
UNIT 21 PORTFOLIOS: A REVIEW

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21.1 INTRODUCTION

In Units 11 and 15 of Block-3, you have studied about diagnostic, formative and summative assessment of student learning. Diagnostic assessment is carried out by a teacher through all stages of instruction. Diagnostic assessment helps a teacher to start his/her instruction at the level at which the students have reached. Formative assessment provides information about instructional units in progress. The information helps to develop the final unit or product and helps teachers and students to adjust or modify their learning tasks through the feedback. It is applied to course improvement and students' learning. Summative assessment is carried out at the end of an educational activity and helps the teacher to assess learning. There are a number of assessment techniques used during diagnostic, formative and summative assessment stages. One of such techniques or tool of assessment is the Portfolio. Student portfolios developed as a major tool of assessment in the mid-1990s (Marsh, 2009).

Portfolios can include a number of components. They are records, plans, models, notes, written work, audio and video programmes, photographs, and other artifacts. Students decide what to include in their portfolios and can reflect on what they have learnt. Therefore, the portfolios are not only the activity carried out by an individual student but also the strategies they have used in making their decisions. Teachers can assess not only the components of portfolios but also the processes that students have followed in carrying out these activities while preparing a portfolio for a course.

Open and distance learning (ODL) requires designing instruction and assessment strategies for diverse groups of learners. As a student, many questions that may come to your mind such as “How does a teacher in distance education system know that distance learners are acquiring knowledge and developing skills while studying the course materials?”,

“What have learners learnt in a specific course?” “How does assessment influence the design of the courses?” “How can students demonstrate what they know?” Although these questions may be answered through some forms of assessment (assignments, projects and term end examination), yet performance assessment with the help of portfolios integrated with electronic assessment may provide you more information and feedback for above questions.

In this unit, the focus is to facilitate a learning environment where you can engage with the study materials and course content of the previous twenty units in a meaningful way through the use of portfolios. Student portfolios act as tools of learning and assessment. This unit provides suggestions for formative assessments designed to help you to show what you have learnt in this course. So, developing a portfolio is closely associated with diagnostic, formative and summative assessment of student learning.

21.2 LEARNING OUTCOMES

After going through this unit, you should be able to:

- explain the concept and purpose of a portfolio;
- describe different components of a student portfolio; and
- identify the different types of portfolios.

21.3 PORTFOLIO: CONCEPT AND PURPOSE

The term ‘Portfolio’ is derived from the Latin word ‘Portare’, which means ‘to carry’ and ‘foglio’, which means a ‘sheet’. In the beginning, Portfolios were used in finance and marketing to showcase the different stocks and shares that a person may possess. Corporate sectors also use portfolios to view the entire professional profile of the candidate at a glance. Portfolios also act as an important medium for assessing a learner regarding his/her professional capabilities. These are used by individuals for exploring better professional opportunities and for performance appraisal and professional development.

Let us now try to understand the meaning and significance of portfolios for learning, instruction and assessment.

When we look at portfolio in an educational context, the portfolio developed by a student showcases his/her work done during the course for acquiring a qualification. A student portfolio is thus a collection of documents, articles, writings, models, frameworks that the student assembles in order to demonstrate that he/she has the prior and experiential learning to earn a course level credit. Such a student portfolio may be made up of articles written, books published, conferences attended, awards as well as other meritorious work done by the student. Portfolios are portable, visual archives of design products, such as multimedia graphic designs, web sites, flash animations, video clips and papers that can be presented to peers, teachers, tutors, academic counsellors, and course coordinators in a variety of formats. The idea behind creation of the portfolio is to highlight the diverse work done by the student to assess the level of his/her competency.

Portfolios serve many useful purposes for a learner. Portfolios are significant in the student's academic journey as they also provide the students an opportunity to critically reflect on their own work in relation to a set of internalized standards i.e. standards that they are shared with many others such as peers, academic counsellors, teachers, tutors and course coordinators. The student portfolio requires a demonstration of knowledge, skills and application (KSA) of the concepts or subjects that are being studied. Portfolios thus help students to focus attention on their learning efforts and accomplishments and in doing so, the portfolio helps students to improve their learning. A student portfolio is a summary of the student's major learning accomplishments and strengths. It describes a student's work and achievements.

Student portfolios are a means to link assessment directly to instruction. Within this context, teachers and student jointly develop some important criteria for assessment. Portfolios help students to understand the assessment criteria set for them. As students learn more about designing assessment procedures, their understanding of whole assessment process is enriched. Students can then use portfolios to keep their own records and reflect on how well they are doing. By viewing the evidence of their increasing proficiency, they reflect on their own progress. According to Calfee and Perfumo (1996), portfolios have been used to document teaching, students' learning and performance. This can serve both to stimulate reflection about good practice and to provide evidence for assessment of student's learning. By learning to communicate with peers, teachers, and parents about their achievement, learners can also learn to take more responsibility for their own academic success (Costantino, De Lorenzo & Kobrinski, 2006). The portfolio therefore prepares the learner to develop knowledge and competencies for making a transition from learning to a professional practice.

Let us now look at the *merits* of a portfolio. A portfolio can:

- Demonstrate knowledge, skills and attitudes of the learner while applying the principles of instructional design;
- Showcase the learners' strengths and interests and their understanding of instructional design;
- Present a record of a students' work over a period of time. The working portfolio may show how the design has been conceptualized and progressed from an abstract idea to a concrete model;
- Enable measurement of student achievement over a period of time;
- Act as an evaluation tool for performance appraisal, personal assessment and goal setting;
- Provide diverse information about the learner under one cover;
- Act as an effective tool for reflection by students as well as peer sharing;
- Help the learner in self-assessment;
- Provide opportunities to select a unit or block for preparing a portfolio according to his/her choice.

Let us also identify some *demerits* of a portfolio:

- It is time consuming to collect and select the resources for developing portfolios.
- It needs continuous updating to stay relevant and current.
- A paper portfolio may be bulky and not easily portable.
- ePortfolios require application of technology and skills by the learner.

To summarize the above discussion about portfolios, we can say that portfolios are a collection of a students work in a course and can include excerpts from a unit or a block of a course, video or audio clips, research articles, papers, online discussion postings and reactions or suggestions of peers and teachers. So, for a learner, the portfolio is a tool of self-assessment to know your own progress while studying the course. As learners, you may think about your learning experience of a day or a week or a month during the course work and record your reactions about the course and review your previous entries in the record (Portfolio) to see how you are progressing as a distance learner.

Check Your Progress 1

- Note:** i) Write your answer in the space given below.
ii) Check your answer with the answers given at the end of this Unit.

1. What is a Portfolio?

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2. Describe the different purposes of a student portfolio.

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21.4 PORTFOLIOS AND INSTRUCTIONAL DESIGN

As you have learnt in the previous section, a student portfolio provides you an opportunity to present your ability when you are involved in course work. Such portfolios serve as evidence of a learner’s own learning. Before developing a portfolio, it is important to identify different components that need to be kept in mind while conceptualizing and developing a portfolio.

Let us now identify these components.

21.4.1 Components of a Portfolio

- **Vision, goals and outcomes**

The vision, goals and outcomes are the first step in the development of a portfolio. Before you start developing your portfolio, it is necessary to consider why you are involved in this activity. You must be able to develop a vision that reflects the philosophy and framework of the portfolio. The next step is to identify the goals for which the portfolio is being made as well as the outcomes which you expect to achieve once the portfolio is completed. This is a very important exercise as it will provide you the direction for building your portfolio. The clarity about goals and outcomes is necessary for both the teacher as well as the student.

If you are an instructional designer who is expecting his/her students to develop a portfolio, then the purpose for which the portfolio is going to be used by the teacher must be made clear to the students. For instance, if the student portfolio is to be used for assessment purpose by the teacher, then this needs to be explained in the Student's Course Guide. If you are a student, then you have to understand the purpose and the expected learning outcome and accordingly plan how to develop learning portfolios related to this course.

- **Intended Audience**

The next important component is that of the identifying the audience i.e. for whom is the portfolio being developed? Who is the intended audience? This issue also derives from your goals and outcomes as your goal will throw light on the nature of your audience. For instance, if you as a student are preparing the portfolio where the goal is to submit it for term-end evaluation, then your audience is the teacher/assessor or evaluator or your peer group. On the other hand, if you are seeking a job, then your portfolios' audience is the potential employer. In both cases, you will prepare your portfolio according to the audience. Your portfolio should address the needs of your audience. As a student, you also need to study the mission, work profile of your audience so that you can develop it accordingly. Understanding the audience will also help you to decide the content of your portfolio.

- **Content-Selection, Sequencing and Coverage**

The next logical step is that of the content of your portfolio. What do you want to illustrate? How will you select and then sequence your work i.e. in which order will you place your documents? What will you place within the portfolio so that your skills and competence are best displayed? This issue is again connected to your goals and audience. If you are a student whose portfolio is aimed at assessment of your learning, then the content needs to demonstrate the achievement of learning outcomes. The selection of content by the student also has to be done very carefully so that the full range of the curriculum coverage is displayed. There should be sections that demonstrate your ability to reflect, collaborate, communicate as well as show the research conducted by you. The self-identity of the learner must also be visible through the nature of content selected for the portfolio. For a learner who is displaying skills of being an instructional designer, the content should include functions and models of instructional design, so that different aspects of learning are visible in the content.

You also need to ensure that you sequence the work in the portfolio systematically with content so that it flows and shows continuity. You can develop the beginning/opening pages, followed by the body of your work and then have content that forms the closing section i.e. it summarizes your work and also implications of your work and the future direction. The teacher or evaluator who will be assessing your work should be able to gauge the depth of your knowledge, competencies as well as the diversity of your skills. The standard of your work must also be reflected in the portfolio.

- **Documentation**

The portfolio can be developed using different documents which will best showcase the knowledge and skills as well as creativity of the student. These

documents can be used depending upon the nature of the discipline. According to Marsh (2009), a student portfolio may include the following:

- Print materials/content (Course/Unit/Sections)
- Journals
- Records
- Daily logs
- Self-assessments, such as questions/checklists and rating scales
- Experiments
- Demonstration of skills
- Research notes/ Survey of learning resources
- Team or group activities
- Creative works
- Major projects or products, such as websites, oral history collections, audio and video programmes, photographs, charts, flash animations, video clips and timelines, multimedia graphic design.
- Tests/Tools/Techniques
- Peer Comments/Suggestions
- Rough drafts and finished products
- Teacher comments.

(Source: Marsh, 2009)

- **Presentation: Organization and Formatting**

The manner in which the content is displayed reflects the organizational skills of the learner/instructional designer. Depending upon whether the presentation is through a paper-based portfolio or an ePortfolio, the learner must decide the presentation design. The presentation style has to be accordance with the goals of the portfolio.

The portfolio can use graphics, video clips, links and other materials to showcase the work done. The presentation must also include a table of objectives, a statement of professional goals, designing components as well as a summary of the skills of the learner. A resume or a personal statement can also be added to the portfolio. In case the portfolio contains examples of collaborative work, then there should be ways by which the specific contribution of each learner can be recorded. The presentation of a portfolio is a means to best demonstrate the knowledge and skills of a learner in this course.

Many educational institutions indicate the formatting requirement of a portfolio such as the paper size, font type and size, alignment, cover design, number of words, number of pages. In case of eportfolios too, the digital requirements may be specified. There may also be a specification of the supporting certificates that are to be submitted. The student must keep in mind these requirements while preparing the portfolio.

- **Assessment requirements**

The learner must also be aware as to how the portfolio will be assessed. The teacher needs to identify the performance criteria and observable indications for assessment so that the learner can design and develop the portfolio presentation accordingly. The portfolio should contain evidence of work

done. These can be in the form of work samples, representative artifacts, papers, resources, models, which may have been prepared over different periods of time. Therefore, periodic updation of portfolios is also required prior to the assessment.

Activity 21.1

In the above section, you have read about the possible documents that may be included in a portfolio.

- Reflect upon the nature of your own discipline and make a list of documents that you may include in your portfolio.
- *Remember that a portfolio dealing with a topic from History subject may differ from that displaying an area of Biology subject.*

21.4.2 Designing a Portfolio

The portfolio is a useful medium for an instructional designer, as there is ample scope to highlight the theories of learning as well as application of instructional design models through the portfolio.

The learner has to apply the theories of learning, models of instructional design, instructional design process, and other related areas of instructional design so as to demonstrate his/her creativity and professional competency while preparing a portfolio for instructional design. It is suggested that the portfolio for Instructional Design and Technology (IDT) should be able to demonstrate competencies in the above areas. The features of a portfolio for instructional design include the components given at section 21.4.1.

The preparation of a portfolio for instructional design is based upon application of different learning theories and instructional models. While planning and developing a portfolio, the learner may follow the ADDIE approach (see Unit 11, Block 3).

Let us revisit ADDIE approach:

- **Analyze:** Examine the needs of the audience;
- **Design:** Create a design i.e. storyboard of the portfolio which reflects the creativity, critical thinking, problem solving, evaluation skills of the student;
- **Develop:** Collect, select and display the instructional materials based upon the audience needs and selected design;
- **Implement:** Implement the design processes to demonstrate learning;
- **Evaluate:** Ensure that all the assessment points have been for measuring leaning.

Activity 21.2

In the earlier units, you have read about the ADDIE approach (Ref. Unit-11, Block 3) and about the Constructivist Learning Theory (Ref. Unit-4, Block-1).

Now develop a portfolio on the theme: Constructivist School of Thought and its implications for designing study materials in ODL.

21.4.3 Portfolio and Assessment

Portfolios are useful for carrying out self-assessment by a student at every level because they allow students to reflect on their own learning. These are record of students’ ideas and thinking processes while offering opportunities for reviewing as to how students are progressing in their learning.

Portfolios serve as a *formative* performance assessment tool for students and give them an opportunity to select, reflect and communicate what they are doing. Portfolios allow students to think about the evidence they have collected and promote student involvement in their learning and formative performance assessment. Portfolios can be used by teachers to modify or adapt instruction based on students’ performance. Students thus produce evidence of their progress to adjust their own learning. (Hamm & Adams, 2011)

According to Hamm & Adams (2011), students use performance or work samples to show their participation in conducting research, experiments, involvement in collaborative inquiry as well as reflective process while preparing a portfolio. Portfolios allow students to represent their progress in a more authentic and meaningful manner. Portfolios not only capture an authentic portrait of a student’s thinking, but they also provide an excellent conferencing tool for meetings with students, parents, and supervisors. So, tools and techniques of assessment incorporated at this stage are checklist, attitude scales by teacher, interest inventories, rating scales by students, questionnaires, self-reports, attitude scale and aptitude scales, interview technique etc.

As a student, after developing your portfolio before you submit it for assessment, you should try to obtain reviews from peers, faculty or other professionals, and revise it accordingly. Such review would help in checking the content, language as well as format. A student may also receive feedback on presentation techniques and improve the portfolio before its final submission for assessment. Portfolios also serve as a summative performance assessment tools.

Portfolios are useful tools for teachers as they help them to pitch performance tasks in accordance with the academic level of the learners and tailor it to the maturity of their students. Thus portfolios provide a framework for teachers to have conversations about the strengths and weaknesses of their students’ performance.

Check Your Progress 2

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answers given at the end of this Unit.

1. Explain different components of a Portfolio.

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2. Describe how ADDIE approach may be applied for designing a Portfolio.

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21.5 TYPES OF PORTFOLIOS

Portfolios can be prepared depending upon the objective for which they have been developed. Different scholars have suggested different types of portfolios. According to Danielson and Abrutyn (1997), portfolios can be of three types: Working portfolio, Display portfolio and Assessment portfolio. According to Hartnell-Young and Morries (2007), portfolios may be described as Formative portfolio, which is prepared at the development stage. Summative portfolio is a cumulative portfolio prepared for final assessment and a Marketing portfolio which basically focuses on the career advancement of the person (for example in marketing management course). According to a study by Fersten (2009), portfolios may be those that showcase the achievement of a person or process portfolio, evaluation portfolio or an online/ePortfolio.

Let us discuss the different types of Portfolios.

21.5.1 Working Portfolios

The working portfolio can be described as a ‘work in progress’. Such a portfolio demonstrates the work which is still in an unfinished form and contains samples that may be at different stages of completion. Such a folder contains all the work that is being done for the achievement of specified learning objectives. Working portfolios for students would include a collection of their work which displays how they have selected a particular topic and the work they have done on the topic. It also shows their thought process and reflection towards the task. Such a portfolio can be used by the teacher to diagnose how the student is progressing as well as identify the strengths and weaknesses in the learner’s learning.

The contents of the working portfolio also depend upon the audience for whom it is being prepared. For example, while developing portfolio in the case of school education, the primary audience could be the teacher as well as the parent. The portfolio helps to give a realistic picture of the abilities of the learner and also provides evidence of the work done by the learner. For instance, in the case of a student who has read this course i.e. Instructional Design, the process for creation of a portfolio involves identification of a specific theme based upon which the portfolio has to be designed and then followed by the collection and development of materials related to the theme. The materials depend upon the objective to be achieved and diverse methods can be used to showcase the objective. (Also see Unit 22, Activity 22.1)

The working portfolio can be reviewed at different stages by the teacher, which could be helpful in assessing the progress of the student. Such a review would also help to identify those items in the portfolio which can be shifted to the assessment portfolio, which will contain the final documentation. It must be emphasized that the learners should be able to give reasons for selection of the final pieces that are being moved to the assessment portfolio.

21.5.2 Display Portfolio

The display folder is the display of the student's best work. This folder is meant to showcase the most meritorious work of the student such that it provides a complete review of the range of the work done by the learner and demonstrates the high quality of work. A display folder is also a means for showing the progress of the learner and is thus maintained on an annual basis. A student may add an improved version of a work done earlier to show his/her progress to the teacher. Similarly, a work of a higher level may also be included in the display portfolio. Display folders can be prepared by learners of all disciplines. For example, an artist can show the progress in their art work, while students from a creative writing course can showcase the development of their writing skills. The progress in developing models can also be displayed through such a portfolio. The audience for such a folder is both the learner as well as the teacher. In the case of distance learning students, such portfolios can be viewed by the distance teachers/academic counselors to review the progress and achievements of the learners. The process of preparation of such a display portfolio is similar to that of a working portfolio. The learner must be able to describe why the work has been selected for display as well as what the display portfolio is showcasing.

21.5.3 Assessment Portfolio

The assessment portfolio is developed for the purpose of assessing the learning that has taken place. Such a portfolio documents the specific achievements against the stated learning outcomes. The items displayed in the assessment folder display the knowledge and skills acquired by the learner as a part of the learning process. All the items in the assessment portfolio would serve as evidence of the learner's competence and mastery in the area. The audience of such a portfolio could be the teacher or the evaluator who would be assessing the final output of the learner. For example, while preparing an artwork, the learner may place only the finalized artwork in the assessment portfolio so that the final product is visible to the assessor. According to Danielson and Abrutyn (1997), there are some basic steps for developing an assessment portfolio. These are as follows:

- Determine the curricular objectives to be addressed through the portfolio;
- Determine the decision that will be made based on the portfolio assessments;
- Design assessment tasks for the curricular objectives;
- Define the criteria for each assessment task and establish performance standards for each criterion;
- Determine who will evaluate the portfolio entries; and
- Train assessors/teachers or other evaluators to score the assessment of a portfolio. This will ensure the reliability of the assessments

21.5.4 Skill Area Portfolios

The skill area portfolio is aimed at demonstrating the skills acquired by the learner in a particular area. Such a portfolio contains the level of proficiency that the learner has acquired in that area and the items in the portfolio are evidence of this competency. This may include skills such as problem solving mastery in the use of technology, ability to make a model to display scientific knowledge, projects on various social issues and others skills.

21.5.5 Paper and ePortfolio

The portfolios can be developed using different mediums. You may prepare (i) a paper based (hardcopy) portfolio or (ii) an ePortfolio. A paper based portfolio is made using paper that may be of a prescribed type and size. It is a physical entity and contains documents prepared on paper by students and placed in folders, notebooks, binders. These could also be spiral bound. Paper based portfolios can be bulky and difficult to carry and transport. Also such portfolios require meticulous work as a small mistake may need the entire paper to be replaced. Earlier paper based portfolios were more commonly used by students of art, photography, and other disciplines. However, now with the growth of digital tools, it has become more convenient to replace paper based portfolios with ePortfolios.

ePortfolios are an on-line collection of work consisting of digital content (files, photos, graphics, multimedia). It allows the students to demonstrate their learning experiences. ePortfolios allow a student to collect evidence of his/her skills and achievements in their own dedicated online space. ePortfolios are useful as a means to overcome challenges of portability and ownership. There is a range of ways in which technology can be used by students in the preparation and presentation of their work. The use of PowerPoint or other graphics packages to produce visual aids for presentations or posters is popular in many universities. Further as students' web skills develop, many teachers are experimenting with allowing students to create online portfolios of work or websites for assessment. You will learn more about ePortfolios in the next unit (Ref. Unit 22, Block-5).

Check Your Progress 3

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answers given at the end of this Unit.

1. List the different types of Portfolios.

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2. Differentiate between paper and eportfolio.

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21.6 LET US SUM UP

In this unit, you have studied the concept and purpose of portfolio. Portfolios are used in the educational context to demonstrate the knowledge, skills, competencies of a learner. A portfolio comprises a collection of documents, writings, models that a learner may assemble to demonstrate his/her level of proficiency. A portfolio is a summary of the learner's performance and achievements. A portfolio has different components, which include the goals and outcomes, which form the basis for designing the portfolio. A portfolio can be prepared keeping in mind the intended audience, so that it is able to address the needs accordingly. The content of the portfolio is selected according to the goals and audience. The presentation of the portfolio helps to showcase the work of the learner and can be prepared using various graphics and digital tools. The components of an instructional design involved in a portfolio are analyze, design, develop, implement and evaluate. The portfolio has many advantages in instructional design such as demonstrating the skills of the learner in applying the principles of instructional design. It also acts as an evaluation tool and helps to measure the learning acquired by the student.

There are different types of portfolios. These include working portfolio, which serves as a 'work in progress', display portfolio which displays the students most meritorious work, assessment portfolio which is used for assessing the learning that has taken place, and skill area portfolio which is prepared for demonstrating the level of skills in a particular area. Portfolio can be paper based or an ePortfolio but the aim remains the same i.e., to showcase the best work of the learner.

21.7 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress 1

1. Portfolio is a summary of the student's major learning accomplishments and strengths. It describes a student's work and achievements. A student portfolio is thus a collection of documents, writings video or audio clips, research articles, online discussion postings and reactions on suggestions of peers that the student assembles in order to demonstrate that he/she has the prior and experiential learning to earn a course level credit. (Please see section 21.3)
2. The purpose is to highlight the diverse work done by the student to assess the level of his/her competency. Portfolios are significant in the student's academic journey as they also provide the students an opportunity to critically reflect on their own work in relation to a set of internalized standards. (Please see section 21.3)

Check Your Progress 2

1. The different components of a portfolio include the concept, vision and goals of the portfolio. The portfolio has to be developed depending upon the nature of the audience, the content and its sequencing are also important. The portfolio must be based on appropriate documentation and should use an effective presentation method. The assessment requirement should be known to the learner and teacher. (Please see section 21.4.1)

2. ADDIE approach may be applied for designing a portfolio by following the principles of analyse, design, development, implementation and evaluation. (Please see sub-section 21.4.2)

Check Your Progress 3

1. The different types of portfolios include working, display, assessment, skill area portfolios and paper and eportfolio. (Please see sub-section 21.5.1)
2. A paper portfolio prepared using paper that may be of a prescribed type and size. It may be carried in a folder, notebook, binder or briefcase. A ePortfolio is an online collection of work based on digital content. (Please see section 21.5)

