ASSESSING THE IMPACT OF AN INSTRUCTIONAL DESIGN COURSE ON ARABIAN GULF UNIVERSITY DISTANCE LEARNING STUDENTS` INSTRUCTIONAL DESIGN COMPETENCIES

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Abstract

This study investigates the impact of a graduate course in instructional design on Arabian Gulf University post-graduate students` learning outcomes represented in the instructional design general competencies generated by IBSTPI, 1986. The study also seeks to provide an analysis of the general instructional design competencies and performance statements including (Knowledge, Skills, and Affective) competencies that are necessary to achieve effective instructional design and development outcomes with a specific focus on distance teaching and training applications. The study used a developmental research method guided by ADDIE instructional design model on a sample of 22 graduate diploma and master students in the department of distance learning. Data analysis revealed statistically significant differences between the participants' pre and post mean scores on instructional design general competencies scale in favour of the post administration. Results also indicated that subjects' believed that the course content is realistic, clear, and useful. It links theory to its real and practical applications in the field of developing distance teaching and training material. The huge content, the big effort required for successfully passing the course compared to other courses; as well as the short period of time positioned for studying the course material represent the west part of the course. To improve the course outcomes in the future participates recommended the need for an Arabic version of the workbook and renovation of the broken internet links related to course topics or replacing them with active ones.

Keywords: Instructional design, instructional design general competencies, ADDIE, distance learning, and distance teaching &training program.

1 INTRODUCTION

Instructional design is the practice of creating instructional experiences which make the acquisition of knowledge and skills more efficient, effective, and appealing (Merrill, Drake, Lacy and Pratt, 1996). The process consists broadly of determining the state and needs of the learner, defining the end goal of instruction, and creating some intervention to assist in the transition. It is a systematic process by which the instructional materials are designed, developed, and delivered. The terms instructional design, instructional technology, learning experience design, educational technology, curriculum design, and instructional systems design (ISD), are often used interchangeably. It is a. way of planning instruction considering the learner, end goal or product, and evaluation/assessments. Many times, multimedia tools are used to improve instruction and increase student engagement (Culatta, 2016)

When designing instructional material for open and distance learning the concept of (deep design is highly

recommended). Reeves (2011) mentioned that; the term "deep design" is used by intended to distinguish student-and learning-centered lesson planning from the classroom-centered, activity-oriented planning that is common among beginning teachers. Deep design work is not directly visible to students or to anyone else who is not part of it. The teacher- and classroom-centered instructional design focus activities, teacher performance, classroom events and experiences, burning question: "What will we be doing today?" and planning addresses only the teacher's time with students. On the other hand; the student- and Learning-centered instructional design focus on what kinds of thinking students do, the intellectual skills students develop, burning question: "What will students be learning today?" , planning addresses long-term outcomes and what students take away from the classroom events and experiences.

To achieve effective learning outcomes, the science of instruction and instructional design models are used to guide the development of instructional design strategies that elicit appropriate cognitive processes. Chongwony and Washington (2018) explored the competencies required for an instructional design manager to be effective in higher education settings; they used a Delphi study surveying managers and leaders of instructional design through an anonymous consensus-building process consisting of two rounds of surveys. Results identified eight major categories with 64 competencies as relevant for leading and managing instructional design in higher education. In 2017, Rozitis, identified competencies specific and beneficial to online high school teachers that are modifying their own courses. He stressed out that; existing instructional design standards, available to guide online teachers, are not only too numerous, they are also inconsistent. Moreover, a lack of clarity exists about which specific standards benefit this emerging professional group in the process of developing and revising their courses.

Park and Luo (2017), investigated the instructional designer's competencies essential for the context of online higher education, and have selected an instruction design unit in a research university as a case of investigation. To identify and compare competencies at organizational and individual levels, his study employed a mixed method to collect and analyze data based on a validated IDs competency model by the International Board of Standards for Training, Performance and Instruction (ibstpi) as a framework. Throughout the study, Instructional design competencies expected jobs/tasks and currently performed jobs/tasks were systematically analyzed, and the applicability of the ibstpi model in this specific context of online higher education was verified. Based on the empirical findings, this study proposed a refined competency model to improve the instructional design competencies performance in human resources development and management practice.

Critical discussions within the field of instructional design have addressed the roles and competencies of designers, as well as the nature of design work per se. In this concern (Yanchar,2016) presented an overarching metaphor--namely, instructional design as a journey into the unfamiliar--that views design as a two-fold learning enterprise (i.e., innovative and maintenance learning) and characterizes designers as sojourner-learners. The metaphor placed instructional design in a narrative context and emphasized designers, rather than formalisms, as the primary drivers of the design process. He presented several implications of his metaphor related to the identity and innovative practices of designers in the field and finally, suggested that this metaphor can serve as a framework for inquiries into everyday instructional design work, examinations of innovative design practices, and further discussion of the respective roles of instructional designers and design formalisms.

Yuayai and his college (2015) investigated developing competency of teachers in basic education schools. The research instruments included the semi-structured in-depth interview form, questionnaire, program developing competency, and evaluation competency form. Data analysis revealed that factors of competency were: 1) the persistence in learning management and work practice, 2) competency in planning, goal setting, learning management and work practice, 3) competency in ICT use in learning management and work practice, 4) creativity of learning management, 5) competency in following up and evaluation in knowledge management and work practice, and 6) competency in improving and developing the learning management and work practice. Program for developing competency included 9 factors and 7 learning units; total of 200 h. Program could develop and enhance the teachers by posttest score higher than those pretest score.

The original set of Instructional Design Competencies, was developed in 1986 as a result of more than a year of research, discussion, and validation by a group of instructional design professionals and academics (Richey, Fields, and Foxon, 2001). The level of proficiency described in the 1986 Competencies was taken to represent an instructional designer who would probably have at least three years of experience in the field beyond entry-level training. Since the first set of ID competencies, much has changed in the landscape of practice, technology and developments in the major theories that underpin the field of instructional design.

In response to this changing environment, the International Board of Standards for Training, Performance

and Instruction (IBSTPI) set out to review and revise the ID competencies in the year 2000 and, more recently, in 2012. With every revision, more elements have been added to the process, including:

1. The influence of advanced technologies, team-based design, and business management skills;

2. The professional foundations of design, as well as planning and analysis, design and development, and implementation and management skills;

3. A categorization of competencies as Essential or Advanced;

4. A larger representation of professionals around the world (including Directors, consulted experts and working professionals participating in the validation studies).

Based on the above literature the instructional designer was defined as a person who designs instruction, a person who know how people learn and have ideas on how to help them learn better. If you are looking for engaging learning activities or ways to make practice closer to real life skills, that's when an ID is who you need. The job of an instructional designer can be summarized in the following points:

1. Work with Subject Matter Experts to identify what students need to learn

2. Develop objectives and ensure content matches those objectives

3. Revise and rewrite content to shape it for learning needs

4. Structure content and activities for student learning

5. Create media to support learning (e.g., visual aids for face-to-face, various multimedia for e-learning and online)

6. Develop assessments (note that this does not only mean tests)

7. Adapt instructional materials created for one format to another format (usually this is adapting materials from face-to-face to e-learning)

The aim of the present study is to explore an instructional design post graduate module (course) and assess its impact on the Arabian Gulf University Distance Learning Students` Instructional Design Competencies and satisfaction with the learning experience.

2 IBSTPI GENERIC COMPETENCY DEVELOPMENT MODEL

According to Merrill (1998), a competency model refers to "the organization of identified competencies into a conceptual framework that enables the people in an organization to understand, talk about, and apply the competencies…..an organizing scheme". With the advent of performance-based educational techquices, competencies have served as the nucleus of program design and the development efforts (Richey, Fields, and Foxon, 2001). According to Dick, Watson, and Kaufman, (1981); the basis of this approach was the demand for clearly definable measures of program effectiveness in teacher education programs. Another origin was that competency-based education applied the innovative systems design techniques and elements of mastery learning (Young and Van Mondfrans, 1972).

Competency-based education program design is not a new approach; it was widely used in both teacher education and K-12 education during the 1970s of the past decade. Today, competencies continue to be used in many of these same activities in higher education, business and training environments, distance teaching and training program at the Arabian Gulf University is not exceptional of this. In institutions which utilize and make use of distance education, teaching responsibilities are usually divided into two phases, that of course development, in which course materials are prepared in advance, and tutoring, in which instructional support is provided to learners as they are using the materials. Course development tends to be subdivided further into two aspects that of providing subject matter expertise and that of providing expertise in the area of instructional techniques appropriate to distance education. Similar competencies are required for both aspects of course development, with some specific competencies required for subject matter specialists and instructional design specialists. The generic IBSTPI competency development model is shown in figure (1) below.
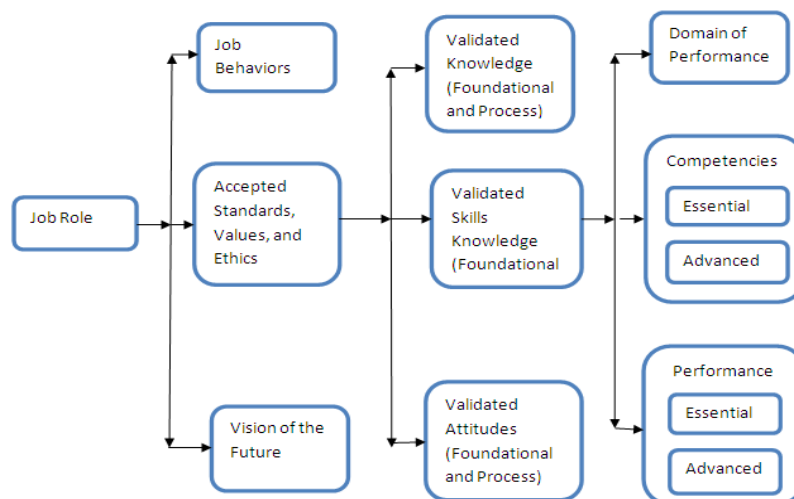
Figure 1: The Generic IBSTPI Competency Development Model

The effectiveness of courses delivered over a distance, like face-to-face instruction, depends on the planning of the course, class activities and the instructional materials used. The use of systematic instructional design in course planning can help to make any instruction more successful in promoting learning. However, there are significant differences between face-to-face instruction and distance learning. Robert and Judi (1995) reviewed applicable instructional design models for distance education, the unique characteristics of distance education in higher education via interactive television (ITV) are discussed, and a nine-step instructional design model, designed specifically for college course delivery via interactive television, is presented. Their model is an adaptation of the Dick and Carey model which is discussed in the article. Implementation of this model in situations which do not have large support staffs and budgets for ITV is discussed.

In the Arabian Gulf University, distance teaching and training program these competencies covered in many courses (AGU-Distance Learning Booklet, 2014) taught in the first semester of the first academic year for both postgraduate diploma and master students. These include the courses of Learning Theory (DLRDT531), Materials, Media and Development Tools (DLRDT522), Writing the Materials (DLRDT533), Design and Presentation (DLRDT524) and Designing e-Learning Materials (DLRDT525). All these courses are program required and perquisites for studying the instructional design course.

The forementioned courses in addition to the instructional design course (the topic of the present investigation) are developed to help the distance teaching and training post graduate candidate to develop a wide range of knowledge, skills and build the essential competencies needed for designing and developing distance learning projects, modules, and learning material. The activities of the present study are only limited the instructional design general competencies proposed by IBSTPI, 1986 and covered in the Arabian Gulf University instructional design course.

3 THE STUDY

3.1 Statement of the problem

Researchers in the field of educational technology and distance learning and training agree that instructional design competencies play the main role in the success in the field of developing effective learning material. Therefore the present study is conducted to explore and assess the impact of an instructional design graduate course on Arabian Gulf University distance teaching & training program students` instructional design basic competencies.

3.2 Research Questions

The main question addressed by this study is: What is the AGU instructional design course like? And what is the impact of the course on Arabian Gulf University distance learning students` instructional design general competencies?"

Immerging from the main questions are the following sub-questions

1. What are the basic (general) instructional design competencies according to Association for Educational Communications & Technology like?

2. What are the objectives and components of the Arabian Gulf University instructional Design for distance learning course like?

3. What is the impact the instructional design course on developing Arabian Gulf University Diploma and masters students instructional design competencies?

4. How do Arabian Gulf University students satisfied with their instructional design course?

3.3 Importance of the study

Studying the development of instructional design competencies by distance learning specialist is very important for many factors; first and the most instructional design competencies are needed by all instructional designers and distance learning writers are not excluded. Secondly, based on their learning and training, distance teaching & training program candidates must demonstrate that they have acquired the basic and the general instructional design competencies in order to perform all the specialized tasks related to distance learning design and learning material development. Thirdly: a distance learning designer and learning material writer need to master how to create learning contents with information that can be used and applied in solving a real distance learning problem. Fourthly; a systematic evaluation of an instructional design course can help in the determination of merit, worth, and significance of the learning/ training process by comparing criteria against a set of proposed standards which are AECT instructional design competencies in this study.

3.4 Limitations

The sample of the present study was driven from the Arabian Gulf University, distance teaching & training master and post-graduate diploma candidates` who are studing instructional design for open and distance learning course, instructional design competencies under investigation and assessment are adapted from the general instructional competencies published by the International Board of Standards for Training, Performance, and Instruction (IBSTP) 1986. Therefore generalization of the results will be limited to instructional/training context and learning`s communities who process similar characteristics and studying the same course contents.

4 METHOD AND PROCEDURES

This is a developmental research study in which a mixed research method was utilized. According to Richey (1994), developmental research can be defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria of internal consistency and effectiveness. In the developmental research mix research methods may be applied. Furthermore; she classified three types of developmental research; the first type involves situations in which the product-development process is analyzed and described, and the final product is evaluated. The second type of developmental research focuses more on the impact of the product on the learner or the organization. The third type of study is oriented toward a general analysis of design development or evaluation processes as a whole or as components in the present study a mixed research method combined three research approaches:

1. A descriptive research approach was implemented for analyzing the candidates` characteristic, instructional design module content analysis, previous research and resources analysis to establish a list of instructional design general competencies and developing the course online component.

2. A systems development approach by utilizing the ADDIE instructional design model in guiding the course development starting by the analysis phase and ending with the evaluation phase which intended to assess the impact of the proposed course on developing DTTP masters students instructional design competencies.

3. An experimental research method with quasi-research design (one group) design to assess the impact of the developed module on subjects instructional design competencies which measured at the start of the course and by the end of the course after successfully completing studying the course material.

4.1 Instruments:

Two instruments were used by the study, instructional design general competencies list (questionnaire) (IBSTP, 1986), and a satisfaction with learning scale prepared by the AGU Quality of Excellence Center.

4.1.1   *Instructional design general competencies list (questionnaire).*

The instructional design general competencies questionnaire adapted from International Board of Standards for Training, Performance, and Instruction (IBSTP) 1986 list of competencies. The list of the instructional design general competencies composed of 16 basic competencies; each main competency has its` own performance statements (indicators). The rating used for the assessment is a 5-point Likert–type scale, where 5 meant "a very high level of mastery and 1 refers to a week level of mastery of the nominated competency. The participants asked to judge his mastery of a competence before and after studying the instructional design course. Rateability confident of the instrument (Cronbach's Alpha) was computed and found be around .950 which represents a high validly of the instrument.

4.1.2 The satisfaction with learning scale.

The satisfaction with learning instrument was prepared by the AGU quality of excellence center which developed and validated by the National Commission for Academic Accreditation and Assessment - Saudi Arabia. The scale is composed of three main parts; **part one** aimed to collect information about the course (title and code, program/department information and the academic year, in addition to the instructions on how to respond to the questions; **part two** aimed to assess subjects` degree of satisfaction with the course and its contents. This part consists of 26 (items) questions form subjects` satisfaction with the course. These questions distributed among 4 dimensions: the study plan of the course, the teaching activities, judging the course value and the overall evaluation of the course. The table 1 below shows the dimensions and number of items in each. The **third part** is open-ended questions (question 27, 28 &29) allow the candidate to report on his observations related to his satisfaction with the course as well as the learning experience and include the following questions:

1. What is the best of the course you much like?

2. What is the west of the course that you did not like?

3. What are your suggestions do you have for improving the course?

5 RESULTS:

The results of this treatment aimed to answer the main question of the study sating [What is the AGU instructional design course like? And what is the impact of the course on Arabian Gulf University distance learning students` instructional design general competencies?"

The following sessions will present and discuss the results related to the sub-questions of the study.

5.1 Results Related to Instructional Design General Competencies:

Results related to instructional design general competencies were driven from answering the first research question stating: [What are the basic (general) instructional design competencies according to Association for Educational Communications & Technology like?]

In 1986, the International Board of Standards for Training, Performance, and Instruction (IBSTPI) published the first edition of "Instructional Design [ID] Competencies: The Standards." It was the result of work that began in 1978. In its third edition, IBSTPI presents the latest view of the competencies of instructional designers. It is a greatly expanded view that reflects the complexities of current practice and technology, theoretical advancements, and the social tenor of the times (Richey, C. Fields, and Foxon, 2001).

The original set of the instructional design competencies was developed in 1986 and was the results of more than a year of research, discussion, and validation by a group of instructional design professionals and academics. In recognition of this ibstpi Board set out to review and revise these competencies. The 1986 ID competencies set contains 16 competencies and 70 performance statement (Table 3). The 1986 competencies and the associated performance statement are given in the table below. The complete listing of the competencies and its updates are found in Instructional Design Competencies: The Standards available online from www.aboutlearning.com.

Table 2: AECT ID General Competencies Scale Based on ibstpi, 1986

Competency: Related to the field of instructional design, I can :	Level of Mastery				
	1	2	3	4	5
1. Determine projects are appropriate for instructional design					
2. Conduct needs assessment.					
3. Assess the relevant characteristics of learners/trainers					

4. Analyze the characteristics of a setting					
5. Perform job, task and/or content analysis					
6. write statements of performance objectives					
7. Develop the performance measurements					
8. Sequence the performance objective					
9. Specify the instructional strategies					
10. Design the instructional materials					
11. Evaluate the instruction/training					
12. Design the instructional management system					
13. Plan and monitor instructional design projects					
14. Communicate effectively in visual, oral and written form.					
15. Interact effectively with other people					
16. promote the use of instructional design					

N.B: The above questionnaire was administrated at the beginning and at the end of studying the instructional design course material. The study asked the participant to rate his level of mastery of each of the 16 competencies, then comparing the main and the gain in these competencies to test the effect of the studying the course material on developing the students ID general competencies.

5.2 Results Related to Instructional Design Module's Topics And Outlines

DE 0506 Instructional Design is a three (3 Cr) hours module post-graduate diploma and master required course. The prerequisites for DE 0506 are the entire diploma and the master courses taught in the first semester of each academic year. The aim of this module is to help the students to master the skills needed for analyzing Open and Distance Learning models according to learners' analysis, learning content analysis, communications and information technologies and helping learners to acquire the skills needed for designing and building course materials that suit open and distance learning. The module will cover the following topics: Classical & modern learning theories; The basic elements/ components included in the instructional systems and courses design and development processes; Designing instructional materials according to behavioural, Cognitive, Criticism, and Cognitive & Social Constructivist learning theories; Designing instructional processes according to the principle of learning driven from different schools of learning (for more information see DTTP website , 2013 available online at:. http://www.agu.edu.bh/english/colleges/grad_elearning14.aspx).

The details outlines, of course; are covering the following topics cover the basic phases and show in details the sub-phases included in each phase. In the combined workbook the module units will describe the basics tasks for each stage of the model and offer sufficient learning activities to help you understand and practice instructional design techniques (AGU-distance Learning Booklet, 2014). The course outlines and the topics are:

Introduction to the module: highlights the course objective & topics, teaching strategy, and assessments.

Unit 1: Overview of Instructional Design: The unit covers topics such as; instruction and Instructional Systems, the need for Instructional Design, types of ODL Instructional Design, Models and Theories of Instructional Design, Instructional design and learning theory, the Phases of the Instructional Design Process, the Main Steps for Designing Instructional Systems, and Dick & Carey model for the systematic design of instruction

Unit 2: Instructional Design: Analysis Phase. The analysis phase topics are; Identifying Instructional Goals, Conducting Instructional Analysis, Analyzing Learners and Context, and Write Performance Objectives

Unit 3: Instructional Design: Design Phase. This includes; Develop Assessment Instruments, Plan Instructional Strategy, Choose Delivery Method, Write your Instructional Design Documents (Writing the teacher package, writing the student package), Review Instructional Design Documents, and Revise Instructional Design Documents

Unit 4: Instructional Design: Development Phase: the unit covers topics such as; Develop Instructional Materials, Develop the student materials: (handouts, study guide, homework), Develop the evaluation materials: (test and survey items), and Develop instructor materials: (Producing a teaching assistance guide).

Unit 5: Instructional Design: Implementation Phase. The unit exploring the following topics; Deeside the

technique of instruction (f2f, blended or completely online), Selects the modes of instruction: (lectures, multimedia presentation, guest speaker or students class activities), Media selection, Lunch the Course, and Follow- up to add enrichment and remediation activities.

<u>Unit 6: Instructional Design: Evaluation Phase</u>. The final unit of the module covers; Designing and Conducting Formative Evaluation: Gather the feedback that you can use to modify and improve your course through: (Gather Feedback From Learners, Measure Improvement and Gabs, and Measure Business Results), Revising Instructional Materials, and Designing and Conducting Summative Evaluation: usually take place after the course delivery so as to answer the big question (was my course effective?)

5.3 Results Related To The Impact Of Course On Developing Arabian Gulf University Diploma And Masters Students Instructional Design Competencies

To test the impact of the instructional design module on developing subjects` general instructional design competencies, the instructional design general competencies scale was administrated twice: at the beginning of the module (first day of week 1) and the end of the module (last day of the 4th week of the module); after the participants successfully completed studying the instructional design course for distance students. The general instructional design competencies scale was pre and post answered by 19 candidates of the course participants who were 21 in total. Table 3 shows mean scores, standard deviations with regard to subjects` pre and post assessment of their instructional design general competencies scale.

Table 3 Mean scores, standards deviations & degree of judge with regard to pre-assessment of instructional design competencies

General ID Competency Statement	N	M	SD	Judge
1. Determine projects are appropriate for instructional design	19	2.8947	1.10024	Below average
2. Conduct need assessment	19	3.4737	1.07333	Average
3. Assess the relevant characteristics of learners/trainers	19	3.4211	1.21636	Average
4. Analyze the characteristics of a setting	19	3.4211	1.12130	Average
5. Perform job, task and/or content analysis	19	3.0000	1.15470	Average
6. write statements of performance objectives	19	3.9474	1.07877	Above average
7. Develop the performance measurements	19	2.9474	.97032	Below average
8. Sequence the performance objective	19	3.7368	1.09758	Above average
9. Specify the instructional strategies	19	3.2105	1.13426	Average
10. Design the instructional materials	19	3.3684	1.11607	Average
11. Evaluate the instruction/training	19	3.5789	1.01739	Above average
12. Design the instructional management system	19	3.1579	.95819	Average
13. Plan and monitor instructional design projects	19	3.3158	1.00292	Average
14. Communicate effectively in visual, oral and written form.	19	3.6316	1.06513	Above average
15. Interact effectively with other people	19	3.7368	1.36797	Above average
16. promote the use of instructional design	19	3.7368	1.19453	Above average
The whole scale	19	3.4112	.83679	Average

Table 1 provides the means, standards deviations, of subjects` own ratings for each instructional design competency. The table also displays the ranking of the competencies based on the degree of judge. From table 3 we concluded the following:

1. Subject's evaluation of their instructional design general competencies- before studying the instructional design course- ranged between below average and above average. The average of the 16 sub competencies ranged between (m=2.8947, SD = 1.10024) for the statement #1 (I can determine projects are appropriate for instructional design) and (m=3.9474, SD=. 1.07877) for the stamen # 6 (I can write statements of performance objectives).

2. As indicates in table 2, the statement # 6 (I can write statements of performance objectives) scored the highest mean (m= 3.9474, Sd. = 1.07877), then came the statements # 8 (Sequence the performance objective), 15 (Interact effectively with other people) and 16 (promote the use of instructional design), (m= 3.9853, Sd. =. 4780), motivation toward studying English (m=3. 9316, Sd. = .55767). Fears and worries concerning studying and practicing English scored the lowest mean (m= 3.1054, Sd. = .62123).

3. The overall mean score of the subjects' instructional design general competencies is above average (m=3.4112, Sd. = .83679), which is judged as possessing an average level of ID competencies.

Table 4: Mean scores, standards deviations & degree of judge with regard to post–assessment of ID general competencies.

General ID Competency Statement	N	M	SD	Judge
1.Determine projects are appropriate for instructional design	14	4.4286	.64621	High
2.Conduct need assessment	14	4.7857	.42582	Very high
3.Assess the relevant characteristics of learners/trainers	14	4.5714	.51355	Very high
4.Analyze the characteristics of a setting	14	4.4286	.64621	High
5.Perform job, task and/or content analysis	14	4.6429	.49725	Very high
6.write statements of performance objectives	14	4.5714	.64621	Very high
7.Develop the performance measurements	14	4.1429	.86444	High
8.Sequence the performance objective	14	4.3571	.84190	High
9.Specify the instructional strategies	14	4.3571	.74495	High
10. Design the instructional materials	14	4.2857	.82542	High
11. Evaluate the instruction/training	14	4.4286	.64621	High
12. Design the instructional management system	14	4.2857	.72627	High
13. Plan and monitor instructional design projects	14	4.5000	.75955	Very high
14. Communicate effectively in visual, oral and written form.	14	4.5714	.64621	Very high
15. Interact effectively with other people	14	4.7143	.61125	Very High
16. promote the use of instructional design	14	4.6429	.63332	Very high
The whole scale	14	4.4821	.47436	High

In the post ID general competencies survey a noticeable development in subjects' competencies' was reported. From the post ID general competencies survey results (table 4) one can conclude that; subjects` ID general competencies in all dimensions scored a mean (≥4. 0) and judged as high to very high, i.e. (the 16 dimensions of ID general competencies scale means ranges from high to very to very high). The statement # 2 (conduct need assessment) scored the highest mean (M= 4.7857, Sd. = .42582), then came the statement # 16 (M= 4.7143, Sd. =.61125), then the statement # 5 (M=4.6429, Sd. = .49725) and statement #16 (promote the use of instructional design) i.e. (M=4.6429, SD=.63332). The statement # 7 stating: Develop the performance measurements; scored the lowest mean (M= 4.1429, Sd. = .86444).

The overall mean score of the subjects' ID general competencies judgment in the post survey is very high (M=4.4821, Sd. =. 47436) which is judged as possessing a high level of ID competencies.

To test the impact of the proposed instructional design module impact on developing subjects` ID general competencies, a paired sample t-test was conducted to evaluate whether subjects ID general competencies by the course or not. Table 4 presents subjects` paired sample t-test results related pre and post ID general competencies survey.

Table 5 Paired samples t-test results of the Pre &Post ID general competencies Measures

| Competency Statement | Paired Differences | | | | t | df | Sig. (2-tail) |
| | Mean | Std. Deviation | 95% Confidence Interval of the Difference | | | | |
			Lower	Upper			
Determine projects are appropriate for instructional design	-1.58333	.99620	-2.21629	-.95037	-5.506	11	.000
Conduct need assessment	-.66667	1.07309	-1.34847	.01514	-2.152	11	.054
Assess the relevant characteristics of learners/trainers	-.91667	.99620	-1.54963	-.28371	-3.188	11	.009
Analyze the characteristics of a setting	-1.00000	1.47710	-1.93850	-.06150	-2.345	11	.039
Perform job, task and/or content analysis	-1.58333	1.16450	-2.32322	-.84345	-4.710	11	.001
write statements of performance objectives	-.50000	.67420	-.92837	-.07163	-2.569	11	.026
Develop the performance measurements	-1.16667	1.46680	-2.09863	-.23470	-2.755	11	.019
Sequence the performance objective	-.50000	1.16775	-1.24195	.24195	-1.483	11	.166
Specify the instructional strategies	-1.00000	1.27920	-1.81277	-.18723	-2.708	11	.020
Design the instructional materials	-.66667	.98473	-1.29234	-.04100	-2.345	11	.039
Evaluate the instruction/ training	-.75000	1.21543	-1.52225	.02225	-2.138	11	.056
Design the instructional management system	-1.08333	1.37895	-1.95948	-.20719	-2.721	11	.020
Plan and monitor instructional design projects	-1.08333	1.37895	-1.95948	-.20719	-2.721	11	.020
Communicate effectively in visual, oral and written form.	-.58333	.99620	-1.21629	.04963	-2.028	11	.067
Interact effectively with other people	-.41667	1.08362	-1.10517	.27184	-1.332	11	.210
promote the use of instructional design	-.53846	1.19829	-1.26258	.18566	-1.620	12	.131
The whole scale	-.89063	.86073	-1.43751	-.34374	-3.584	11	.004

Notes: IDGCpr (for instructional design general competencies pre assessment), and IDGCpo (for instructional design general competencies post assessment).

For the above table (paired sample t-test results) on instructional design general competencies pre and post assessment we conclude the following:

1. The overall means of pre and post IDGCs are significant at 0.05 level of significance i.e. (Mpre=3.4112, SD pre=.83679; Mpost=4.4821, SDpost= .47436) computed value of t =-3.584), (P = .004)

2. About 10 out of the 16 IDGCs scale components (statements) paired sample t-test results show significance test results at 0.05 level of significance (see the table 6 below).

Table 6: Parried samples t-test significance results of the pre & post ID general competencies measures.

| Competency Statement | Paired Differences | | | | t | df | Sig. (2-tailed) |
| | Mean | Std. Deviation | 95% Confidence Interval of the Difference | | | | |
			Lower	Upper			
Determine projects are appropriate for instructional design	-1.58333	.99620	-2.21629	-.95037	-5.506	11	.000
Assess the relevant characteristics of learners/trainers	-.91667	.99620	-1.54963	-.28371	-3.188	11	.009
Analyze the characteristics of a setting	-1.00000	1.47710	-1.93850	-.06150	-2.345	11	.039
Perform job, task and/or content analysis	-1.58333	1.16450	-2.32322	-.84345	-4.710	11	.001
write statements of performance objectives	-.50000	.67420	-.92837	-.07163	-2.569	11	.026
Develop the performance measurements	-1.16667	1.46680	-2.09863	-.23470	-2.755	11	.019
Specify the instructional strategies	-1.00000	1.27920	-1.81277	-.18723	-2.708	11	.020
Design the instructional materials	-.66667	.98473	-1.29234	-.04100	-2.345	11	.039
Design the instructional management system	-1.08333	1.37895	-1.95948	-.20719	-2.721	11	.020
Plan and monitor instructional design projects	-1.08333	1.37895	-1.95948	-.20719	-2.721	11	.020
The whole scale	-.89063	.86073	-1.43751	-.34374	-3.584	11	.004

3. Five out of the 16 statements indicated no significance in pre and post assessment (table 7 below).

Table 7: Paired samples t-test insignificance results of the pre & post ID general competencies measures

| Instructional design general competences component | Paired Differences | | | | t | df | Sig. (2-tailed) |
| | Mean | Std. Deviation | 95% Confidence Interval of the Difference | | | | |
			Lower	Upper			
Conduct need assessment	-.66667	1.07309	-1.34847	.01514	-2.152	11	.054
Sequence the performance objective	-.50000	1.16775	-1.24195	.24195	-1.483	11	.166
Evaluate the instruction/ training	-.75000	1.21543	-1.52225	.02225	-2.138	11	.056
Communicate effectively in visual, oral and written form.	-.58333	.99620	-1.21629	.04963	-2.028	11	.067
Interact effectively with other people	-.41667	1.08362	-1.10517	.27184	-1.332	11	.210
promote the use of instructional design	-.53846	1.19829	-1.26258	.18566	-1.620	12	.131

5.4 Result related to satisfaction with the instructional design course

Seventeen (17) out of the 22 participants who enrolled in the study were answered the satisfaction with the

learning instrument. Data analysis shows a very high degree of satisfaction with the course (i.e. overall satisfaction is around 92%). Results related to open–ended questions are summarized in the table 8 below.

Table 8 below shows the results of the study on the open –ended questions about the course

question	What is the best of the course you much like?	What is the west of the course that you did not like?	What are your suggestions do you have for improving the course?
Subjects answer	- The course content is realistic, clear and useful and links theory with applications. - Develop useful knowledge, skills and competencies for graduate learners. - Help to deal with how to carry out learners' needs, learning environments and learning context. - The activities and assignments of the course found to be powerful and complete learning the course objective. - Understand how systematic design of instruction guided by ADDIEE, or Dick & Carey works. - Is considered to be the core of the field distance teaching & training. - Though the course content is huge, the content distributed in a useful and easy manner that helps students learning. - Topics and information, scheduled in sequence help clarity. - The course instructor is a unique, very nice and keen, a type of a professor who likes his students and considers their needs.	- The content is difficult and heavy compared to other courses, need more time, so that the student can learn the material, do the activities and master the learning objectives. - The course difficult, the assignment (the project) and needs creativity and imagination. - Some websites links are broken and need to be renewed. - The language of the course is difficult and need translation into Arabic. - The course consists of 6 units; all of the same importance, there locating extra time for the course can help in deep learning of subjects.	- Activating the broken links, or replace them with active ones. - Develop a field visit to do a real analysis of learners and environments and contexts. - That there will be applications step by step. - Taking into account all students learning styles. - Reducing the load of the course to help in studying the material better. - Dividing the course into two courses or allotted more time for teaching the course.

6 CONCLUSION

One of the reasons that the quality of much instructional material is poor is because it is not carefully planned and well designed. This fact led the Arabian Gulf University distance teaching and training program curriculum developers to consider a course in instructional design to help the diploma and master degree graduates to deal with the essential principles and develop essential competencies of instructional design.

The goal of the present study is to assess the impact of an instructional design course on Arabian Gulf University distance teaching and training program students learning outcomes. These learning outcomes are instructional design general (basic) competencies and satisfaction with the instructional design course. The study developed a course in instructional design as a program required, taught the course and the assess its impact on the nominated variable. AGU distance learning students` Instructional design competencies were assisted twice; at the beginning of the course and the end of course by administrating a competency questionnaire proposed by AECT,1986, and a satisfaction with course instrument administrated at the end of the course.

Data analysis revealed significant differences in the participants' instructional design basic competencies pre and post-survey. Subjects` rating for their instructional design competencies found to be higher in the post survey and ranging from (high to very high. i.e. all statements means scored more than 4.00 out of 5.00 in the post-assessment). This significant development in subjects` instructional competencies is due to the study of course and the learning material, the strategy used for developing the course is a kind of deep design approach. It goes with Reeves (2011) thoughts that ensured that "deep design" is a term used by intended to distinguish student-and learning-cantered lesson planning from the classroom-centred activity-oriented planning that is common among beginning teachers. These results also supported by Yuayai and his college (2015) who found that factors of competency were: 1) the persistence in learning management and work practice, 2) competency in planning, goal setting, learning management and work practice, 3) competency in ICT use in learning management and work practice, 4) creativity of learning management, 5) competency in following up and evaluation in knowledge management and work practice, and 6)

competency in improving and developing the learning management and work practice. Such a program for developing competency included these factors could develop and enhance the teachers by posttest score higher than those pretest score.

The study also used a satisfaction instrument developed by the AGU quality of excellence center administrated by the end of the course. Data analysis's results revealed a high level of satisfaction with the course material i.e. (around 92% overall satisfaction level). Participants reported that; the course content is realistic, clear and useful and links the theory of instructional design with its real applications, contribute to develop useful knowledge, skills and competencies for graduate learners and helps them to deal with how to carry out learners' needs, learning environments and learning context. Moreover, the course helps them to understand how systematic design of instruction guided by ADDIE, or Dick & Carey works and considered to be the core of the field distance teaching & training.

Besides these advantages of the courses they highlighted some difficulties related to course consents, the language barriers and such as; content is difficult and heavy compared to other courses, need more time, so that the student can learn the material, do the activities and master the learning objectives and language of the course is difficult and need translation into Arabic.

To overcome these difficulties they derive suggested activating the broken links, or replace them with active ones, develop a field visit to origination do real analysis of learners and environments and contexts, taking into account all students learning styles when developing the course learning material and reducing the load of the course to help in studying the material better.

The development of the course and the assessment of its impact on AGU distance learning graduate students revealed the importance of competencies critical for instructional designers working in the field of distance learning and teachers education. Developing such competencies can be subject for future studies in training and certification of instructional designers and distance learning professionals to determine which competencies have the greatest impact on the success of an instructional design course and efforts. Based on these findings the study suggested farther training in the field of instructional design and furthers studies with large group of participants to assess the impact of graduate courses in developing nominated educational competencies in graduate and post-graduate programs.

This study uses the competencies statements without the performance statements, further studies can use the full statements with their performance indicators for a post graduate student to undertake a self-assessment to determine areas in which he may need to focus for future professional development in the field.

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