“TÉCNICA DEL NORTE” UNIVERSITY

ENGINEERING SCHOOL OF APPLIED SCIENCE

SCHOOL OF COMPUTER ENGINEERING SYSTEMS

TECHNICAL MANUAL

MULTIMEDIA EDUCATIONAL SYSTEM FOR KINDER IN KICHWA LANGUAGE – MESKL

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IBARRA – ECUADOR

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CHAPTER I: INTRODUCTION

1.1. KICHWA

Quechua or Quichua (Kichwa) is a language family native to the central Andes that extends along the western side of South America through six countries. It is spoken by between 8 and 10 million people and is the most widespread language family in Bolivia, Peru and Ecuador after the Indo-European.

1.1.1 KICHWA IN IMBABURA

Northern Quechua, or simply Quichua (Kichwa shimi) is the second most spoken language of the Quechua language family (branch of Quechua II) used in Ecuador.

This form of communication is used more by indigenous peoples as a means of cultural exchange.

1.1.2 THE INTERCULTRUAL BILINGUAL EDUCATION OF IMBABURA

The Intercultural Bilingual Education of Imbabura began operations as an institution since May 15, 1995 through a Ministerial Agreement issued by the Ministry of Labour.

Is a public institution comprised of the peoples of the Kichwa and mestizo nationality people, formed by professionals with criterion of change, able to carry forward the process intercultural bilingual education in the province. The services are aimed at children, youth, teachers, technical teachers, administrators, auxiliary services, community educators and community members of the intercultural bilingual jurisdiction of the province of Imbabura.

The main goal of this institution is the attention to the education of indigenous peoples in Imbabura who wants to maintain social, cultural and linguistic particulars which need to implement an education policy according to their reality and needs.

1.2. METODOLOGY FOR DEVELOPMENT OF EDUCATIONAL SOFTWARE

1.2.1 DENIFITON

Is a set of procedures, techniques, tools, and supporting documentation that helps software developers to perform again, this all is called "software development methodology, software engineering also could be defined as a framework used to structure, plan and control the process of developing information systems.

1.2.2 ADOPTED METODOLOGY FOR MESKL

Para la construcción de un software educativo es necesario tener en cuenta tanto aspectos pedagógicos, como técnicos, en su desarrollo que consiste en una secuencia de pasos que permiten crear un producto adecuado a las necesidades que tiene determinado tipo de alumno, necesidades que deben ser rigurosamente estudiadas por la persona que elabora el material y que se deben ajustar a las metodologías de desarrollo de software educativo presentes en el momento de iniciar dicho proceso.

Por lo tanto se vuelve necesario aplicar una metodología estrictamente para la creación de este tipo de producto, como el que se tiene a continuación.

For the construction of educational software is necessary to have pedagogical, and technical, points of view for development that consists of a sequence of steps for creating a product that meets the student needs, and to be carefully studied by the producer of the material and must conform to the methodologies of educational software development present at the time of initiating the process.

Therefore becomes necessary to apply a strict methodology for creating this type of product, such as that provided below.

1.2.3 METODOLOGY FOR DEVELOPMENT OF EDUCATIONAL SOFTWARE (DESED)

La metodología consta de 13 pasos fundamentales, en los cuales se toman en consideración aspectos de Ingeniería de Software, Educación, Didáctica y Diseño gráfico, entre otros. Es importante que el desarrollador de SE planee su producto de software y considere las características planteadas en cada fase del desarrollo; ya que la finalidad misma de la metodología es la creación de productos de software creativos, pero que vayan de la mano con los planteamientos de una materia, método didáctico y tipo de usuario específico; porque, no todos los aprendizajes pueden, ni deben, ser planteados de la misma forma, ya que las capacidades de los usuarios varían según la edad, medio ambiente y propuesta educativa[1].

The methodology consists of 13 key steps where are taken into consideration aspects of Software Engineering, Education, Teaching and Graphic Design, among others. It is important that the developer planned to be software product and consider the features arising at each stage of development since the very purpose of the methodology is the creation of creative software

[1] http://www.revistaupiicsa.20m.com/Emilia/RevMayDic06/GustavoDESED.pdf

products, teaching method and type of specific user, because not all learning can or should, be raised in the same way as the capabilities of users vary according to age, environment and educational approach

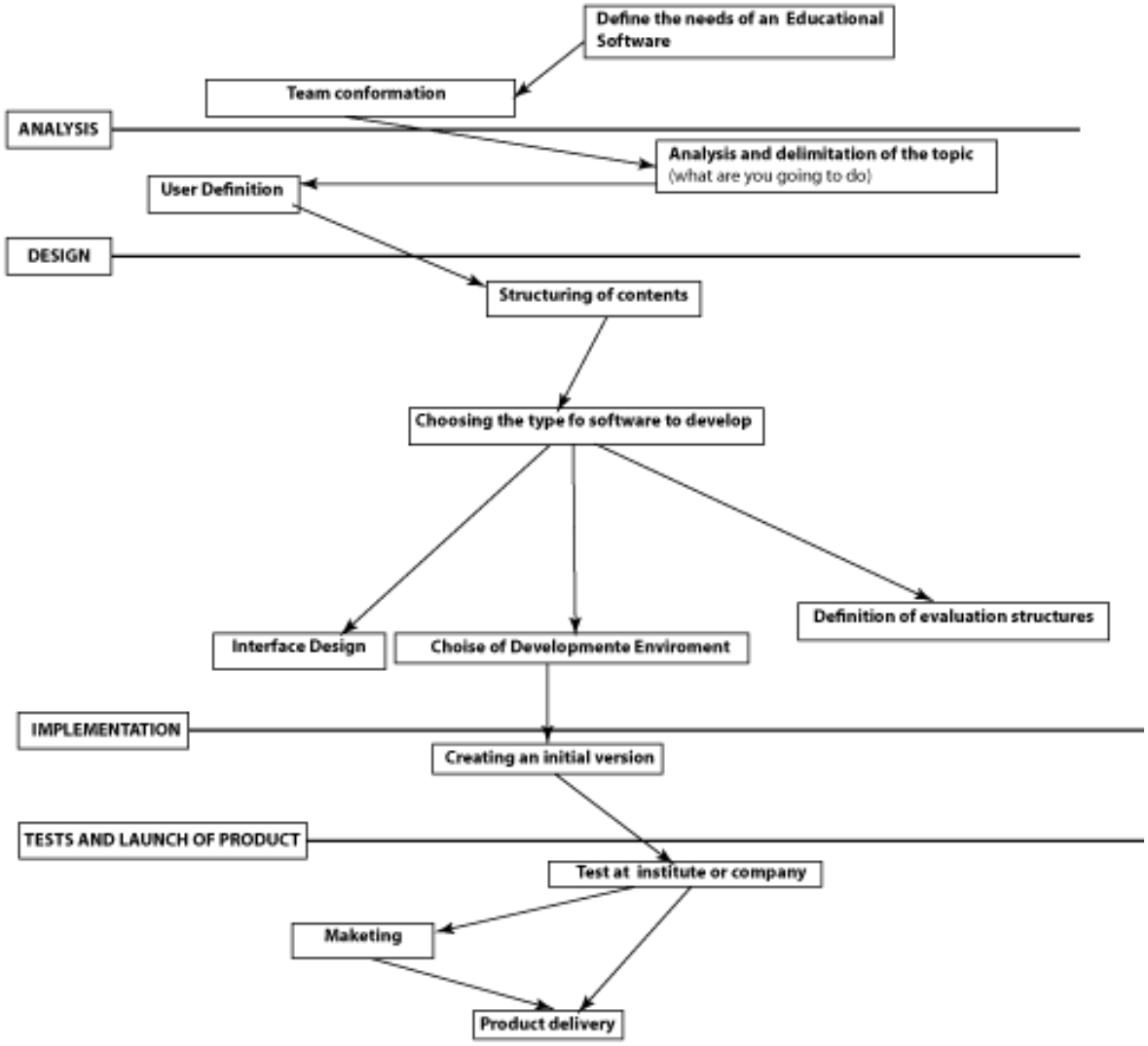

Figure 1: Scheme for DESED methodology.

1.3. JUSTIFICATION

For the development and description of the processes was aborted using the RUP, because it did not fully fit and there is no standard methodology for Multimedia.

Therefore, it was the need to seek another kind of methodology based on Software Engineering, to serve as the basis for the creation of the educational system in question.

Then I decided to apply the methodology (DESED) "Educational Software Development", because it adjusted the most for the previous researches.

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CHAPTER II: ANALYSIS

2.1. THE SEED OF THE IDEA.

This project was born from the initiative of Mr. Irving Reascos and Mr. Raúl Moreta who after performing the pre-professional training in ANTARES-IT Switzerland, and having used programs made in the native language of the Swiss (Swiss-German), decided to make programs in our own language, in my case the Kichwa, so I am helping to rescue of this wonderful ancient language that is being lost, as many Indians opt more for speaking other languages. Also worth noting that to date the project started there is no mass distribution technology resources for classrooms in Kichwa.

2.2.1 DEFINITION

The project named "Multimedia Education System for Kinder in Kichwa language" - MESKL, is based on educational materials of both Spanish and Kichwa, with 8 modules / units which are based on the 8 schemes environmental projects that apply in the first year of elementary.

2.2.2 JUSTIFICATION

Existiendo al momento de iniciar el proyecto casi una ausencia software educativos escolares en lengua Kichwa, por la falta de apoyo y de materiales nuevos en las escuelas rurales lo que ha imposibilitado:

At the time of starting the project almost there are no school educational software in Kichwa language, lack of support and new materials in rural schools making it impossible to:

- Provide visual aids in education classrooms
- Improving the learning process.
- Eliminating monotonous teaching problems.
- Improving the teaching process.
- Reduce learning time and economic resources

Afecting to:

- School academic programming.
- Teachers.
- Students.
- Community.

For this reason we develop the first educational software in Kichwa language, aimed at basic education, which will support rural schools of Cotacachi.

2.4.1 SKETCHES OF SCREENS.

2.4.1.1. MÓDULE 1: THE WAY OF KNOWLEDGE

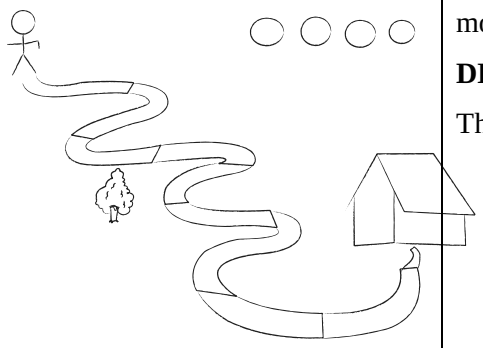

Figure 2: Module 1

GOAL. Increase knowledge of the basic colors and the movement of the mouse

DESCRIPTION:

There are four colors on top: yellow, blue, red, green.

- Then the user must listen to the color that calls for painting the little way to go.
- If correct answer is progressing.
- If wrong answer it does nothing.

METHOD OF ACTION. Using the mouse click on the correct color, which give an action to the user's response, whether valid or invalid.

Table 1: Sketch of module 1

2.4.1.2. MODULE 2: MY AROUND

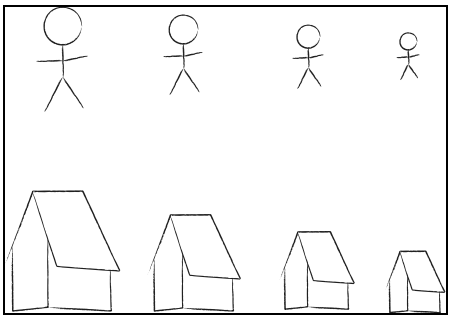

Figura 3: Module 2

GOAL. Increase the concept of object size.

DESCRIPTION:

On top are four characters interchangeably.

The user has to drag the characters to the proper place according to size.

- If correct answer is located in the correct position.
- If wrong answer to the character returns to its place

METHOD OF ACTION. The user drags objects according to size

Table 2: Sketch of module 2

2.4.1.3. MODULE 3: ANIMALES

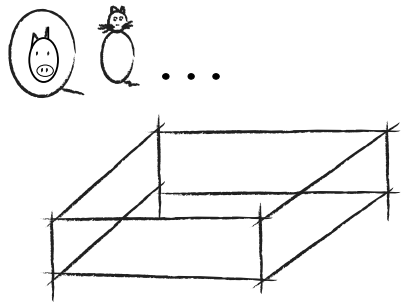 *Figure 4: Module 3, Animales.*	**GOAL.** Increase the knowledge gained in class about animals and numbers 1 and 2. **DESCRIPTION:** We have a group of animals. There will be a question via audio. Correct answer appears as a bonus smiley faces. Incorrect sad faces **METHOD OF ACTION.** The user must indicate using the mouse eg animals that are under the fence .

Table 3: Sketch of module 3

2.4.1.4. MODULO 4: WE ARE PLAYING

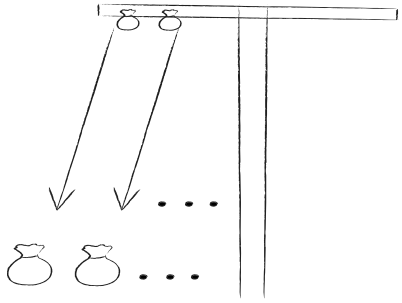 *Figure 5: Module 4, Juguemos*	**GOAL.** Increase the knowledge gained in the classroom and begins to increase learning in terms of numbers 3. **DESCRIPTION:** Hanging objects will appear on the wood. – The software makes a question to the user. – If correct answer increases the number of smiley faces. – If incorrect response increased the number of sad faces **METHOD OF ACTION.** The user interacts with the mouse joining the objects.

Table 4: Sketch of module 4

2.4.1.5. MODULE 5: NUMBERS

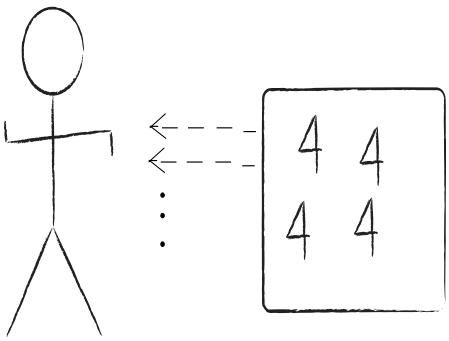

Figure 6: Module 5

GOAL. Increase knowledge acquired in the classroom, on 4, 5 and 6.

DESCRIPTION:

Displayed X number of numbers or objects.

The software makes an order.

If correct answer increases smileys.

If incorrect answer it does nothing.

METHOD OF ACTION. The user interacts with the computer where he made mouse movements and drag objects from one place to another.

Table 5: Sketch of module 5

2.4.1.6. MODULE 6: ON THE MARKET

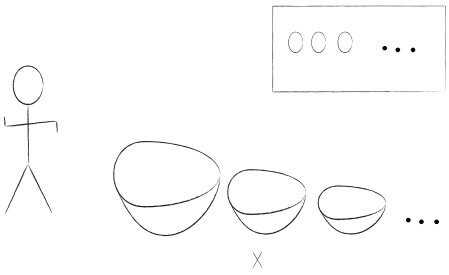

Figure 7: Module 6

GOAL. Increase knowledge acquired in the classroom, 7 and 8

DESCRIPTION:

There will be a table of items, some baskets and a number X under the basket.

The software gives and order -put "X items in the basket?.

If correct answer increases the number of smiley faces.

If incorrect response increases the number of sad faces

METHOD OF ACTION. The user interacts by dragging objects, according to the number that corresponds, which give an action to the user's response, whether valid or invalid.

Table 6: Sketch of module 6

2.4.1.7. MODULE 7: HAPPY BIRTHDAY

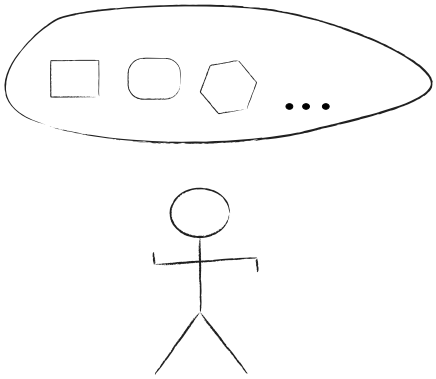 *Figure 8: Module 7, Cumpleaños*	**GOAL.** Increase the knowledge gained in the classroom, memory, numbers 9 and 0. **DESCRIPTION:** There are a set of options for a particular purpose. The software askes the user. What are the ingredients we need to make a bread?. If correct answer increases the number of smiley faces. If incorrect response increases the number of sad faces. **METHOD OF ACTION.** The user will interact with objects by pressing on them with a click, which give an action to the user's response, whether valid or invalid

Table 7: Sketch of module 7

2.4.1.8. MODULE 8: MY DREAMS

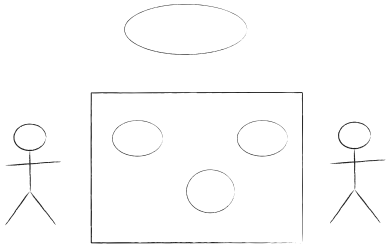 *Figure 9: Modelo 8, de Matemática*	**GOAL.** Increase the knowledge gained in the classroom, vocal, numbers 1-0 **DESCRIPTION:** At the top there is the sample. The computer will perform an order to follow the user. If correct answer increases a smiley face. If incorrect response increases a sad face. **METHOD OF ACTION.** By one click the user shows the vowels or objects shown in the sample, which give an action to the user's response, whether valid or invalid.

Table 8: Sketch of module 8

NOTE: FOR DETAILS OF SUBMODULES GO TO SEMPAK DOCUMENT

2.4.2 ADVANTAGES OF THIS SOFTWARE.

The material in development, will be a great contribution to the educational, motivating and providing knowledge to the children of the institution, specifically for kinder of 5 years old because there is a weakness in communication with the children who speaks Kichwa and because there are absence of Kichwa language of teaching materials, to provide assistance in the institution.

The developing material will provide a dual education in the sense that the user will not only entertain, but will enhance their knowledge of the matter and at the same time learn and assimilate the knowledge of the Kichwa language.

The children will have a high self-esteem having software that have is made in their own language.
By increasing self-esteem will recognize and identify with their culture.
In obtaining the above are not only rescuing Kichwa language and also the cultural value.

2.4.3 ACTIVITY BY PROFESSIONAL PROFILE.

Professional	**Activity**
Pedagogue.	Create models of learning for Readiness area considering limiting the Kichwa language.
Techear.	Makes revisions of the learning models developed by the pedagogue, which will verify their experience from day to day implementation of the model
Linguist.	Perform interpretations of the topics from Spanish to Kichwa
Graphic Designer.	Represent the ideas of professionals, educators and teachers to a visual medium.
Developer.	Schedule interactions between learning models, stocks, entertainment and communication between the user's computer.

The creation of a multidisciplinary team as the one mentioned above becomes simply recommended, for this reason the student will work with Mr. Luis Rivas as content planner, Professor Jose Jesus Menacho in reviews, Mr. Rigoberto Cachiguango as a graphic designer on the applicability largely assume the roles of other professionals.

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CHAPTER III: DESIGN

3.1. MODELS OF TEACHING-LEARNING THROUGH KICHWA.

Although the DIPEIBI and other organizations make efforts to globalize a methodology of teaching - learning which can be the guide and apply the teaching of Kichwa in the area, and even schools are unaware of the existence of some guidance or find it difficult to adapt to other methodologies different from those that are applying, which may be of support to accomplish our goal, we decided to take another approach. We take Spanish textbooks and make translations and interpretations.

3.2. DETERMINATION OF SPECIFIC OBJECTIVES.

To begin to identify the specific objectives, you must have the support of an expert or teacher who has experience with the kinder in the age of 5.

It should be understood that a particular aim in teaching and learning are the parts of a whole, which must first examine its parts and then understand the whole.

As an example we can add the process to paint, first the student must learn the skills, then you can apply, and builds up a chain of knowledge to reach a whole, this process is referred to specific objectives.

3.2.1 SPECIFIC OBJECTIVES OF MODULE 1:

- Recognize colors: yellow, blue, red and green
- Periodically clean the classroom.
- Increase colors: yellow, blue, red and green.
- Recognize geometric shapes in the environment.
- Recognize types of fruit.
- The puzzle game, mouse movement.

3.2.2 SPECIFIC OBJECTIVES OF MODULE 2:

- Distinguish the type of clothing.
- Identify the type of clothing.
- Increase colors: yellow, blue, red and green.
- Precision of mouse movement.
- Specify the puzzle game mouse movement.
- The puzzle game, mouse movement.

3.2.3 SPECIFIC OBJECTIVES OF MODULE 3:

- Placing animals: near, far, up, down, over.
- Distinguishing marks: Lola, Inti, chicken and dog.
- Strengthen notion: in and out.
- Increasing geometric shapes: square, triangle, circle.
- Distinguish the utensils you need the nurse.
- Recognition of number 1.
- Recognition of transportation: cars, planes, ships and trains.
- Recognition of the number 2.
- The puzzle game, mouse movement.

3.2.4 SPECIFIC OBJECTIVES OF MODULE 4:

- Recognition of colors: orange, purple. Increasing the colors: yellow, blue, red and green.
- Recognition of equal trompos.
- Rescue of traditional games: paloencebado.
- Recognition of 3.
- Count and write numbers: 1, 2 and 3.
- Traffic sign recognition: UNA VIA. Notion of left and right.
- The puzzle game, mouse movement.

3.2.5 SPECIFIC OBJECTIVES OF MODULE 5:

- Strengthen the colors: green, red, brown, yellow, orange, purple, white-black,white-blue.
- Recognition of the number 4.
- Recognize series: 1, 2, 3 4 and 5.
- Recognition of the number 5.
- Distinguishing sets of elements: 1, 2, 3, 4 and 5.
- Strengthen series: 1, 2, 3, 4 and 5.
- Recognition of the number 6.
- The puzzle game, mouse movement.

3.2.6 SPECIFIC OBJECTIVES OF MODULE 6:

- Strengthen the fruit: pear, apple, banana and orange.
- Recognize the fruit and juice by color: pineapple, tree-tomatoe, strawberry, grape and orange.
- Distinguish the fruits of other foods.

- Recognize the vegetables in a salad.
- Recognition of the number 7.
- Distinguish moods: sad, happy, angry and amazed.
- Strengthen the recognition of numbers 1, 2, 3, 4 and 5.
- Distinguish between quantity and number.
- Recognition of the number 8.
- The puzzle game, mouse movement.

3.2.7 SPECIFIC OBJECTIVES OF MODULE 7:

- Recognition of the ingredients to make bread.
- Recognition of the number 9.
- Observe and distinguish types of cakes.
- Recognition of the number 0.
- Recognize objects through their similarities using the logic.
- The puzzle game, mouse movement.

3.2.8 SPECIFIC OBJECTIVES OF MODULE 8:

- Observe and recognize the vowel a.
- Observe and recognize the vowel i.
- Recognize and write numbers in ascending order: 1, 2, 3, 4, 5, 6, 7, 8 and 9.
- Recognize and write numbers in descending order: 1, 2, 3, 4, 5, 6, 7, 8 and 9.
- Distinguish between day and night, and the sleeping children awake.
- Strengthen and watch the numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9 and 0.
- Observe and recognize the vowel u.
- The puzzle game, mouse movement.

3.3. FLOW CHARTS CONSTRUCTION

The flow charts represent an overview of the performance cycle of activities, processes and tasks running within a program, which provides a great help as a start in the encoding process.

To represent the different processes I used the following shapes for standard representation.

3.3.1 DEFINITION OF FLOW CHARTS

Flow diagrams are geometric figures or combinations to represent the process flow of an activity, program, etc.

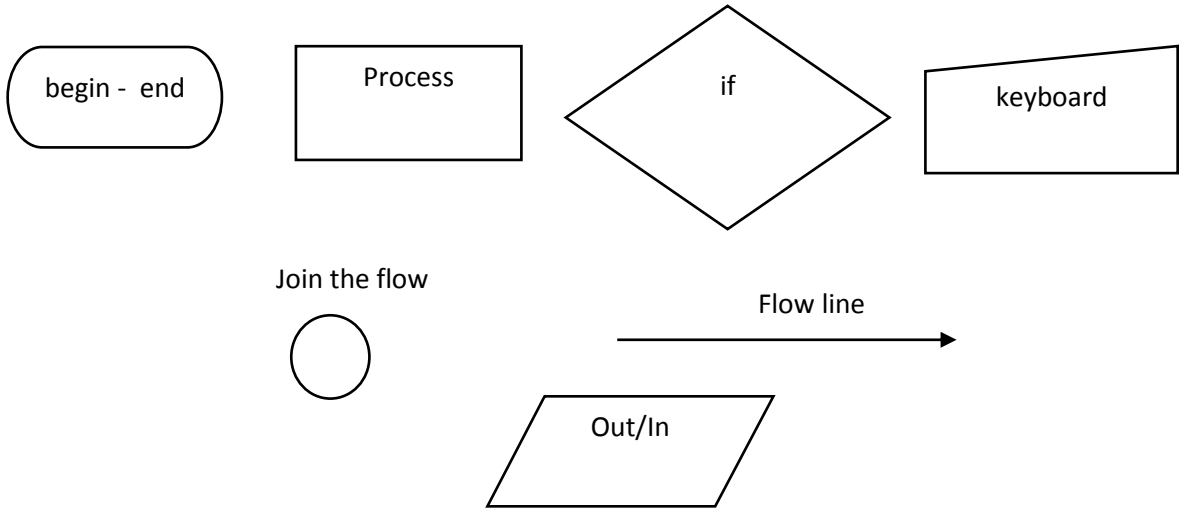
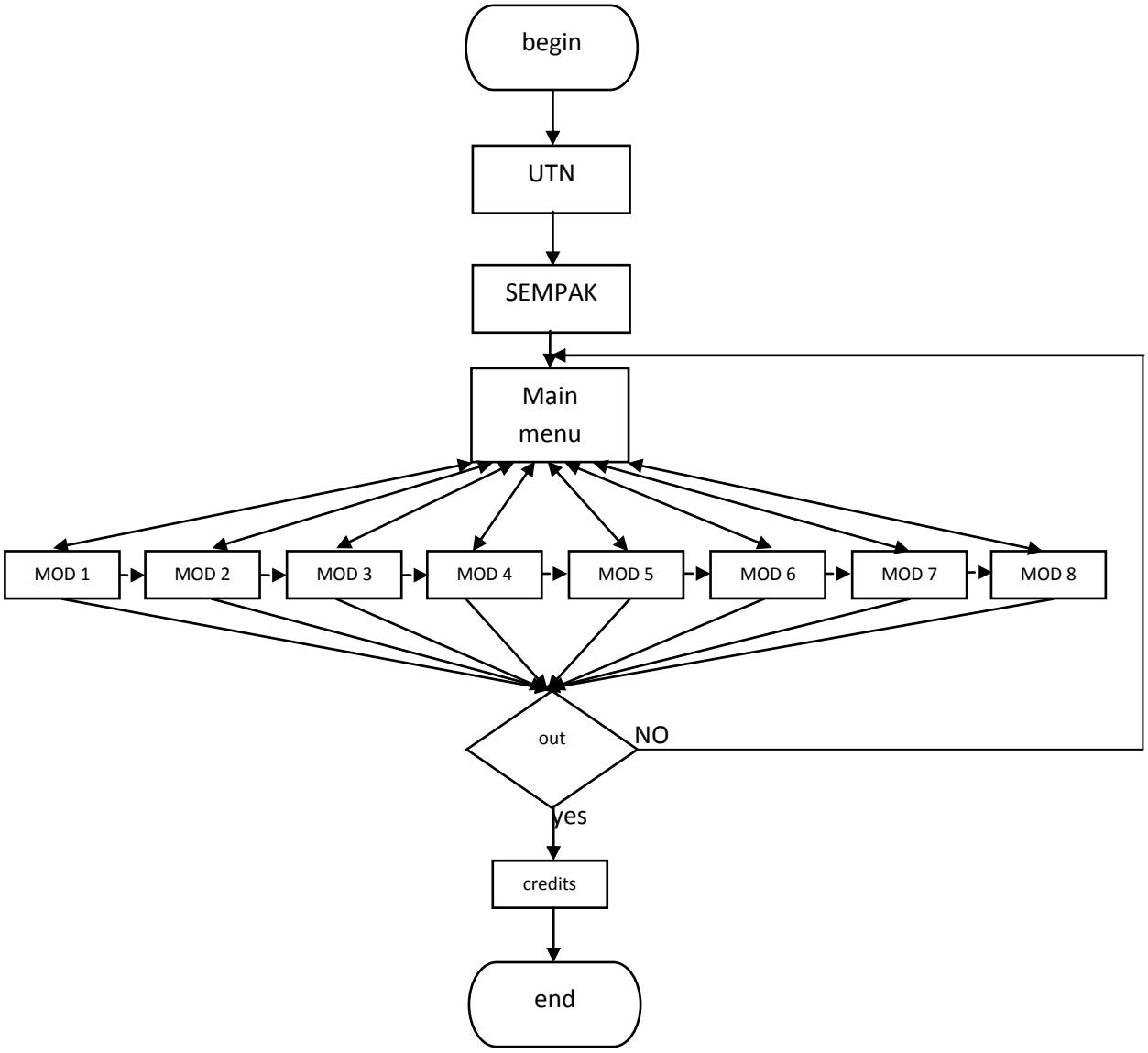


Figure 1: Flow charts

3.3.2 FUNCTIONAL PROCESS OF MESKL (SEMPAK)



UTN=UNIVERSIDAD "TÉCNICA DEL NORTE"

MOD=MODULO

SEMPAK=Sistema Educativo Multimedia para Primer Año de Educación Básica, en lengua Kichwa.

Figure 2: Functional stages SEMPAK

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CHAPTER IV: IMPLEMENTATION

4.1 DEVELOPMENT SOFTWARE TOOLBOOK 10.0

ToolBook's ease-of-use and flexibility enable you to quickly meet your content development needs. ToolBook includes features ranging from simple drag-and-drop authoring to sophisticated automation features - all designed for you to get results fast. With ToolBook, users can meet tight deadlines while delivering high quality content.

Thousands of global companies have selected ToolBook as their e-learning authoring tool of choice, making it the de facto standard for creating training and software simulation content.s

Use ToolBook to create a wide range of elearning applications, from Regulatory Compliance Training, to Sales Force readiness, Software simulations, Quizzes, Assessments and much more… Get inspired by seeing how others are using ToolBook in the E-learning Showcase section or read the Case studies for more information about how ToolBook is helping companies every solve their e-learning challenges.

Easy to Learn

Familiar PowerPoint-like authoring environment.

Getting Started guides and tutorials included with ToolBook.

Easy to Use

ToolBook includes wizards, customizable templates, and a catalog of reusable objects that ensure high authoring productivity as well as a consistent look and feel in your content.

Automatic standards support: content can be published as HTML to any SCORM 1.2, SCORM 2004 or AICC-compliant Learning Management System (LMS) without any programming. You can also publish to CD-ROM, the Internet, Intranet or LAN.

Easy integration of media. Drag and drop ToolBook's Universal Media Player into your content to include video, sound or Flash animations.

ToolBook creates plain HTML and JavaScript for Web deployment, eliminating the need for a plug-in.

Powerful

Integrate media to create highly interactive e-learning content for high-fidelity software simulations, soft skills training, quizzes and secure online compliance certifications.

Rapidly author and achieve your instructional design goals with customizable assessment objects.

Automation capabilities with ToolBook's OpenScript helps you meet tight deadlines and eliminates repetitive work.

Don't take our word for it, take a free test drive to see for yourself.

Image 1: Toolbook 10.

4.1.1 JUSTIFICATION

En el anteproyecto consta el uso de TOOLBOOK 9.0 que tienen en la universidad, pero luego de realizar una minuciosa investigación más que todo en la parte para la utilización de gráficos se constató que no se puede utilizar gráficos de extensión: .png[2], .ai[3], ya que esto era muy importante debido a que se va a utilizar en modo web y el usuario final son los niños de 5 a 6 años en donde el gráfico juega un papel importante.

At the benning of this software I use of TOOLBOOK 9.0 which is possible to get from the University , but after conducting a thorough investigation mostly in part to the use of graphics toolbook 9.0 does not support graphics extension:. png,. ai, as this was very important because it will be used in web and the end user are children ages 5 and 6 where the graph plays an important role.

[2] Portable Network Graphics es un formato de imágen
[3] ADOBE ILUSTRATOR, es un formato de imagen vectorizado.

4.2 GRAPHIC DESIGN TOOLS: ILUSTRATOR, FIREWORKS, PHOTOSHOP

4.2.1 JUSTIFICATION

These tools are best used for graphic design as it does so vectorized and this very important property to maximize and / or minimize because it does not distorts the original image.

4.2.2 ADOBE AUDITIÓN 3.0

This tool is easy to use for audio editing as in my case was to record sounds such as instructions in mp3 format because of size and TOOLBOOK 10 recommendation for the inclusion of audio, and was used for editing background music with mp3 extension.

4.3 DEVELOPMENT AND IMPLEMENTATION OF THE FINAL SKETCHES

It is time to begin implementing the final hand painted graphics which was showed in the previous chapter. It is important to emphasize that the team stayed together for this project. To say the designer can not be separated from the programmer, as the graphics that are taking shape must be consistent with the final draft and provided end user focus. In my case I appreciate the cooperation and understanding of Rigoberto Cachiguango at each stage of development

Then it should be noted that all images are original project extension. ai, then using Fireworks and Photoshop were exported to png format, which are recommended by TOOLBOOK 10 for exporting to WEB.

The sounds and background music were recorded with Adobe Audition 3 saved in mp3 format.

4.4 THE 8 UNITS-SOFTWARE CONTENT

4.4.1 PAINTING THE SCHOOL WAY.

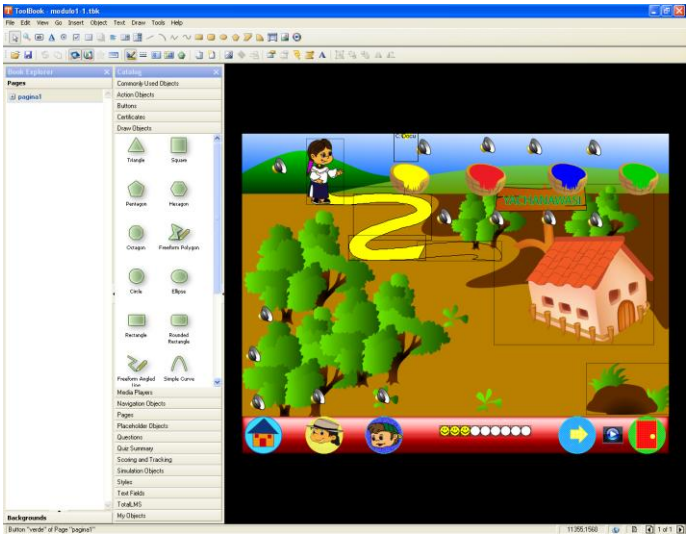

Image 2: Module 1.

4.4.2 THE CLOTHING

Image 3: Module 2.

4.4.3 THE ANIMALS

Image 4: Modulo 3.

4.4.4 THE TROMPO.

Image 5: Module 4.

4.4.5 DOMESTIC AND WILD ANIMALES.

Image 6: Module 5.

4.4.6 SISA SELLING FRUITS

Image 7: Module 6.

4.4.7 SISA AT THE SUPERMARKET

Image 8: Module 7

4.4.8 THE a VOWEL.

Image 9: Module 8

“MULTIMEDIA EDUCATIONAL SYSTEM

FOR KINDER IN KICHWA LANGUAGE ”

MESKL

CHAPTER V: TEST

5.1 TESTS

- ¿Están conformes los usuarios finales, para los que se destinó el software?
- ¿El software elaborado es aplicable, aporta en algo a la educación?

Son los puntos más importantes que debemos considerar, ya que de nada vale si dentro de un sistema educativo uno de estos dos puntos no se cumple.

Para lo cual es necesario realizar pruebas pilotos o pruebas de campo con los usuarios finales que son: niñ@s y docentes con la finalidad de descubrir los posibles puntos en que se deba mejorar en el aplicativo.

Dado que el sistema desarrollado es un conjunto de 59 juegos de eduentretenimiento con el cual los niñ@s van a reforzar los conocimientos ya adquiridos; cada juego es distinto en la escenificación, contenido y presentación de información, se tomó la siguiente estrategia; evaluar cada uno de los juegos de todo el paquete desarrollado, por medio de una encuesta personalizada luego de haber utilizado el aplicativo.

Since we have completed the coding of all the scenes and made the necessary checks in relation to possible errors, sequencing, navigation between modules, animations, use of colors, sounds, text, among others, turn to the most important :

Are users happy using this software?

Brings the software something to the education?

These two questions are the most important things to consider.

For this reason it is necessary to make a test at users, in this case children of 5 years old.

For this assessment is based on report cards that teachers use with students in schools and colleges and has considered the following equation

TEACHERS REPORT:

0	-	10 Insufficient
11	-	13 Regular.
14	-	16 Good.
17	-	18 Very good.
18	-	20 Excelent.

Evaluation chart:

0	-	13 bad.
14	-	16 normal.
17	-	18 good.
19	-	20 Excelent.

Equivalence percentages:

0%	-	65%	bad.
66%	-	80%	normal.
81%	-	90%	good.
91%	-	100%	Excelent.

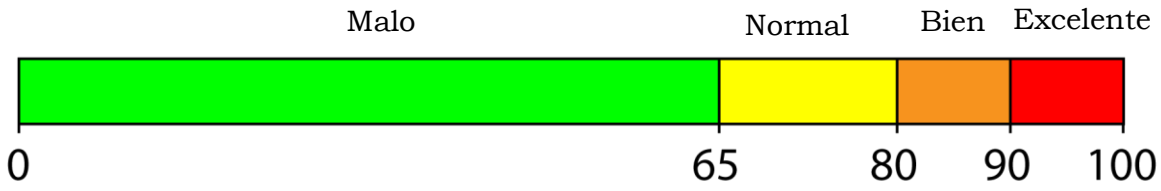

figure 1: percentage tabulation.

OK VALUE IN BAD CATEGORY:

0 - 65%

Hacemos que 65%→100%, luego por regla de tres:

$$\text{VAC1} = \frac{VMC1^2}{100} = \frac{65\%^2}{100\%} = 42{,}25\%$$

Gráfico 2: Ecuación para la categoría malo

Donde, VMC1=Valor Máximo de cada Categoría Malo.

OK VALUE IN NORMAL CATEGORY:

66% - 80%

Hacemos que 80%→100%, luego por regla de tres:

$$\text{VAC2} = \frac{VMC2^2}{100} = \frac{80\%^2}{100\%} = 64\%$$

Gráfico 3: Ecuación para la categoría normal

Donde, VMC2=Valor Máximo de cada Categoría Normal

OK VALUE IN GOOD CATEGORY:

81% - 90%

Hacemos que 90%→100%, luego por regla de tres:

$$\text{VAC3} = \frac{VMC3^2}{100} = \frac{90\%^2}{100\%} = 81\%$$

Gráfico 4: Ecuación para la categoría bien

Donde, VMC3=Valor Máximo de cada Categoría Bien.

OK VALUE IN EXCELENT CATEGORY:

91% - 100%

Hacemos que 91%→100%, luego por regla de tres:

$$\text{VAC4} = \frac{VMC4^2}{100} = \frac{100\%^2}{100\%} = 100\%$$

Gráfico 143: Ecuación para la categoría excelente

Donde, VMC4=Valor Máximo de cada Categoría Excelente.

Con esta deducción la fórmula general queda de la siguiente forma:

$$\text{Prom./Item} = \frac{\sum VALOR * VAC}{Muestra}$$

Gráfico 5: Ecuación general

En donde: Valor = Valor asignado en cada categoría.

VAC= Valor Aceptable en Cada Categoría.

Muestra= Número de niños que evaluaron el sistema.

5.2 EVALUATION TO CHILDREN OF CECIB "JOSÉ DOMINGO ALBUJA"

Student list:

1. Bonilla Morán Elvis Jhoel
2. Quiranza Piñán Daniel Elías
3. Morocho Tabango Saira Daniela
4. Morán Ruiz Jenny Cristina
5. Farinango Sanda Lucía
6. Farinando Pérez Saira Narcisa
7. Lanchimba Caranqui María Marisol
8. Perugachi Taya Luis Andrés

5.3 AVERAGE OF CHILREN EVALUATION

module	Parcial average
1	81,82
2	81,23
3	81,83
4	81,81
5	80,48
6	81,54
7	81,66
8	79,86
Global average	**81,28**

table 1: children evaluation

5.4 EVALUATION TEACHERS OF MAIN MENU

ÍTEMS A EVALUAR	VALOR				
	BAD	NORMAL	GOOD	EXCELENT	Prom./Item
Facilidad de visualizar los contenidos				3	100,00
Facilidad de usarlo				3	100,00
Calidad del entorno audiovisual				3	100,00
Calidad de colores			2	1	87,33
Originalidad				3	100,00
				PROMEDIO	**97,47**

Tabla 2: Evaluation teachers of main menu evaluation

5.5 AVERAGE OF TEACHERS EVALUATION

Modules	Parcial average
1	96,10
2	97,08
3	98,03
4	96,55
5	100,00
6	99,85
7	89,28
8	95,07
Global average	**96,50**

Tabla 3: Average of teachers evaluation

NOTE: IF YOU WANT TO KNOW DETAIS OF BOTH EVALUATION PLEASE SEE SEMPAK DOCUMENT