EFFECTIVENESS OF INSTRUCTIONAL DESIGN MODEL (ISMAN - 2011) IN DEVELOPING THE PLANNING TEACHING SKILLS OF TEACHERS COLLEGE STUDENTS' AT KING SAUD UNIVERSITY

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ABSTRACT
The new instructional design model (Isman - 2011) aims at planing, developing, implementing, evaluating, and organizing full learning activities effectively to ensure competent performance by students. The theoretical foundation of this model comes from behaviorism, cognitivism and constructivism views. And it's based on active learning. During teaching and learning activities, learner is active and uses cognitive learning to construct new knowledge. To construct new knowledge, educational technology materials are used. These materials are connected with goals and objectives. This study examines the effectiveness of the instructional design model (Isman - 2011) in developing the students teaching skills (Planning Teaching Domain) by redesign "General teaching methods course – curr 233-", which taught to the sixth level students at teachers' college, King Saud University. The sample of the study consisted of 80 students that enrolled in the second semester 2010/2011, they were divided into two groups of 40 students each, (an experimental group and a control group). The result comes by administered pre- post teaching skills test to find out the model has strong effectiveness in achieving the research aims especially in developing the student teaching skills.
Keywords: instructional design, teaching skills, Isman 2011 instructional design model.

INTRODUCTION

Instructional System looks large and consecutive development to keep up with changes resulting from the progress of science, technology and the subsequent rapid growth and constant in the era of knowledge. It was natural to strive instructional systems to adapt to these developments and understand concepts commensurate with the needs of the individual society. Focusing on continuity of learning motivation and work on activating the role of the teachers to be more positive roles, therefore the ability to participate in the production the ability to provide information by modern methods that are compatible with the characteristic of students and twenty-first century instead of the traditional methods.

Given global economic conditions that are increasingly forcing organizations' to downsize while simultaneously requiring an increase in productivity from their remaining, reduced workforce, instructional designers are increasingly called upon to produce higher quality instructional programs using ever more efficient methodologies. This new economy can be summarized in two words: change and speed (Gordon & Zemke, 2000, p44).

Instructional design research has historically focused on increasing learner efficiencies through the examination of areas such as cognitive load theory, the study of what instructional designers actually do to increase efficiency during the design of instruction. Therefore, Instructional events refer to actions of both teacher and learners during the teaching session. Selecting appropriate events and planning them in the right format and the right sequence is crucial in a successful lesson design. A lesson design is a plan showing the type of

instructional events, their order and the kind of activity taking place in each event. In designing a lesson plan, there are two important factors: the objectives and the learners.

Dick & Carey (2001) ; Ross &Kemp (2004) ; Smith & Ragan (1993) and Posner& Rudnitsky (2001) stated that the term instruction design can be defined as the systematic method for analyzing , designing , developing , evaluating and managing the instructional process efficiently on the knowledge and experience of learning and instructional theories .

Developing teaching skills is the umbrella of any activities doing in any teachers college around the world. Many educators use several approaches, method, frameworks and models to achieve this target. The Model is a schematic description of a system, theory, or phenomenon that accounts for its known or inferred properties and may be used for further study of its characteristics. The model can present complex information in a simpler way. And the model may be procedural (describing hoe something works) or conceptual (describing components and the relationship between these components). In this paper we take (Isman - 2011) instructional design model as Example for these efforts to enhancing and developing teaching and learning.

Arthur Markman (1999) stated that. Mental models are one way that humans represent knowledge (Markman, 1999, p44 Instructional Design is defined as "a conceptual model for developing instruction and typically includes analysis, design, development, implementation, and evaluation. (i.e., ADDIE model). The others say it is a central intellectual process that guides the design and development of successful learning environments (Nelson, Magliaro & Sherman, 1987, p87).

So we should know answer the following questions: ***What are ID models? What is the difference between ID & ICD Model?*** The terms Instructional Design (ID) and instructional Systems Design (ISD) could be used interchangeably. The same holds for Instructional Development and Instructional Systems Development; therefore, both can be used interchangeably. Kent Gustafson points out this mixed use of terminology in many places within each version of his Survey of Instructional Development Models (Dick & Carey,2001); for example, while Dick and Carey refer to their model as Instructional Design, (Gustafson & Branch,1997) Gustafson believes it should be categorized as an Instructional Development model.

Instructional System Design indicates the overall plan and it is concerned with the processes for any instruction regardless of the field. It works as a guide indicating how to implement as instruction. Basically and simply the routine of the instructional design includes and follows the stage of analysis, design, development, implementation and evaluation and shortly this model is called ADDIE. These are the common characteristics found in almost all instructional design models. (Baturay, 2008, 472)

Conceptual models have been created for teachers, professional developers, and others partners of Learning and Training Field, some models are advertised as applicable to a range of contexts, students, and content (e.g., Dick & Carey Model, Kemp Model, 3PD, 4C/ID-Model, Merrill's 5-Star Model and others Instructional Design Models).

Most of instructional design models agree in this points with different arrangements (basic description of the ADDIE component): **Analysis:** the initial information gathering activities which assess the what, who, how and why of the instructional activity. **Design:** designing the objectives and desired outcomes of the instructional activity and the overall plan such as timelines, strategies, lesson plans, etc. **Development**: the actual making of the instructional materials including instructor guides. **Implementation:** putting the plan and the instructional materials into action such as completing offering a computer –based instructional module. **Evaluation:** checking for the effectiveness of the instructional program both immediately and in the long run.

Isman (2011) presented new instructional design model in his paper entitled "instructional design in education: new model". The major goal of this model is to point up how to plan, develop, implement, evaluate, and organize full learning activities effectively so that it will ensure competent performance by students.

In addition, the main goal of this model is to organize long term and full learning activities. The new instructional design model is based on the theoretical foundation of behaviorism, cognitivism and constructivism. During teaching and learning activities, learner is active and uses cognitive, constructivist or behaviorist learning to conduct new knowledge. To construct new knowledge, educational technology materials are used. These materials are related with goals and objectives. Isman model is based on instructional system theory. It is occurred within the five stages. These are input, process, output, feedback and learning (Isman, 2011. p 142).

Isman (2011) in his paper descries the five steps which contains twelve stages: Input (five stages), Process (three stages), Output (two stages), Feedback (one stage), and Learning (one stage). The model steps divided into twelve stages which distributed in the five steps as follows in table (1).

Table (1) shows the steps and stages of (Isman- 2011) instructional design model

The step	The stages	The descriptions
1- The input step	1.1 Identify needs	Derived from a needs assessment with regard to particular curriculum by using survey, observation and interview methods to determine what the students need to learn. The definition of needs may be derived from a needs assessment with regard to particular curriculum
	1.2 Identify contents	The contents are derived from students' needs. The main goal of this step is to clarify what to teach
	1.3 Identify Goals-Objectives,	The goals and objectives are derived from need assessment and contents, and define what students will be able to do after instructional process. Goals and objectives usually contain skills, knowledge and attitudes. Skills could be psychomotor skills and intellectual skills. When students learn psychomotor skills, they develop muscular actions. When students learn intellectual skills, they develop cognitive activity such as discrimination, implementation and solving problem. The goals and objectives are derived from need assessment and contents
	1.4 Identify teaching methods,	Teaching methods should be related with content and goals because goals and objectives will be taught with the appropriate method
	1.5 Identify instructional media.	It tells us how to deliver the instruction to students. And apply communication and learning. Identify instructional media is based upon a review of needs, contents, goals and teaching methods. These instructional media should motivate students to learn and keep the new knowledge in the long term memory. It includes books, journals, graph, model, picture, poster, cartoon, newspaper, dioramas, trip, blackboard, multimedia, films, radio, telephone, television, computer, data projection, internet and others. The instructional media is usually used to enhance learning by instructional designer.
2- The process step	2.1 Test prototypes,	The main goal is to find out which stages are working and which stages are not working. Testing prototypes tells us what students really want to learn and how to get there
	2.2 Redesigning of instruction	After problems are identified, we reorganize instructional activities. To reorganize instructional activities, pre-testing plays a key role to design an effective instruction. If an effective instruction is designed well, instructional goals will be achieved successfully.
	2.3 Teaching activities.	Teacher begins teaching activities in terms of content, teaching methods, goals and objectives with instructional media.
3- The Output step	3.1 Assessment	Teacher uses formative and summative evaluation methods to check goals and objectives. This process requires teacher to implement assessment tools to determine whether the students did demonstrate the skills, knowledge, and attitudes that teacher described in instruction goals and objectives or not. When the students participate in the instructional activities, teachers want to know whether they learned what the instructional plan expected them to learn. Teachers should analyze the results and make decision on where to go in the instruction
	3.2 Revise instruction	We shall evaluate all instructional activities. If we find problems during the instructional design process. Then, we solve the problems after that redesign the instruction.
4- Feedback	4.1 Go back to related steps	The feedback process involves revise instruction based upon the data collected during the implementation phase. If, during the phase, teacher finds that students are not learning what the plan wanted them to learn, and/or they are not enjoying the learning process, teacher will want to go back to related step and try to revise some aspect of their instruction so as to better enable their students to accomplish their goals. During this cycle, instructional designer may go back to any steps to where a problem is occurred
5- Learning	5.1 Long term learning	The learning process involves full learning. In this process, teacher wants to make sure that their students have learned what the instructional plan wanted

The step	The stages	The descriptions
		them to learn. If, during the phase, teacher finds that their students accomplished their goals in the instructional activities, teacher will want to go new instructional activities. At the end of this step, long term learning is accomplished by instructional designer.

THE STUDY

In this paper, we have chosen a routine practical procedure that student teachers need to learn the designing lessons, instructional situations in the classroom lessons and the planning Teaching Skills. Therefore, we think that our duty is to improve the student teachers' understanding of instructional design models, its implementation in teaching, learning, and help student teachers design successful learning environments.

This study attempts to examine the effectiveness of the instructional design model (Isman - 2011) in developing the students' teaching skills (Planning Teaching Domain) by redesign "General teaching methods course – curr 233- which is taught , for the first time, to the sixth level students in teachers college at King Saud University, in the light of (Isman - 2011) instructional design model. Also the research tries to answer the following question: What is the effectiveness of using (Isman - 2011) instructional design model in developing the planning teaching skills for student teachers?

The researcher used the Quasi-Experimental approach design for equivalent groups. The population of the study consisted all male students at the curriculum department at Al-Riyadh Teachers' College- King Saud University during the second semester of the academic year 2010/2011. The sample of the study consisted of 80 students who were divided randomly in two groups of 40 students each, (an experimental group and a control group). In this research, the experimental group studied "General teaching methods course – curr 233- which redesign in (Isman - 2011) instructional design model, and the control group studied the original course as it is.

FINDINGS

To answer the first question: What is the effectiveness of using (Isman - 2011) instructional design model in developing planning teaching skills for student teachers? The researcher used an observation scale card to observe the planning teaching skills of the experimental and control groups as pretest and posttest. This scale card is the planning domain from "Teaching Skills Scale card" of (Isman, A. et al, 2012). The differences between two groups in planning teaching standards, at the pretest, are revealed in table (2).

Table (2) the differences between experimental and control groups in planning teaching standards at the pretest

Standards	groups	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
determining the students educational needs	Experimental	8.8250	2.09869	.33183	.499	78	.621
	control	9.0750	2.23478	.35335			
planning for greater targets not for detailed information	Experimental	4.6750	1.30850	.20689	-.172	78	.864
	control	4.6250	1.25448	.19835			
Designing suitable educational activities	Experimental	6.3500	1.09895	.17376	.557	78	.581
	control	6.5000	1.21950	.19282			

The previous tables revealed that there are no significant differences between experimental and control groups at the pretest in planning teaching standards, that mean the two groups are equivalents before the experimental treatment. After 3 weeks of teaching "the planning Teaching Unite" in "General teaching methods course – curr 233" the researcher made the posttest. The differences between two groups in planning teaching standards, at the posttest, are revealed in table (3).

Table (3) shows that the differences between experimental and control groups in planning teaching standards at the posttest

Standards	groups	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
determining the students educational needs	Experimental	24.7250	1.78293	.28191	8.856	78	.000
	control	20.2750	2.55190	.40349			
planning for greater	Experimental	11.3000	1.35495	.21424	1.410	78	.167

Standards	groups	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
targets not for detailed information	control	10.9000	1.15913	.18328			
Designing suitable educational activities	Experimental	17.0750	1.71550	.27124	7.977	78	.000
	control	13.8500	2.28204	.36082			

The previous tables revealed that there are significant differences between experimental and control groups at the pretest in the first and the third planning teaching standards, but there are no significant differences in the second planning teaching standards. Which indicates the model contributes in developing many of planning teaching skills especially in determining the students' educational needs and Designing suitable educational activities.

About the Experimental group that studied the redesign course, the differences between pre and post test as revealed in table (4).

Table (4) shows that the differences in planning teaching standards between pre and post test of Experimental group

Standards	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
determining the students educational needs	15.90000	2.80841	.44405	35.807	39	.000
planning for greater targets not for detailed information	6.22500	1.94129	.30694	20.281	39	.000
Designing suitable educational activities	10.72500	2.01262	.31822	33.703	39	.000

The result in table (4) shows that there are significant differences between the pre and posttest in favor of the posttest. This finding indicates that the model contributes in developing the planning teaching skills especially over the third standards.

To check the development in teaching skills over indicators, table (5) shows the differences between indicators over standards.

Table (5) shows the differences in planning teaching indicators over standards between pre and posttest of Experimental group

Standards	Indicators	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
determining the educational needs of the student	The teacher designs activities to explore the students' need and talents.	2.57500	1.05945	.16751	15.372	39	.000
	Uses different methods to determine the students' level of understanding.	2.80000	.96609	.15275	18.330	39	.000
	Encourages students to reflect about their life and personal experience.	2.50000	.96077	.15191	16.457	39	.000
	Uses dialogue as a means of knowing the needs and experience of students.	2.72500	.96044	.15186	17.944	39	.000
	Involves students in setting targets for the educational plan and its components.	2.55000	1.21845	.19265	13.236	39	.000
	Determines the stages of lesson planning according	2.75000	.89872	.14210	19.353	39	.000

Standards	Indicators	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
	to student needs and implements them during the time available.						
planning for greater targets not for detailed information	Teacher makes an integrated and comprehensive study of his subject to set his plan.	2.35000	1.02657	.16231	14.478	39	.000
	Adds to his plan motivating activities to encourage research.	1.80000	.93918	.14850	12.121	39	.000
	Sets educational objectives to develop critical thinking and methods of problem solving.	2.07500	1.20655	.19077	10.877	39	.000
Designing suitable educational activities	Teacher designs activities that increase effective learning time.	2.75000	.89872	.14210	19.353	39	.000
	Designs educational units and lessons in the light of long-term objectives.	2.47500	.81610	.12904	19.180	39	.000
	Plans lessons on the bases of his knowledge of the subject and the students.	2.65000	.86380	.13658	19.403	39	.000
	Designs educational activities that allow the use of diverse strategies such as peer and cooperative education.	2.85000	.80224	.12685	22.468	39	.000

The result in table (4) assess the result in table (3), Its shows that, there are significant differences between the pretest and the posttest in favor of the posttest, Also this finding indicates that the model contributes to developing the planning teaching skills in indicators over standards. Then the Results of statistical treatment indicated that, there are significant differences between means of pre-post treatment in Experimental group in favor of posttest. As Students thought, these results indicated that using (Isman - 2011) model helped them to improve their planning Teaching skills. In general, the result indicated that (Isman - 2011) instructional design model which had significantly increased the students competencies in planning lessons and their learning.

CONCLUSION AND DISCUSSIONS

The researcher thinks that until now, Isman (2011) model for instructional design hasn't measured its validity in teaching class, but the findings of this study are logic result. Because this model based on the theoretical foundation of behaviorism, cognitivism and constructivism, and using materials which related with goals and objectives and flows scientific consequence process from Identify needs, contents, Goals-Objectives, teaching methods, instructional media Through Assessment and Feedback to exist the long term learning. And this is compatible with the literature in the result of examining the instructional design model as:

Min Kyu Kim (2010) discusses an effort to improve training performance in a large corporate conglomerate in South Korea. In particular, focus is placed on a new instructional design (ID) model named the Cogwheel ID model. The cogwheel metaphor is used to illustrate the integrated processes within complex training organizations, including organizational, functional, and managerial elements. The model is likely to be directly applicable to other contexts where there are large organizations with a diverse set of sub-groups having different training requirements. In addition, the Cog-wheel ID model can inspire training practitioners to create their own ID solutions to manage and control the quality of training service in their complex organizations.

Le Roux, L & Oosthuizen, H (2010) presented an instructional design (ID) model positioned in the intersection between the positioning-based and resource-based theories and used a multi-disciplinary approach to extend the literature on ID models and offer measurable improvements in job-specific knowledge and productive behavior as proxies for sustainable competitive advantage. The research confirmed the contribution of the ID model in

this regard and described and substantiated the pivotal link between training and ID models and the application thereof in practice to aid organisations in the achievement and sustainability of competitive advantage. In this, the second article, the ID model will be subjected to empirical investigation and evaluated through the application thereof in a case organization and a grounded conclusion provided. Hence, this article presents a brief overview of the first article, and focuses on the research methodology, research results, analysis and interpretation; conclusions and assessment of the research.

Fazelian, Porandokht ; Ebrahim, Abdolrarim Naveh and Soraghi, Saeed (2010) investigated the effect of 5E instructional design model on learning and retention in sciences of middle school students. In this regard two hypotheses were tested: 1) 5E instructional design model that increases the learning of students. 2) The instructional design model that increases the retention of science lessons. Population was all middle school students in the city of Nahavand. The sample was selected by cluster sampling method and it was put into two experimental and control groups. Instrument consisted of a researcher made test, which was used as pre and post test during a six weeks period. Collected data was analyzed by ANCOVA and MANOVA. The result indicated that 5E instructional design model which had significantly increased learning and retention of science lessons.

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Appendix (1): The Planning Teaching Skills Scale card

Standards	Indicators	score				
		1	2	3	4	5
determining the educational needs of the student	The teacher designs activities to explore the students' need and talents.					
	Uses different methods to determine the students' level of understanding.					
	Encourages students to reflect about their life and personal experience.					
	Uses dialogue as a means of knowing the needs and experience of students.					
	Involves students in setting targets for the educational plan and its components.					
	Determines the stages of lesson planning according to student needs and implements them during the time available.					
planning for greater targets not for detailed information	Teacher makes an integrated and comprehensive study of his subject to set his plan.					
	Adds to his plan motivating activities to encourage research.					
	Sets educational objectives to develop critical thinking and methods of problem solving.					
Designing suitable educational activities	Teacher designs activities that increase effective learning time.					
	Designs educational units and lessons in the light of long-term objectives.					
	Plans lessons on the bases of his knowledge of the subject and the students.					
	Designs educational activities that allow the use of diverse strategies such as peer and cooperative education.					
	Total Domain score					