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NeedSport Project

Bringing Sport to Children with Special Needs

KA2-SE-7/18, 18/201-047041

NEEDSPORT Project Design Proposal

**As it is common in many projects in different areas, one of the major concerns of the research team is to identify or develop the project design to be used in the project. A project design** is seen as an iterative and social process very much related with the evaluation of choices and outcomes early-on, before committing to a course of action (implementation of the project). As it is common in most research & intervention projects, things change over time due to a variety of intrinsic and extrinsic reasons so one of the most important characteristics of a good design is to be easily adjusted.

The **project design**is perceived by teams that are starting to develop their projects as the capability to model, explore, and optimize complex projects and programs before committing to action. Thus, project designs allow project teams to guide, to predict and to anticipate potential incongruences, barriers and difficulties related to a certain specific project just before you start to implement it on the field as well as to assess potential implications on the intended outcomes.

The ADDIE Instructional Design (ID) method has been used for many year as a framework to design and develop educational and training programs with predictable success. Educators, instructional designers and training developers accept, value and find this approach very useful because it has been structured using clearly defines stages that facilitate the implementation of effective educational training tools. Historically, the concept of Instructional Design can be traced back to the early 1950s but ADDIE was not created until 1975. Originally developed for the U.S. Army by the Centre for Educational Technology at Florida State University, ADDIE suffered different revisions in its original hierarchical structure over the years transforming it into a more interactive and dynamic model. ADDIE presents five different basic components/stages: i) analysis; ii) design; iii) development; iv) Implementation and v) evaluation. These different stages/phases do not impose a strict linear progression, i.e., it is not compulsory that one stage has to be completed before starting the next.



Figure 1 – The five components (stages) of the ADDIE model

Available at: <https://educationaltechnology/the-addie-model-instructional-design/>

We will briefly present and discuss each one of the five stages of the project design and provide examples of the specific tasks to be developed in each phase, for the NEEDSPORT project.

**Analysis**

The analysis phase is usually considered as the “Goal-Setting-Stage”. The focus of the designer in this phase is on the target audience and on its characteristics. The major concern in this phase it to be sure that the project/program matches the level of skills, intelligence and capacity/availability of the participants. It is crucial, in this phase, that the project team is able to clearly identify what participants already know about the topic, what type of information is already available about the topic and to focus on new information that has to be explored and learned. Thus, it is important that in this phase the project team clearly identifies what is already known and which resources are available for the topic and what they should know and generate after finishing the implementation of the project.

In NEEDSPORT we will start by reviewing the evidence available for the major benefits of Sport and Physical Activity for people with disability using a systematic search identifying a potential number of studies that will provide us with the background to build up the foundations of our intervention program to promote sport and physical activity participation in people with disabilities. Additionally, we will search for other research projects already implemented with a similar aim in order to identify the best examples of good practices and potential suggested resources which will be taken in consideration when developing our program and our activities.

This type of procedure is relevant in the context of the project: i) to avoid duplication of relevant information; ii) to increase the quality of the material to be produced about the topic; iii) to provide an adequate answer adjusted to the needs of the people with disabilities; iv) to improve que quality of the Adapted Physical Activity services offered to people with disabilities fulfilling the mission identified by EUFAPA for APA professionals.

In this analysis phase, we should address issues and questions such as:

1. What is the typical background of the participants who will participate in the program/ target group? Personal and educational information, age group, nationality and previous experience and interests. What are the educational goals?
2. What are the participants needs? What they should achieve at the end of the program?
3. What are the desired outcomes in terms of knowledge, skills, attitudes and behavior?
4. Review existing instructional strategies? Are they adequate? Why not?
5. How will you promote the program and its learning outcomes? [face-to-face, web-based or both] What type of environment will be more adequate to implement the program? Which major motivational strategies will you use to motive participants to undergo on the program?
6. Identify potential limiting factors [human, technical, financial] to the overall goal of the project.

**Design**

In this phase we will focus on the goals, on the major tools to be used on the content of the activities to be implemented and on their planning and resources requirements. Thus, we will focus on learning objectives, content, exercises and sessions planning, as well as assessment instruments when required. During this phase we should adopt a systematic, logical, process identification, development and evaluation of planned strategies approach targeting to improve and adequate the type activities to be implemented to the characteristics and needs and expectations of the participants.

1. Types and levels of activities to be generated during the project. Are they going to be collaborative, interactive or on a per participant basis? What particular resources will be needed to implement them?
2. Which teacher´s style approach? Given the wide variety of participant´s preferences and learning styles, which method will you use to be sure that the program meets their wants and needs? What variety of delivery options and media types will you use to support that?
3. Time frame for each activity, how much time should be assigned to each activity? How will activities learning be implemented (task to task, circuit, etc.)? Will activities be organized requiring a linear progression (i.e. easier to difficult)?
4. What are the cognitive and psycho-motor skills prescribed for participants to achieve the project´s learning goals?
5. Knowledge and skill development after each task, is it possible to assess participant´s acquisitions? [define a minimum and an advanced level of expected performance for each proposed task]
6. Develop a road map of the project with the different activities and see whether they are in line with the goal of the project.
7. Which mechanisms will you use to check if the participant´s progression and learning?
8. Summarize the main idea of the project (training activity).

**Development**

The development stage starts with the production and testing of the methodology to be used in the project. Project designers make use of the data collected from the two previous stages, and use this information to create the project program itself that will relay on what needs to be developed and taught to participants with disability. The major purpose of this phase is to put the planning into action. For that three tasks are required: drafting, producing and evaluating the project. This development stage also involves creating and testing the learning outcomes. For that we aim to address the following questions:

1. Is the time frame being adhered to in relation to what has been accomplished in terms of material? Are we creating the materials according to the schedule?
2. Do you see team work across various project members? Are the members working effectively as a team?
3. Are participants contributing as per their optimal capacity?
4. Are the materials produced up to task on what they were intended for?

***Development proposal structure [Draft]***

**[Part 1]** Introductory theoretical information summary about the benefits of regular sports and exercise for people with disabilities, mainly about the relationship between the improvement of physical fitness (physical condition) and the reduction of risk disease and improvement of health and well-being.

**[Part 2]** Detailed description about sport and exercise activities and useful monitoring guidelines to promote regular sport activities and improvement of physical fitness [and health] in participants with physical, intellectual & developmental and sensory disabilities.

**[Part 3]** Description of activities, organized by:

**Team sports**

• Different areas of disability [physical, intellectual & developmental and sensory]

• Examples for major team sports in each area

• General training guidelines [intensity, frequency, type, duration, volume, progression]

• Sport agents intervention strategies (parents, teachers, coaches, local authorities, etc.) to promote team sport in people with disabilities

• Examples of good practice for team sports (short summary)

**Individual sports**

• Different areas of disability [physical, intellectual & developmental and sensory]

• Examples for major individual sports in each area

• General training guidelines [intensity, frequency, type, duration, volume, progression]

• Sport agents strategies (parents, teachers, coaches, local authorities, etc.) to promote individual sport in people with disabilities

• Examples of good practice for individual sports (short summary)

**Physical activity and exercise**

* Different areas of disability [physical, intellectual & developmental and sensory]
* Different ways to improve physical fitness using informal (physical activity) and formal (exercise) activities
* Exercise prescription and monitoring guidelines [intensity, frequency, type, duration, volume, progression]
* Sport agents strategies (parents, teachers, coaches, local authorities, etc.) to promote regular physical activity & exercise in people with disabilities
* Examples of good practice for fitness & health improvement (short summary)

**Implementation**

The implementation stage reflects the continuous modification of the program to make sure maximum efficiency and positive results are obtained. Here is where Instructional Designers (IDs) strive to redesign, update, and edit the course in order to ensure that it can be delivered effectively. “Procedure” is the key word here. Much of the real work is done here as IDs and participants work hand in hand to train on new tools, so that the design can be continuously evaluated for further improvement. No project should run its course in isolation, and in the absence of proper evaluation from the IDs.

Since this stage gains much feedback both from IDs and participants alike, much can be learned and addressed. Design evaluation is done in the implementation phase. Designers play a very active role in this stage, which is crucial for the success of the project. Developers should consistently analyze, redesign and enhance the product to ensure effective product delivery. Meticulous monitoring is a must. Proper evaluation of the project course (activities and services), with necessary and timely revisions, is done in this phase. When instructors and participants actively contribute during the implementation process, instantaneous modifications can be made to the project, thus making the program more effective and successful.

The following are examples of what can be determined:

1. Advise on the preferred method of record keeping, as well as the actual data you would like to mine from the experience of participants interfacing with the project.
2. What is the emotional feedback given to you by instructors and participants during initial demonstration of the project? Are they genuinely interested, eager, critical or resistant?
3. As the project proceeds, do you see that IDs are able to grasp the topic immediately or do they need help?
4. Explain how you are going to deal with any possible errors during testing. What will your response be if, after presenting activities to participants, things do not go as planned?
5. Did you prepare a back-up tool in the event of initial failure of the project? When technical and other problems arise do you have a back-up strategy?
6. Will you go for implementation on a small scale or a large scale?
7. When the participants get the material can they work independently, or is constant guidance required?

**Evaluation**

The last stage of the ADDIE method is Evaluation. This is the stage in which the project is being subjected to meticulous final testing regarding the what, how, why, when of the things that were accomplished (or not accomplished) of the entire project.

This phase can be broken down into two parts: Formative and Summative. The initial evaluation actually happens during the development stage. The Formative phase happens while participants and IDs are conducting the study, while the Summative portion occurs at the end of the program. The main goal of the evaluation stage is to determine if the goals have been met, and to establish what will be required moving forward in order to further the efficiency and success rate of the project.

Every stage of the ADDIE process involves formative evaluation. This is a multidimensional—and essential—component of the ADDIE process. Evaluation is done throughout the implementation phase with the aid of the instructors and the participants. After implementation of the project program is over, a summative evaluation is done for instructional improvement. Throughout the evaluation phase the designer should ascertain whether problems relevant to the training program are solved, and whether the desired objectives are met.

[Evaluation](http://educationaltechnology.net/kirkpatrick-model-four-levels-learning-evaluation/) is an essential step of the whole ADDIE method as it aims to answer the following questions:

1. Determine the categories that will be established to evaluate the effectiveness of the project (i.e. improved learning, increased motivation etc.) On what factors or criteria will the effectiveness of project be determined?
2. Determine the way you will implement data collection, as well as the timing at which it will be effectively made. When will the data related to the project’s overall effectiveness be collected and how?
3. Determine a system for analyzing participant feedback.
4. Determine the method to be used if some parts of the project need to be changed prior to full release. On what basis will you arrive at a decision to revise certain aspects of the project before its full implementation?
5. Determine the method by which reliability and content validity can be observed.
6. Determine the method by which you will know if instructions are clear. How is the clarity of instructions assessed?
7. Determine the method by which you can analyze and grade the response of the participants on the project.
8. Determine who gets to receive your final output regarding the project. Who will prepare this report on the results of the evaluation?

Kurt, S. "ADDIE Model: Instructional Design," in Educational Technology, August 29, 2017. Retrieved from <https://educationaltechnology.net/the-addie-model-instructional-design/>