they did not accept new changes in school textbooks. With lack of academic skills in researchers responsible for designing curriculum for schools, the most important feature of curriculum, i.e. content suffers a lot. Students follow rote-learning process, because the content of their books does not match to their educational skills.

In order to make students problem-solvers, I would argue that our books must contain questions that relate to problems we face in our daily life. By answering those questions, students will learn to solve issues in difficult situations.

For example, while studying the concept of speed in science, students must be given questions related to real-life examples of speed such as speed of a car etc., so that they know the application of the concept.

MOE (Ministry of Education) must contribute to solve curriculum problems in our country Pakistan. MOE should have developed a curriculum that provides activity-based learning to students and gives problem-solving skills to them.

Peace and prosperity are not impossible in Pakistan, if our local and national leaders pay respect to their national interest!

Q.4 Discuss monitoring and evaluation of curriculum.

The curriculum development process takes information from a subject matter expert and, through much iteration, creates instruction. But how does information from an expert get translated into educational content that is effective for learners? It goes through four steps of design. In each step are important team members including project managers, instructional designers, writers, copy editors, and subject matter experts. The team works together to create effective content. Let's have a look at the four steps in the curriculum development process.

1. Gathering Information

The first step of the curriculum development process involves planning and determining who the learner is and what they need to get out of the material. Instructional designers then work with the subject matter expert and obtain the necessary information by asking many questions. With information in hand and a clear idea of the audience, the team moves on to the second step.

2. Design

Now that the team has extracted the information and identified the learner, it is time to begin developing the content. Before designing the content, there needs to be clear objectives. Clear objectives include action words such as:

- Identify
- Modify
- Plan
- Evaluate

As the instructional designers create the objectives, they carefully connect them to the content. The objectives are measurable, which ensures that learning outcomes can occur. The team examines the environment in which the content will be used. They ask questions such as: will the learners be accessing the material on their mobile phones or in a classroom?

The team plans how to sequence the content and what delivery method to use. They perform research, search for appropriate materials, and decide what graphics to use.

3. Building the Content

The third step of the curriculum development process is to build the content into a workable instructional unit. The team combines written material with newly created graphics and, if needed, animation. As the material is being built, there is constant communication between team members. Copy editors work to keep the content consistent by ensuring the work is in the correct style and lines up with the learning objectives. Instructional designers check that the material will lead to measurable outcomes. Multiple iterations occur as material is discussed between team members.

4. Evaluation

The final step of the curriculum development process is evaluation. Although the material has gone through multiple iterations, it is evaluated once more. You could say that step four is present throughout each of the prior steps. Each team member from the beginning is constantly evaluating the material and ensuring that it serves the learner well. For example, the curriculum developer makes sure to match the learning objectives against the material to ensure that the material will lead to measurable results. The project manager tracks all team members' changes and ensures that they incorporate all necessary edits and revisions.

It takes a team to design excellent curriculum. Each step involves collaboration and constant iterations of the material. As a result of this teamwork and dedication to the learner, it is possible to build curriculum that leads to desired learning outcomes.

The **CURRICULUM DEVELOPMENT MODEL** on the next page (Figure 1) shows how these components relate to each other and to the curriculum development process. It begins when an issue, concern, or problem

Level: Curriculum Development (6406)

Semester: Autumn, 2021

needs to be addressed. If education or training a segment of the population will help solve the problem, then curriculum to support an educational effort becomes a priority with human and financial resources allocated.

The next step is to form a curriculum development team. The team makes systematic decisions about the target audience (learner characteristics), intended outcomes (objectives), content, methods, and evaluation strategies.

With input from the curriculum development team, draft curriculum products are developed, tested, evaluated, and redesigned -if necessary. When the final product is produced, volunteer training is conducted. The model shows a circular process where volunteer training provides feedback for new materials or revisions to the existing curriculum.

Phases and steps in curriculum development further illustrates how the 12 essential steps progress from one to the next. It also shows the interaction and relationships of the four essential phases of the curriculum development process: **(I) Planning, (II) Content and Methods, (III) Implementation, and (IV) Evaluation and Reporting.** It is important to acknowledge that things do not always work exactly as depicted in a model!

Each phase has several steps or tasks to complete in logical sequence. These steps are not always separate and distinct, but may overlap and occur concurrently. For example, the curriculum development team is involved in all of the steps. Evaluations should occur in most of the steps to assess progress. The team learns what works and what does not and determines the impact of the curriculum on learners after it is implemented. Each step logically follows the previous. It would make no sense to design learning activities before learner outcomes and content are described and identified. Similarly, content cannot be determined before learner outcomes are described.

In the experience of the author, and confirmed by other curriculum specialists, the following curriculum development steps are frequently omitted or slighted. These steps are essential to successful curriculum development and need to be emphasized. Two types of evaluation are included in the Phases and Steps illustration: **(1) Formative** provides feedback during the process of developing the curriculum, and **(2) Summative** answers questions about changes (impact) that have occurred in learners because of their learning experiences. Summative evaluation provides evidence for what works, what does not work, and what needs to be improved.

In every step of the curriculum development process, the most important task is to keep the learner (in this case, youth) in mind and involve them in process. For example, the curriculum team members, who have direct knowledge of the target audience, should be involved in conducting the needs assessment. From the needs assessment process, the problem areas are identified, gaps between what youth know and what they need to know are identified, and the scope of the problem is clarified and defined. The results may prompt decision makers to allocate resources for a curriculum development team to prepare curriculum materials.

A brief description of each of the curriculum development steps is described below. After reviewing these descriptions, you should have a very clear idea of how the steps occur in each of the phases and what each step includes.

(1) Identify Issue/Problem/Need

The need for curriculum development usually emerges from a concern about a major **issue** or problem of one or more target audience. This section explores some of the questions that need to be addressed to define the issue and to develop a statement that will guide the selection of the members of a curriculum development team. The issue statement also serves to broadly identify, the scope (what will be included) of the curriculum content.

(2) Form Curriculum Development Team

Once the nature and scope of the issue has been broadly defined, the members of the curriculum development team can be selected. Topics covered in this section include: (1) the **roles and functions** of team members, (2) a process for **selecting members** of the curriculum development team, and (3) principles of **collaboration and teamwork**. The goal is to obtain expertise for the areas included in the scope of the curriculum content among the team members and develop an effective team.

(3) Conduct Needs Assessment and Analysis

There are two phases in the needs assessment process. The first is procedures for **conducting a needs assessment**. A number of techniques are aimed toward learning **what** is needed and by **whom** relative to the identified issue. Techniques covered in this section include: KAP - Knowledge, Attitude, and Practice Survey; focus groups; and environmental scanning.

Analysis, the second part of this needs assessment step, describes techniques on **how to use the data and the results** of the information gathered. Included are: ways to identify gaps between knowledge and practice; trends emerging from the data; a process to prioritize needs; and identification of the characteristics of the target audience.

"As the twig is bent, so grows the tree"

(4) State Intended Outcomes

Once the issue is defined, the curriculum team is formed, the needs assessed, analyzed and prioritized, the next step is to refine and restate the issue, if needed, and develop the **intended outcomes or educational objectives**. An intended outcome states what the learner will be able to do as a result of participating in the curriculum activities.

This section includes: (1) a definition of intended outcomes, (2) the components of intended outcomes (condition, performance, and standards), (3) examples of intended outcomes, and (4) an overview of learning behaviors. A more complete explanation of the types and levels of learning behaviours is included in the **Addendum** as well as intended outcome examples from FAO population education materials.

(5) Select Content

The next challenge in the curriculum development process is **selecting content** that will make a real difference in the lives of the learner and ultimately society as a whole. At this point, the primary questions are: "If the intended outcome is to be attained, **what** will the learner need to know? What knowledge, skills, attitudes, and behaviours will need to be acquired and practiced?"

Level: Curriculum Development (6406)

Semester: Autumn, 2021

The **scope** (breadth of knowledge, skills, attitudes, and behaviours) and the **sequence** (order) of the content are also discussed. Intended outcomes of population education with content topics is provided in the **Addendum** section as an example and application of how intended outcomes are linked with content.

(6) Design Experiential Methods

After the content is selected, the next step is to design activities (learning experiences) to help the learner achieve appropriate intended outcomes. An experiential learning model and its components (i.e., **experience, share, process, generalize, and apply**) are discussed in this section.

Additional topics include:

1. learning styles and activities appropriate for each style;
2. a list of types of activities (with descriptions);
3. an activity design worksheet for facilitators; and
4. brief discussions on learning environments and delivery modes.

Ten population education sample activity sheets along with tips for facilitators working with youth and dealing with sensitive topics are included in the **Addendum**.

(7) Produce Curriculum Product

Once the content and experiential methods have been agreed upon, the actual production of curriculum materials begins. This section includes: 1) suggestions for finding and evaluating existing materials; 2) evaluation criteria; and 3) suggestions for producing curriculum materials.

(8) Test and Revise Curriculum

This step includes suggestions to select test sites and conduct a formative evaluation of curriculum materials during the production phase. A sample evaluation form is provided.

(9) Recruit and Train Facilitators

It is a waste of resources to develop curriculum materials if adequate training is not provided for facilitators to implement it. Suggestions for recruiting appropriate facilitators are provided with a sample three-day training program.

(10) Implement Curriculum

Effective implementation of newly developed curriculum products is unlikely to occur without planning. Strategies to promote and use the curriculum are discussed in this step.

(11) Design Evaluation Strategies

Evaluation is a phase in the curriculum development model as well as a specific step. Two types of evaluation, formative and summative, are used during curriculum development. Formative evaluations are used during the needs assessment, product development, and testing steps. Summative evaluations are undertaken to measure and report on the outcomes of the curriculum. This step reviews evaluation strategies and suggests simple procedures to produce valid and reliable information. A series of questions are posed to guide the summative evaluation process and a sample evaluation format is suggested.

(12) Reporting and Securing Resources

The final element in an evaluation strategy is "delivering the pay off (i.e., getting the results into the hands of people who can use them). In this step, suggestions for what and how to report to key shareholders, especially funding and policy decision makers, are provided and a brief discussion on how to secure resources for additional programming.

Q.5 Even though curriculum is modified periodically, Still its not implemented as intended Give reasons.

Firstly, the curriculum is outdated, which does not meet the local needs of Pakistan society. The curriculum problems, notes that our present generation is learning the same knowledge that previous two/or may be three generations have learnt. As students from different parts of the **world** get difficult mathematical and scientific knowledge by activity-based learning, our students are forced to know scientific concepts through cramming.

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Level: Curriculum Development (6406)

Semester: Autumn, 2021

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