Phase V – Testing

1. Functional Test

The Functional test is used to evaluate the performance of a system against the functional requirements gather during the system analysis phase. The following table describes whether or not the functional requirements for our system have been met.

Functional Requirement	Satisfy
1. Message board must be included	Yes
2. Must contain an authentication system	Yes
3. Must contain shopping cart	Yes?
4. Must contain a frequently Asked Questions section	Yes
5. Must contain Contact Page	Yes
6. Must contain a History page for each Genre of music	Yes
7. Must contain Registration form	Yes
8. Must contain a Printable order form	Yes
9. Written explanation of moves along with pictures	Yes
10. Must contain a Team Biographies section	Yes
11. Must include Dance-related links	Yes
12. Must contain a site map	Yes
13. Using ASP for website security	Yes
14. Email validation system	Yes
15. Administrator must be able to filter messages from message board	Yes?
16. Only major credit cards companies will be accepted (MasterCard, Visa, American express)	No
17. Only a registered member can pay using a valid debit card	Yes?
18. New customers are required to register by creating a new account	Yes
19. During the registration process users are required to enter: name, user ID, password twice, and email address	Yes
20. Notification of incomplete registration	Yes
21. Non-registered users will only be able to view some videos samples only, contact us page, and the team bios.	Yes
22. User last and first name must be have maximum length of 20 characters, must be alphanumeric.	Yes
23. The Log ID and Password must both be alphanumeric characters and 12 characters long.	Yes
24. Email address (alphanumeric & max 30 characters)	Yes
25. No two users with the same user name can log into the registered area.	Yes
26. Only registered users can download videos, purchase DVD, and access additional resources	Yes

27. Registered users can fill out a printable order form	Yes

Explanation of Non-Satisfy requirements:

3. The system must contain shopping cart

- The system does contain a shopping cart, which allows users to select any amount of DVD for purchase, but because of financial difficulties the backend of the shopping cart is not functional since we could not afford the merchant license.

14. There is an e-mail validation system in the register form to make sure the users enter a correct e-mail address

15. The Administrator must be able to filter messages from message board

- The administrator is able to delete message posted on the message board, but it must be done through the back-end. Meaning that the administrator has to go into the database and physically remove the messages, there if no option in the front-end designs to remove messages.

16. Only major credit cards companies will be accepted (MasterCard, Visa, American express)

- Because the shopping cart is not fully functional, because of financial reasons previously explained, the account system is not connected to any credit card company
- If the shopping cart was fully functional this requirement would have been met, our system would only accept major credit card to avoid fraud or other problems

17. Only a registered member can pay using a valid debit card

- In our system only register members have access to the shopping cart that would allow them to purchase the DVD
- Currently the shopping cart cannot validate credit cards; therefore all credit cards are accepted.

Overall the system developed meets most important requirements. The main features required by the users were included, such as the FAQ section, message board, videos, written description of moves, and other resources. The web site provides and extensive array of moves that users can learn from. The quality of the videos and other content was positively rated as explained in the acceptance test. The system itself received a good evaluation from the users; therefore the missing features did not impact our success. In the future when the time and financial challenges no longer exist the system will be updated and will include all the features mention in the original design.

2. Performance Test

The Performance test of a system has to answer the following question, "Are the non-functional requirements met?" To answer this question a survey was given out to 50 individuals, then the results were analyzed to determine their satisfaction. This only tested some of the non-functional requirements, therefore to test the remaining requirements the system had to be thoroughly examined by the system analyst.
The following is a list of the Non-Functional requirements and an explanation on how our system satisfies these requirements.

Non-Functional Requirement	**Satisfy**
1. Clear Video Images	Yes
2. Footwork and hand positioning need to be emphasized	Yes

3. Synchronization of steps and music	Yes
4. User-friendliness of videos	Yes
5. Reducing download time for videos	Yes
6. HTML, JavaScript, Flash, and XML used to reduce download time (of web page)	Yes
7. Reduce download time of page by using less pictures (graphics)	Yes
8. Good organization layout of website (good navigation)	Yes
9. ASP host must be fast and reliable	Yes
10. Website must incorporate fresh look (pictures, colors, and up-to-date music)	Yes
11. Must accommodate different learning styles	Yes
12. Must accommodate various forms of payment	Yes
13. Moves should be broken down into respective levels for expertise	Yes
14. Must contain highlights of events and updates	Yes
15. Must incorporate a naming convention for file names	Yes

1. Clear Video Images: To test this non-functional requirement the following statement was included on the survey: “The images clearly depicted each of the moves”

Frequencies

Statistics

Clear Video Images

N	Valid	50
	Missing	0

Clear Video Images

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<10%	1	2.0	2.0	2.0
	10-30%	1	2.0	2.0	4.0
	30-50%	18	36.0	36.0	40.0
	50-70%	18	36.0	36.0	76.0
	70-90%	8	16.0	16.0	92.0
	>90%	4	8.0	8.0	100.0
	Total	50	100.0	100.0	

After obtaining the frequency by using SPSS of results for the above statement as shown below, it was determined that the 40% of our users are not satisfied with the clarity of our

images, while the other 60% are satisfy. This tell us that we if we want to satisfy all of our customers we have to improve the quality of our videos in the next version of our project. On the other hand since the videos shown in the website are only suppose to be teasers to get the users to purchase the DVD the quality of the videos would remain the same. We might also keep the same video because if the quality improves the download time will increase. Overall since 60% of our customers are satisfied with the videos, in this version, they will remain the same.

2. Footwork and hand positioning need to be emphasized: To test this requirement the users of our system were ask to evaluate their satisfaction. This statement was included on the survey. “Footwork and hand-positioning are emphasize in the videos"

Frequencies

Statistics

Footwork and hand positioning

N	Valid	50
	Missing	0

Footwork and hand positioning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10-30%	7	14.0	14.0	14.0
	30-50%	9	18.0	18.0	32.0
	50-70%	22	44.0	44.0	76.0
	70-90%	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

68% of the people that responded to our survey are satisfied with the emphasis of footwork and hand positioning in our videos, therefore our project has satisfy this requirement, although there is always room for more improvement.

3. “Synchronization of steps and music” was another non-functional requirement. This requirement is satisfy in the DVDs since the dancers perform the moves to the rhythm of Latin music. On the other hand, this requirement was not satisfy in the web site since the video size will increase dramatically if sound was also included. This decision was taken since the main goal of our project is to keep download time to a minimum. To make up for this, the users have the option of playing a song by clicking a “Music On” button located in the main page.

4. The user-friendliness of videos was tested by asking the user to rate the following statements:

Video Quality
The video size was large enough to get a good visual of the moves
The images clearly depicted each of the move
Footwork and hand-positioning are emphasize in the videos
The type of instructions used in the videos were effective

Frequencies

Statistics

Quality of Videos

N	Valid	50
	Missing	0

Quality of Videos

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.67	1	2.0	2.0	2.0
	2.67	2	4.0	4.0	6.0
	3.00	1	2.0	2.0	8.0
	3.17	7	14.0	14.0	22.0
	3.33	3	6.0	6.0	28.0

3.50	1	2.0	2.0	30.0
3.67	4	8.0	8.0	38.0
3.83	5	10.0	10.0	48.0
4.00	5	10.0	10.0	58.0
4.17	2	4.0	4.0	62.0
4.33	5	10.0	10.0	72.0
4.50	4	8.0	8.0	80.0
4.67	2	4.0	4.0	84.0
4.83	1	2.0	2.0	86.0
5.00	2	4.0	4.0	90.0
5.17	1	2.0	2.0	92.0
5.33	1	2.0	2.0	94.0
5.50	1	2.0	2.0	96.0
5.83	2	4.0	4.0	100.0
Total	50	100.0	100.0	

The analysis as attached above shows that the users have a wide range of responses when it comes to video quality and therefore video user-friendliness. 52% of the respondents stated that they agree with the quality of the videos and the other 48% did not agree. This once again tells us that the video quality needs to improve, but only if the main focus of our project is to have videos with perfect quality. This is not the goal of our project; the goal was to minimize download time and to sell DVDs. The download time of videos has decreased dramatically. Therefore the users can get taste of some the moves included in our DVD, which has videos of excellent quality since they are no longer vectorized.

5. The download time for videos was reduced by vetorizing them.

6. The following languages were used in the design the implementation of the website: HTML, JavaScript, Flash, and XML

7. Very few pictures are used throughout the website to keep the download time to a minimum. The only section that has a considerable amount of pictures is the move

explanations. Although this increases the download time, it was imperative to include the still images of the moves so that the users can fully comprehend the moves.

8. The organizational layout or layout structure was tested by asking the user to rate the following statements:

Layout Structure
The main content of the page is in a centralized location
The layout of the text is consistent throughout all the pages
The overall look of the website is consistent
The graphics used in each page makes the layout consistent
The colors used give the site a consistent look
The color of text made the content easy to read
The size of the text made the content easy to read
The style of the text made the content easier to read
The size of the graphics is appropriate
The location of the graphics contribute to the effectiveness of the web site
The use of graphics aided in understanding the content of the web site
The graphics provided on the web site are of good quality

Frequencies

Statistics

Layout Structure

N	Valid	50
	Missing	0

Layout Structure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.98	1	2.0	2.0	2.0
	4.00	1	2.0	2.0	4.0
	4.04	1	2.0	2.0	6.0
	4.08	1	2.0	2.0	8.0
	4.17	1	2.0	2.0	10.0
	4.19	1	2.0	2.0	12.0
	4.27	1	2.0	2.0	14.0

4.29	1	2.0	2.0	16.0
4.35	1	2.0	2.0	18.0
4.38	2	4.0	4.0	22.0
4.44	2	4.0	4.0	26.0
4.48	1	2.0	2.0	28.0
4.48	1	2.0	2.0	30.0
4.50	4	8.0	8.0	38.0
4.54	1	2.0	2.0	40.0
4.56	1	2.0	2.0	42.0
4.58	2	4.0	4.0	46.0
4.63	2	4.0	4.0	50.0
4.67	1	2.0	2.0	52.0
4.69	3	6.0	6.0	58.0
4.73	1	2.0	2.0	60.0
4.75	2	4.0	4.0	64.0
4.81	1	2.0	2.0	66.0
4.85	1	2.0	2.0	68.0
4.85	2	4.0	4.0	72.0
4.88	1	2.0	2.0	74.0
4.92	1	2.0	2.0	76.0
4.94	1	2.0	2.0	78.0
4.96	1	2.0	2.0	80.0
5.00	1	2.0	2.0	82.0
5.02	1	2.0	2.0	84.0
5.10	1	2.0	2.0	86.0
5.17	1	2.0	2.0	88.0
5.19	1	2.0	2.0	90.0
5.25	1	2.0	2.0	92.0
5.42	2	4.0	4.0	96.0
5.50	1	2.0	2.0	98.0
5.63	1	2.0	2.0	100.0
Total	50	100.0	100.0	

As shown in the above tables the people interviewed have diverse feeling on layout structure. But 98% of the users agree with the layout structure the layout and only 2% disagree. This proves that we have met this requirement.

9. ASP host must be fast and reliable was another requirement. Although we aim to please our users and meet our goals this requirement is out of our hands. We are

using a free ASP server, due to financial constraints; therefore have little to do with the performance of the server.

10. . Website must incorporate fresh look (pictures, colors, and up-to-date music). To test this requirement users were asked to rate the use of color and video quality of our site. We did not test up-to-date music since there is only one song included in the web site.

Frequencies

Statistics

Use of Color

N	Valid	50
	Missing	0

Use of Color

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	1	2.0	2.0	2.0
	3.67	2	4.0	4.0	6.0
	4.00	9	18.0	18.0	24.0
	4.33	7	14.0	14.0	38.0
	4.67	6	12.0	12.0	50.0
	5.00	10	20.0	20.0	70.0
	5.33	4	8.0	8.0	78.0
	5.67	5	10.0	10.0	88.0
	6.00	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

94% of the users agreed with the colors used on the website. Their answers were that they agree, strongly agree, and extremely agree with the colors; therefore this requirement has been met.

11. To accommodate different learning styles we provided the user with a video demonstrating each move. In addition to take we included still images and written instruction that break down the moves.
12. To accommodate various forms of payment the user has the option of paying with a credit card or printing a mail-in form to purchase the DVD.
13. The moves are broken down into beginner, intermediate and advance levels for each genre. This in turn accommodates the different level of expertise of our users.
14. The main page contains highlights and event updates. The highlights inform the users of the most recent updates to the web site and the event section informs the events happening in the tri-state clubs.
15. A strict naming convention was followed when videotaping the clips and uploading them to the website.

For example this were the names used for the Salsa video for the beginner level:

Level	Name of Move	File Name	Description
Beginner			
Solo	Basic	SalBegBasic	(front/back view)
	Side Basic	SalBegSideBasic	Side to side alone (front/back view)
	Basic Self Turn	SalBegSelfTurn	by yourself (front/side view)
	Cross Basic	SalBegCrossBasic	Paterson Basic (front/side view)

3. Acceptance Test

Acceptance Test is a formal test conducted to determine whether or not a system meets the users expectations. In order to determine if our system satisfies the acceptance criteria of the users we distributed a questionnaire to 50 individuals. The format of the questionnaire was as follow: a statement regarding one of the variables was provided and then the interviewee was asked to check of an appropriate response. The acceptable responses were Extremely Disagree, Strongly Disagree, Disagree, Agree, Strongly Agree, and Extremely Agree.

To develop the questionnaire we first read and analyze literature reviews related to web site design and user satisfaction. Then the following process was followed to develop the survey.

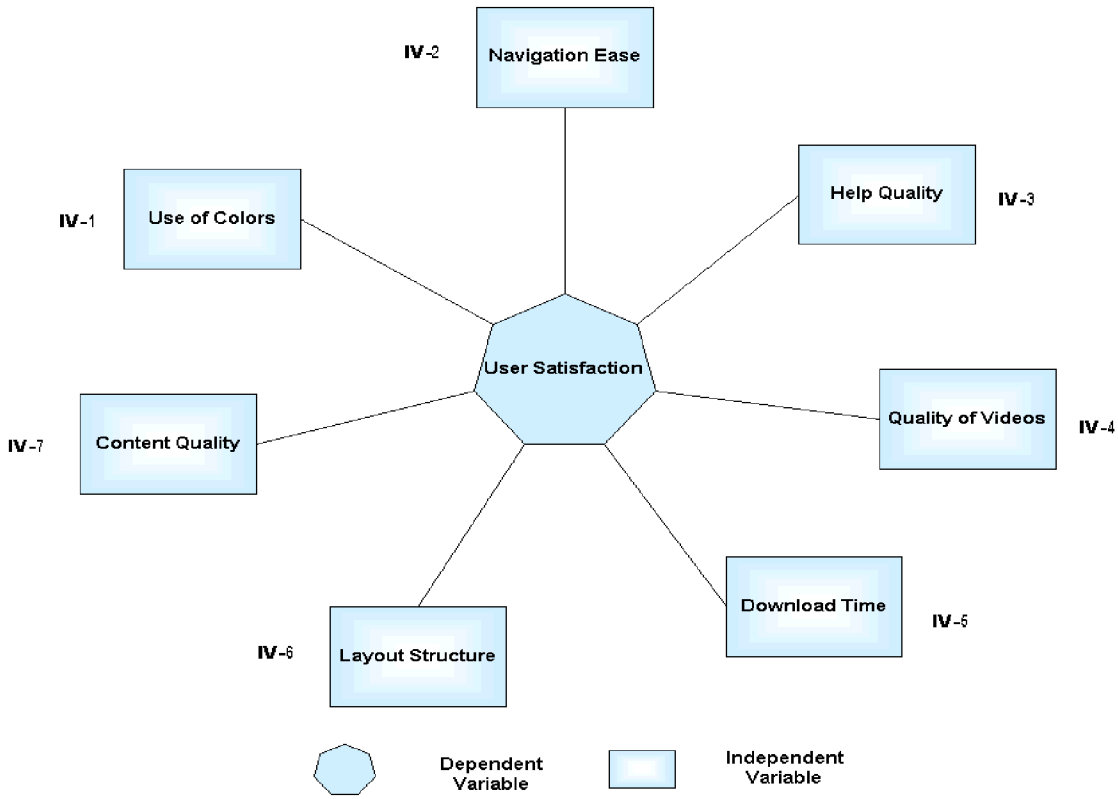
1. The main goal of the survey was determined:

To obtain a subjective measurement of the users' satisfaction with our system

2. The dependent variable was extracted from the main goal, which is "User Satisfaction"

3. The independent variables were then determined from the definition of user satisfaction.

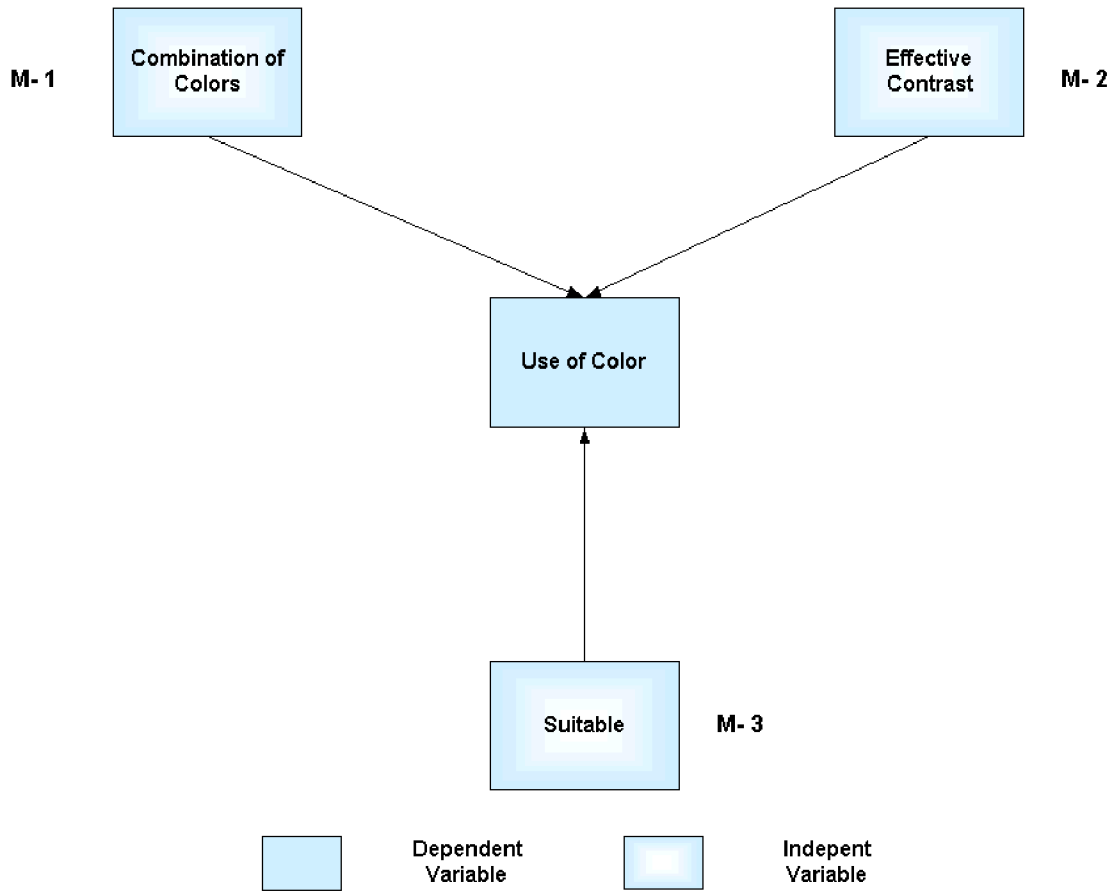
"Overall satisfaction encompasses every aspect of the offering from the user's viewpoints."



4. The independent variables were further decomposed by obtaining their definitions and then applying those same definitions to our system.

4.1 **Use of Color:** "the goal is to present information. It has to be legible"

- "The primary concern with color is that there be a significant, but not jarring, contrast between the background and the foreground 'palette' of color"

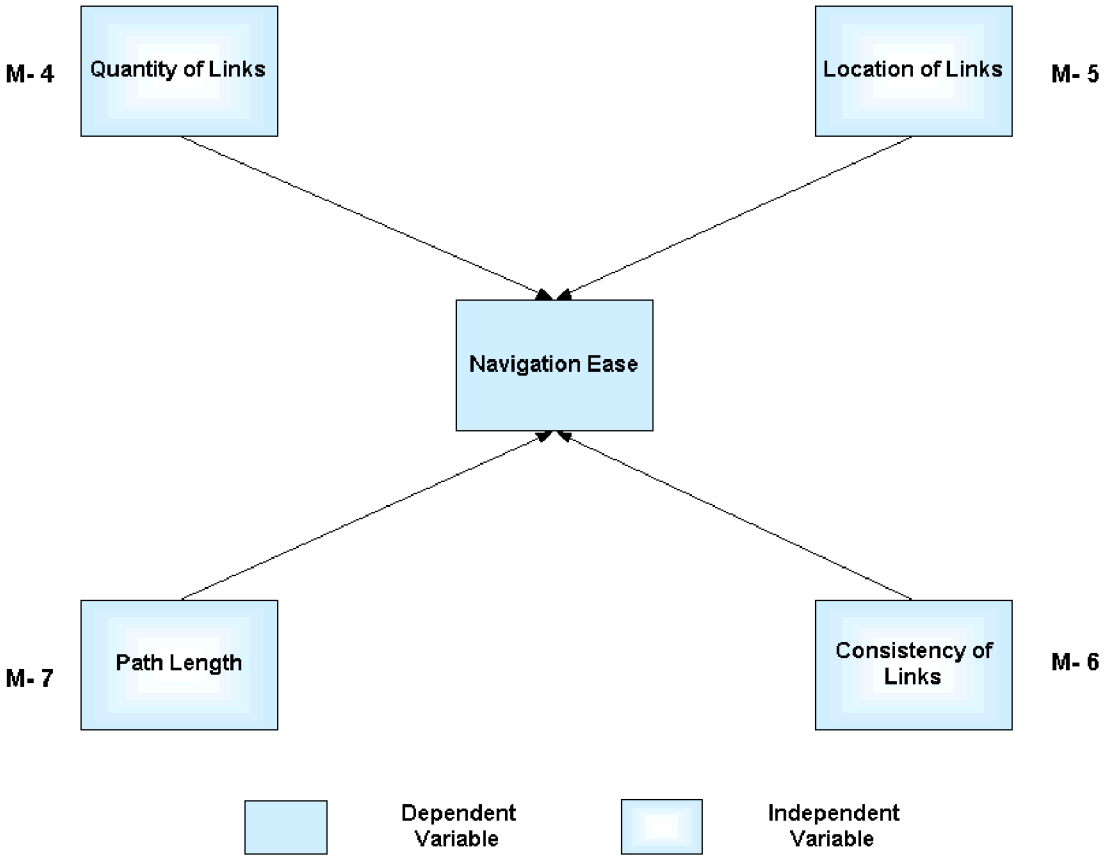


4.1.1 From these variables the following statements were obtain:

- The text is visible against the background color
- The colors are suitable for the page content and purpose
- The combination of blue, light blue and white made the website more presentable

4.2 **Navigation Ease:** it refers to the "organization of the page or site". "Is the use of text and images (or any other method) to guide a user through your site. It's a way to connect the different parts of your site and help the user choose where to go."

- Path Length: "Users want to get in, get the information, and get out. They should be able to find anything on your site in just three clicks"
- Location of Links: "Consistent site design goes a long way toward making your site easily navigable"
- Location of Links: "Don't make you visitors look for links, differentiate then from the rest of your site"
- Quantity: "should be placed in every page"

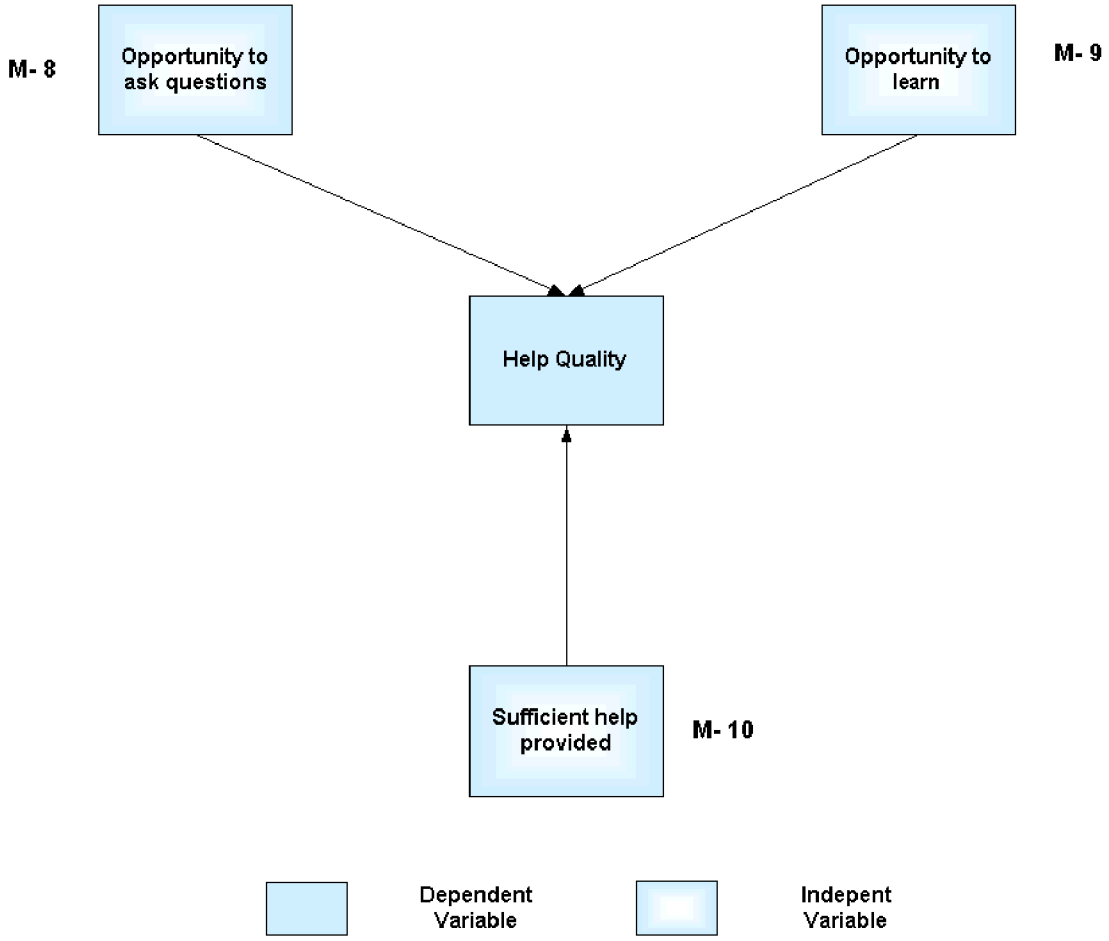


4.2.1 After breaking down Navigation Ease other independent variables the following statements were obtain:

- There are enough links in the web site
- The location of the links help me navigate the site better
- The amount of links you have to click on before you get to your desired location is not excessive

- The location of the links is consistent throughout the page

4.3 **Help Quality**: This variable test the quality of the help provided by our web site to the users.



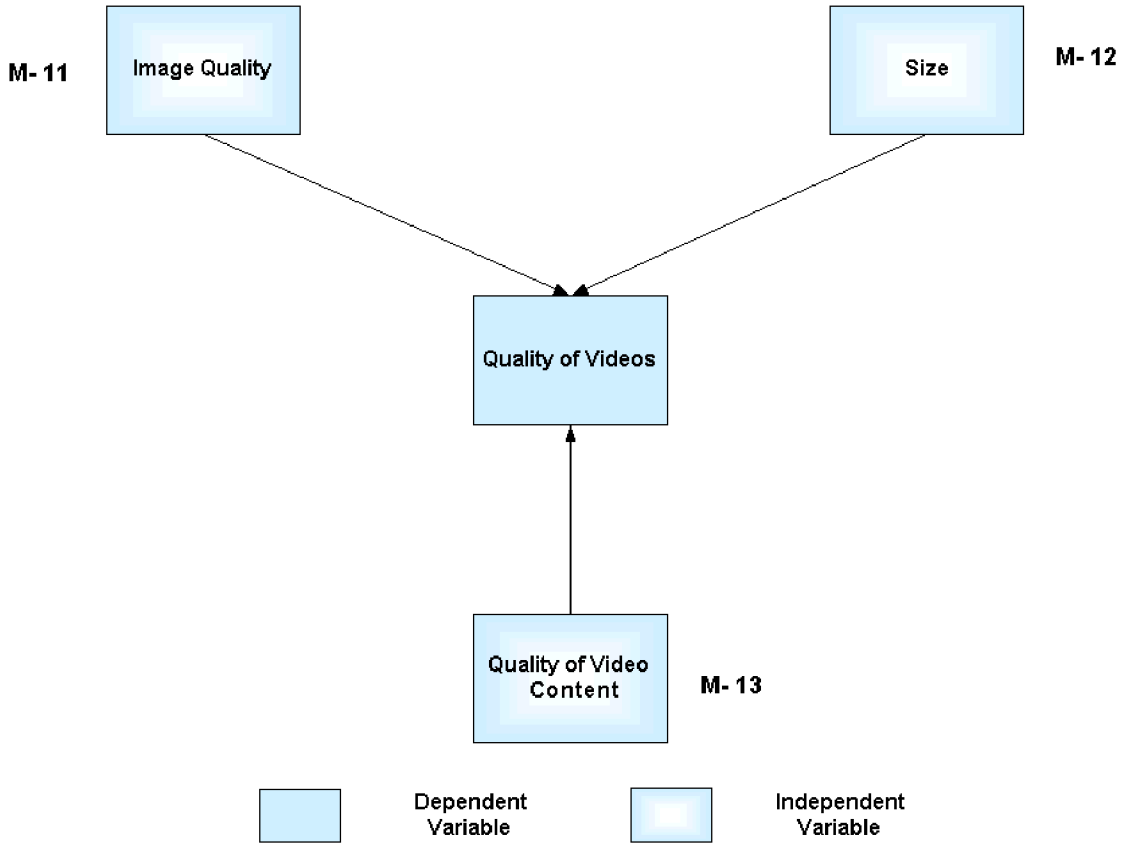
4.3.1 From these variables the following statements were obtain:

- *To learn more:*
  - The resources section allowed me to look up information on other dances

- *Sufficient help provided:*
  - The Frequently Asked Questions section answered questions that I had about the website

- *Opportunities to ask questions:*
  - The Contact Us page gave me the opportunity to ask additional questions
  - The Message Board made it easy to look up any questions I had

4.4 Quality of Videos: This variable test the viewpoint of the users towards the quality of the graphics which include the following variables:

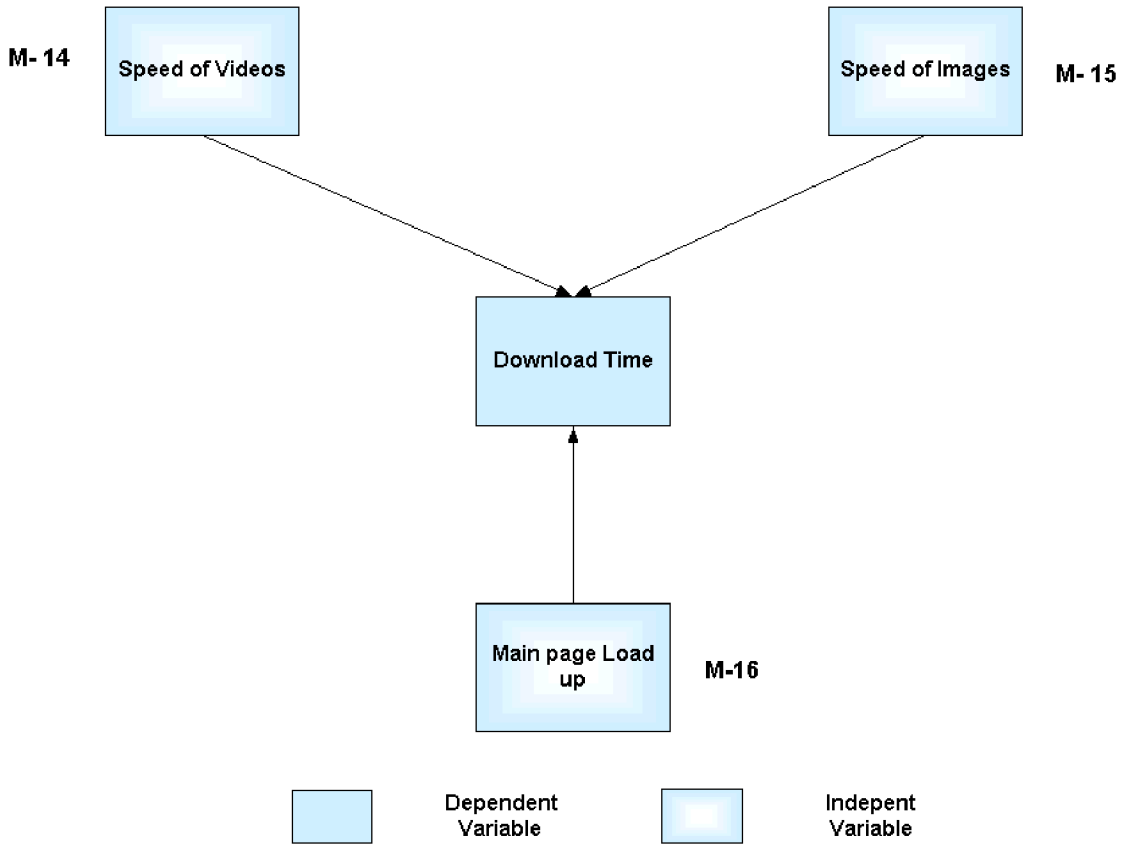


4.4.1 The variable decomposition produced the following statements:

- The video size was large enough to get a good visual of the moves
- The images clearly depicted each of the moves
- Footwork and hand-positioning are emphasize in the videos
- The type of instructions used in the videos were effective

4.5 Download Time: is the amount time the users have to wait to get a response after they have selected an option

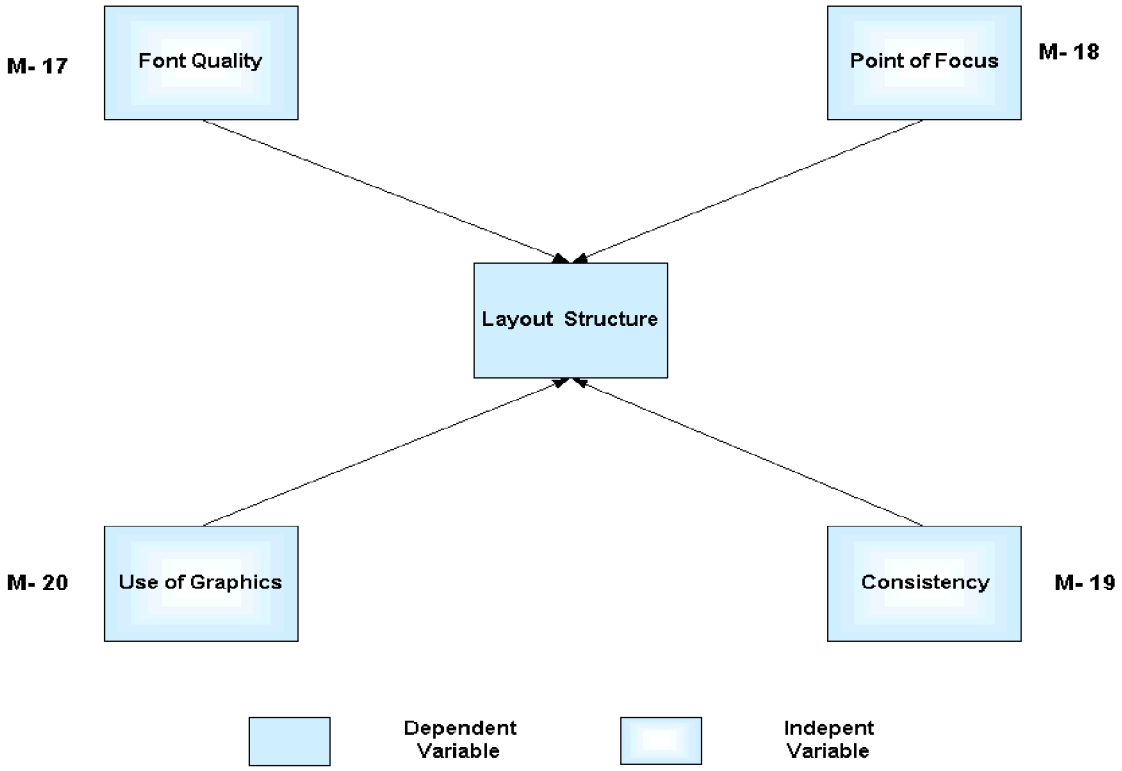
- Some of the recommendations obtain from literature reviews are the following
  - "keep graphic files slow"
  - "if your graphics are too large people will turn them off or jump to another site"



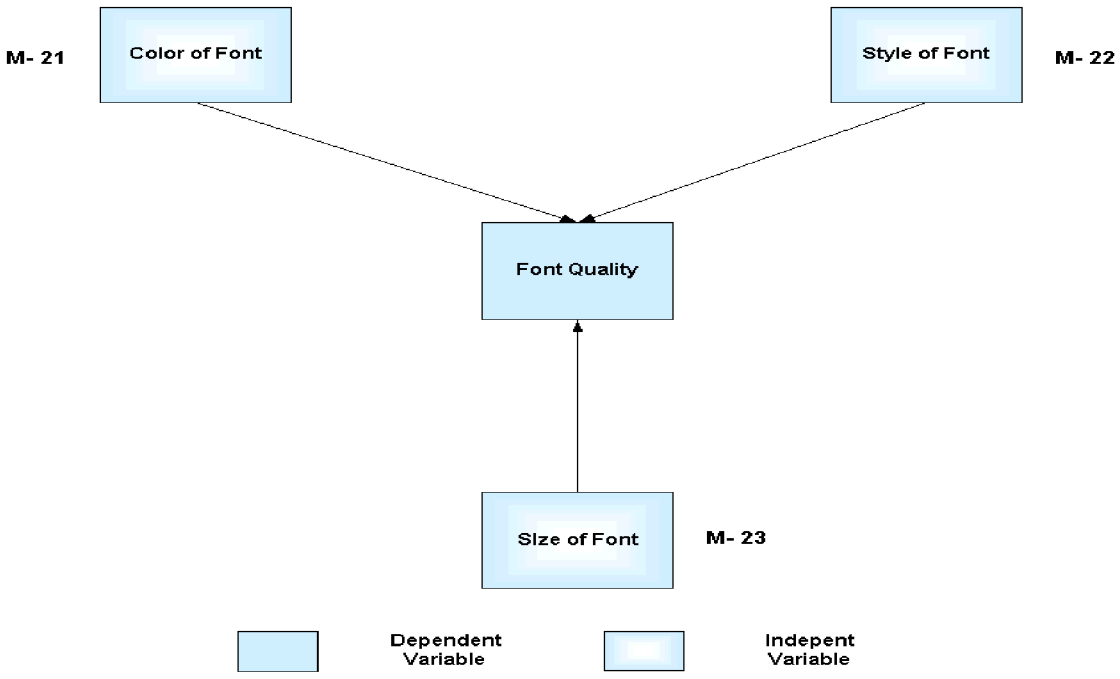
4.5.1 From these variables the following statements were obtain:

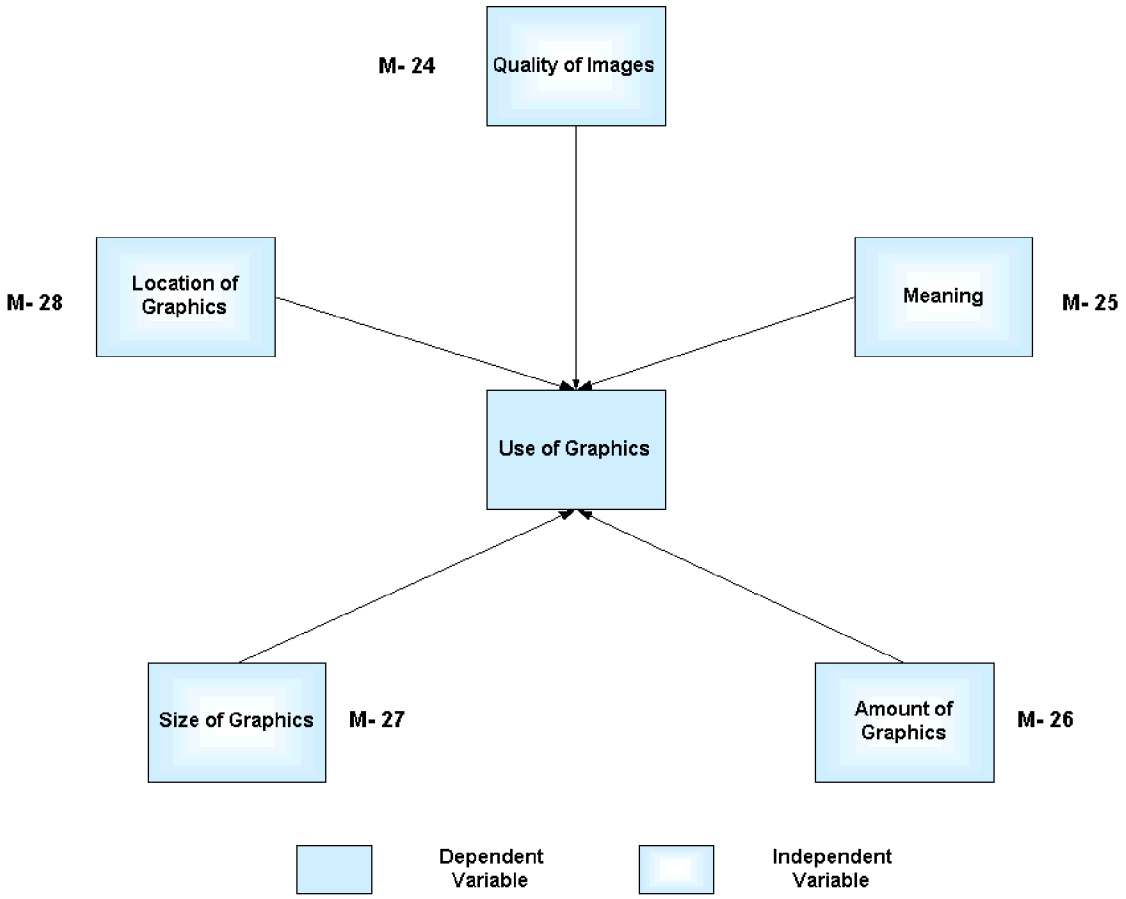
- I did not have to wait a long time for the download of the videos
- I did not have to wait a long time for the download of the images
- I did not have to wait a long time for the web page to load up

4.6 Layout Structure: is what makes a page effective and legible. It is directly related to the Typeface (color, size, style).



4.6.1 Font Quality and Use of Graphics was further decompose:





4.6.2 After the decomposition of all the variables the following statements were obtain:

- The main content of the page is in a centralize location

- *Consistency:*
  - The layout of the text was consistent in all pages
  - The overall look of the pages is consistent
    The graphics used in each page made the layout consistent
  - The colors used give a consistent look to the site

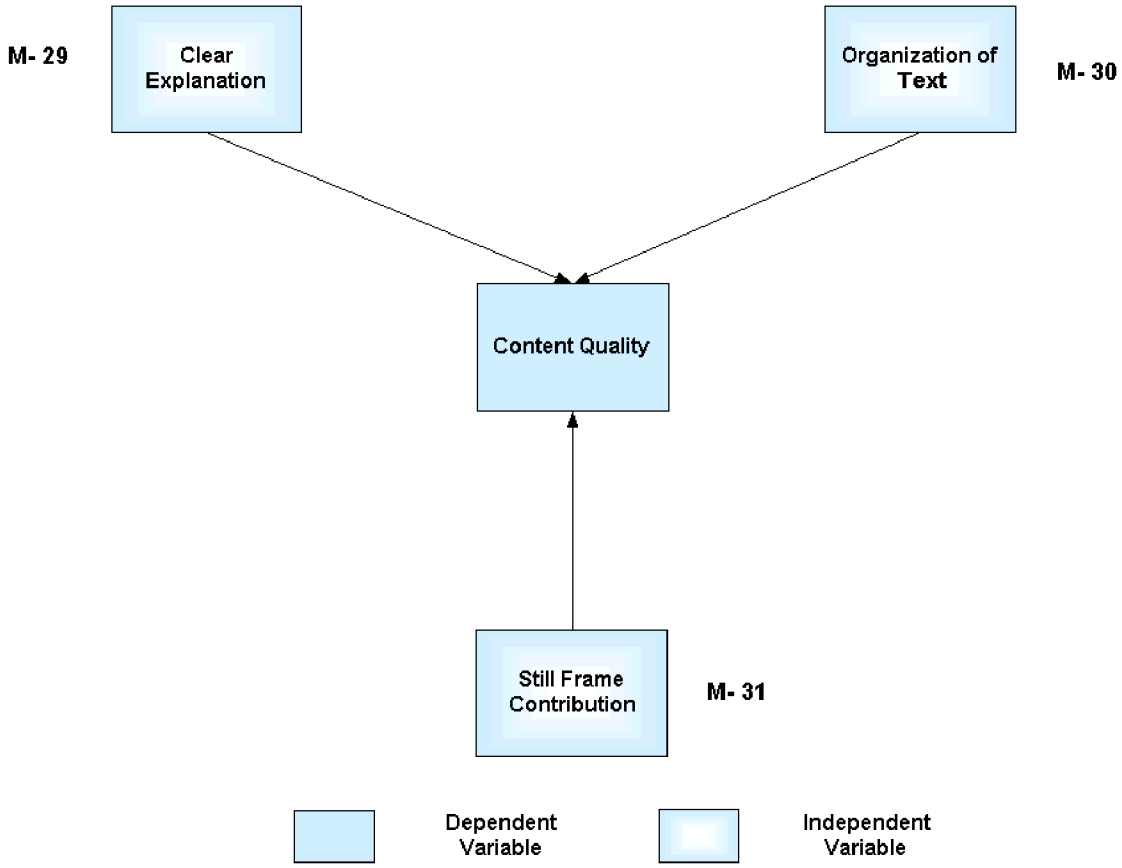
- *Font Quality:*
  - The color of text made it easy to read the content
  - The size of text made is easy to read content
  - The style (times new roman, bold, underline, etc.) of the text made it easier to read

- *Use of Graphics:*
  - The size of the graphics is appropriate

- The location of the graphics contributed to the effectives of the web site
- The use of graphics aided in understanding the content in the web site
- The graphics provided on web site were of good quality
- The amount of graphics was sufficient

4.7 **Content Quality:** Deals with the explanation of the moves, history and other content in the web site.

- This variable was further breakdown after the suggestion of some literature reviews:
  - "All text and no graphics make for a very dull page."
  - "Provide *useful* information"
  - "Include Dynamic Content"



4.7.1 After the breakdown of all the dependent variable, in this case content quality, the following statements were developed:

- The step-by-step description of the moves are explained clearly
- The organizational layout of the moves is appropriate
- The still frames of the moves contribute to the overall understanding of the step-by-step instructions

After the decomposition of all the variables the following Questionnaire was developed:

User Satisfaction Questionnaire for SalsaPartyWalk.com

Using the chart below please check the answer that best describes how you feel.

ED	Extremely Disagree
SD	Strongly Disagree
D	Disagree
A	Agree
SA	Strongly Agree
EA	Extremely Agree

Statement	**ED**	**SD**	**D**	**A**	**SA**	**EA**
Layout Structure						
1. The main content of the page is in a centralized location						
2. The layout of the text is consistent throughout all the pages						
3. The overall look of the website is consistent						
4. The graphics used in each page makes the layout consistent						
5. The colors used give the site a consistent look						
6. The color of text made the content easy to read						
7. The size of the text made the content easy to read						
8. The style of the text made the content easier to read						
9. The size of the graphics is appropriate						
10. The location of the graphics contribute to the effectiveness of the web site						
11. The use of graphics aided in understanding the content of the web site						
12. The graphics provided on the web site are of good quality						
13. The amount of graphics was sufficient						
Navigation Ease						
14. There are enough links in the web site						
15. The location of the links help me navigate the site better						
16. The amount of links you have to click on before you get to your desired location is not excessive						
17. The location of the links is consistent throughout the page						
Use of Color						
18. The text is visible against the background color						

19. The colors are suitable for the page content and purpose						
20. The combination of blue, light blue and white made the website more presentable						
Content Quality						
21. The step-by-step description of the moves are explained clearly						
22. The organizational layout of the moves is appropriate						
23. The still frames of the moves contribute to the overall understanding of the step-by-step instructions						
Help Quality						
24. The resources section allowed me to look up information on other dances						
25. The Frequently Asked Questions section answered questions that I had about the website						
26. The Contact Us page gave me the opportunity to ask additional questions						
27. The Message Board made it easy to look up any questions I had						
Video Quality						
28. The video size was large enough to get a good visual of the moves						
29. The images clearly depicted each of the move						
30. Footwork and hand-positioning are emphasize in the videos						
31. The type of instructions used in the videos were effective						
Download Time						
32. I did not have to wait a long time for the download of the videos						
33. I did not have to wait a long time for the download of the images						
34. I did not have to wait a long time for the web page to load up						
User Satisfaction						
35. I would most likely come back to this web site						
36. I would refer this page to my friends						
37. I think that it is possible to learn how to dance using this web site						
38. I would pay money for the services provided in this web site						
39. I would purchase the DVD						

To map the variables to the questions the following table was developed:

Variable Name	**Measure**	**Questions**
User Satisfaction	IV-1, IV-2, IV-3, IV-3, IV-4, IV-5, IV-6, IV-7	
Use of Color (IV-1)	M-1, M-2, M-3	18, 19, 20
Navigation Ease (IV-2)	M-4, M-5, M-6, M-7	14, 15, 16, 17
Help Quality (IV-3)	M-8, M-9, M-10	24,25, (26,27)
Quality of Videos (IV-4)	M-11, M-12, M-13	28, 29, (30, 31)
Download Time (IV-5)	M-14, M-15, M-16	32, 33, 34
Layout Structure (IV-6)	M-17, M-18, M-19, M-20	1, (2,3,4,5), (6,7,8), (9,10,11,12,13)
Content Quality (IV-7)	M-29, M-30, M-31	20, 21, 22
User Satisfaction	Not measure by independent variables	35,36,37,38,39
Combination of Colors (M-1)		18
Effective Contrast (M-2)		19
Suitable (M-3)		20
Quantity of Links (M-4)		14
Location of Links (M-5)		15
Consistency of Links (M-6)		17
Path Length (M-7)		16
Opportunity to ask questions (M-8)		24
Opportunity to learn (M-9)		25
Sufficient help provided (M-10)		26, 27
Image Quantity (M-11)		25
Size (M-12)		24
Quality of video content (M-13)		30,31
Speed of Videos (M-14)		32
Speed of Images (M-15)		33
Main page load up (M-16)		34
Font Quality (M-17)	M-21, M-22, M-23	6,7,8
Point of Focus (M-18)		1
Consistency (M-19)		2, 3, 4, 5
Use of Graphics (M-20)	M-24, M-25, M-26, M-27, M-28	9, 10, 11, 12
Color of Font (M-21)		6
Style of Content (M-22)		8
Size of Font (M-23)		7
Quality of images (M-24)		12
Meaning (M-25)		11
Amount of graphics (M-26)		13
Size of graphics (M-27)		9
Location of Graphics (M-28)		10
Clear Explanation (M-29)		21

Organization of Text (M-30)		22
Still Frame contribution (M-31)		23

3.1 SPSS

Reliability

```
 ****** Method 1 (space saver) will be used for this analysis ******
_

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)


Reliability Coefficients

N of Cases =     50.0                    N of Items =  8

Alpha =    .7279
```

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Layout Structure	50	3.98	5.63	4.6838	.38982
Download Time	50	4.00	6.00	5.1000	.65031
Quality of Videos	50	1.67	5.83	3.9867	.83696
Help Quality	50	3.83	5.67	4.5033	.44986
Content Quality	50	3.33	6.00	4.6400	.63475
Navigation Ease	50	3.75	5.75	4.6250	.52306
Use of Color	50	3.00	6.00	4.8067	.74411
User Satisfaction	50	2.80	5.60	4.3320	.62936
Valid N (listwise)	50				

Frequencies

Statistics

		Layout Structure	Download Time	Quality of Videos	Help Quality	Content Quality	Navigation Ease	Use of Color	U Satisf
N	Valid	50	50	50	50	50	50	50	
	Missing	0	0	0	0	0	0	0	

Frequency Table

Layout Structure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.98	1	2.0	2.0	2.0
	4.00	1	2.0	2.0	4.0
	4.04	1	2.0	2.0	6.0
	4.08	1	2.0	2.0	8.0
	4.17	1	2.0	2.0	10.0
	4.19	1	2.0	2.0	12.0
	4.27	1	2.0	2.0	14.0
	4.29	1	2.0	2.0	16.0
	4.35	1	2.0	2.0	18.0
	4.38	2	4.0	4.0	22.0
	4.44	2	4.0	4.0	26.0
	4.48	1	2.0	2.0	28.0
	4.48	1	2.0	2.0	30.0
	4.50	4	8.0	8.0	38.0
	4.54	1	2.0	2.0	40.0
	4.56	1	2.0	2.0	42.0
	4.58	2	4.0	4.0	46.0
	4.63	2	4.0	4.0	50.0
	4.67	1	2.0	2.0	52.0
	4.69	3	6.0	6.0	58.0
	4.73	1	2.0	2.0	60.0
	4.75	2	4.0	4.0	64.0
	4.81	1	2.0	2.0	66.0
	4.85	1	2.0	2.0	68.0
	4.85	2	4.0	4.0	72.0
	4.88	1	2.0	2.0	74.0
	4.92	1	2.0	2.0	76.0
	4.94	1	2.0	2.0	78.0
	4.96	1	2.0	2.0	80.0
	5.00	1	2.0	2.0	82.0
	5.02	1	2.0	2.0	84.0
	5.10	1	2.0	2.0	86.0
	5.17	1	2.0	2.0	88.0
	5.19	1	2.0	2.0	90.0
	5.25	1	2.0	2.0	92.0
	5.42	2	4.0	4.0	96.0
	5.50	1	2.0	2.0	98.0
	5.63	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Download Time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.00	7	14.0	14.0	14.0
	4.33	1	2.0	2.0	16.0
	4.67	6	12.0	12.0	28.0
	5.00	18	36.0	36.0	64.0
	5.33	3	6.0	6.0	70.0
	5.67	4	8.0	8.0	78.0
	6.00	11	22.0	22.0	100.0
	Total	50	100.0	100.0	

Quality of Videos

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.67	1	2.0	2.0	2.0
	2.67	2	4.0	4.0	6.0
	3.00	1	2.0	2.0	8.0
	3.17	7	14.0	14.0	22.0
	3.33	3	6.0	6.0	28.0
	3.50	1	2.0	2.0	30.0
	3.67	4	8.0	8.0	38.0
	3.83	5	10.0	10.0	48.0
	4.00	5	10.0	10.0	58.0
	4.17	2	4.0	4.0	62.0
	4.33	5	10.0	10.0	72.0
	4.50	4	8.0	8.0	80.0
	4.67	2	4.0	4.0	84.0
	4.83	1	2.0	2.0	86.0
	5.00	2	4.0	4.0	90.0
	5.17	1	2.0	2.0	92.0
	5.33	1	2.0	2.0	94.0
	5.50	1	2.0	2.0	96.0
	5.83	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Help Quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.83	2	4.0	4.0	4.0
	4.00	6	12.0	12.0	16.0
	4.17	7	14.0	14.0	30.0
	4.33	12	24.0	24.0	54.0
	4.50	5	10.0	10.0	64.0
	4.67	5	10.0	10.0	74.0

	4.83	5	10.0	10.0	84.0
	5.00	4	8.0	8.0	92.0
	5.50	2	4.0	4.0	96.0
	5.67	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Content Quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.33	1	2.0	2.0	2.0
	3.67	4	8.0	8.0	10.0
	4.00	7	14.0	14.0	24.0
	4.33	9	18.0	18.0	42.0
	4.67	11	22.0	22.0	64.0
	5.00	9	18.0	18.0	82.0
	5.33	3	6.0	6.0	88.0
	5.67	4	8.0	8.0	96.0
	6.00	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Navigation Ease

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.75	3	6.0	6.0	6.0
	4.00	7	14.0	14.0	20.0
	4.25	10	20.0	20.0	40.0
	4.50	4	8.0	8.0	48.0
	4.75	9	18.0	18.0	66.0
	5.00	6	12.0	12.0	78.0
	5.25	8	16.0	16.0	94.0
	5.50	2	4.0	4.0	98.0
	5.75	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Use of Color

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	1	2.0	2.0	2.0
	3.67	2	4.0	4.0	6.0
	4.00	9	18.0	18.0	24.0
	4.33	7	14.0	14.0	38.0
	4.67	6	12.0	12.0	50.0
	5.00	10	20.0	20.0	70.0

	5.33	4	8.0	8.0	78.0
	5.67	5	10.0	10.0	88.0
	6.00	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

User Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.80	2	4.0	4.0	4.0
	3.00	1	2.0	2.0	6.0
	3.40	1	2.0	2.0	8.0
	3.60	3	6.0	6.0	14.0
	3.80	3	6.0	6.0	20.0
	4.00	6	12.0	12.0	32.0
	4.20	8	16.0	16.0	48.0
	4.40	7	14.0	14.0	62.0
	4.60	4	8.0	8.0	70.0
	4.80	6	12.0	12.0	82.0
	5.00	4	8.0	8.0	90.0
	5.20	2	4.0	4.0	94.0
	5.40	2	4.0	4.0	98.0
	5.60	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Layout Structure(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.159(a)	.025	.005	.62782

a Predictors: (Constant), Layout Structure

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.

1	Regression	.489	1	.489	1.241	.271(a)
	Residual	18.920	48	.394		
	Total	19.409	49			

a Predictors: (Constant), Layout Structure
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.132	1.081		2.896	.006
	Layout Structure	.256	.230	.159	1.114	.271

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Download Time(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.423(a)	.179	.161	.57634

a Predictors: (Constant), Download Time

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.465	1	3.465	10.431	.002(a)
	Residual	15.944	48	.332		
	Total	19.409	49			

a Predictors: (Constant), Download Time
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.247	.651		3.452	.001
	Download Time	.409	.127	.423	3.230	.002

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Quality of Videos(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.368(a)	.135	.117	.59136

a Predictors: (Constant), Quality of Videos

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.623	1	2.623	7.500	.009(a)
	Residual	16.786	48	.350		
	Total	19.409	49			

a Predictors: (Constant), Quality of Videos
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.230	.411		7.859	.000
	Quality of Videos	.276	.101	.368	2.739	.009

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Help Quality(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.409(a)	.168	.150	.58019

a Predictors: (Constant), Help Quality

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.251	1	3.251	9.659	.003(a)
	Residual	16.158	48	.337		
	Total	19.409	49			

a Predictors: (Constant), Help Quality
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.753	.834		2.103	.041
	Help Quality	.573	.184	.409	3.108	.003

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Content Quality(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.189(a)	.036	.016	.62436

a Predictors: (Constant), Content Quality

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.697	1	.697	1.788	.187(a)
	Residual	18.712	48	.390		
	Total	19.409	49			

a Predictors: (Constant), Content Quality
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.460	.658		5.259	.000
	Content Quality	.188	.141	.189	1.337	.187

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Navigation Ease(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.339(a)	.115	.097	.59814

a Predictors: (Constant), Navigation Ease

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.236	1	2.236	6.250	.016(a)
	Residual	17.173	48	.358		
	Total	19.409	49			

a Predictors: (Constant), Navigation Ease
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.443	.760		3.214	.002
	Navigation Ease	.408	.163	.339	2.500	.016

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Use of Color(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.201(a)	.040	.020	.62293

a Predictors: (Constant), Use of Color

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.783	1	.783	2.018	.162(a)
	Residual	18.626	48	.388		
	Total	19.409	49			

a Predictors: (Constant), Use of Color
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.515	.582		6.045	.000
	Use of Color	.170	.120	.201	1.421	.162

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Use of Color(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.201(a)	.040	.020	.62293

a Predictors: (Constant), Use of Color

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.783	1	.783	2.018	.162(a)
	Residual	18.626	48	.388		
	Total	19.409	49			

a Predictors: (Constant), Use of Color
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.515	.582		6.045	.000
	Use of Color	.170	.120	.201	1.421	.162

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Navigation Ease, Quality of Videos, Content Quality, Layout Structure, Download Time, Help Quality, Use of Color(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.587(a)	.344	.235	.55052

a Predictors: (Constant), Navigation Ease, Quality of Videos, Content Quality, Layout Structure, Download Time, Help Quality, Use of Color

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.680	7	.954	3.149	.009(a)
	Residual	12.729	42	.303		
	Total	19.409	49			

a Predictors: (Constant), Navigation Ease, Quality of Videos, Content Quality, Layout Structure, Download Time, Help Quality, Use of Color
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.118	1.219		.097	.923
	Use of Color	.068	.159	.080	.427	.672
	Layout Structure	.048	.225	.030	.212	.833

	Download Time	.323	.139	.334	2.315	.026
	Quality of Videos	.195	.110	.259	1.768	.084
	Help Quality	.313	.206	.224	1.521	.136
	Content Quality	-.064	.169	-.065	-.381	.705
	Navigation Ease	.028	.188	.023	.149	.882

a Dependent Variable: User Satisfaction

Correlations

Correlations

		Layout Structure	Download Time	Quality of Videos	Help Quality	Content Quality	Navigation Ease	Use of Color	User Satisfaction
Layout Structure	Pearson Correlation	1	.151	.077	.175	.297(*)	.316(*)	.394(**)	.159
	Sig. (2-tailed)	.	.294	.594	.225	.036	.026	.005	.271
	N	50	50	50	50	50	50	50	50
Download Time	Pearson Correlation	.151	1	.088	.196	.281(*)	.457(**)	.317(*)	.423(**)
	Sig. (2-tailed)	.294	.	.544	.171	.048	.001	.025	.002
	N	50	50	50	50	50	50	50	50
Quality of Videos	Pearson Correlation	.077	.088	1	.392(**)	.134	.239	-.095	.368(**)
	Sig. (2-tailed)	.594	.544	.	.005	.354	.095	.511	.009
	N	50	50	50	50	50	50	50	50
Help Quality	Pearson Correlation	.175	.196	.392(**)	1	.266	.360(*)	.276	.409(**)
	Sig. (2-tailed)	.225	.171	.005	.	.062	.010	.052	.003
	N	50	50	50	50	50	50	50	50
Content Quality	Pearson Correlation	.297(*)	.281(*)	.134	.266	1	.251	.647(**)	.189
	Sig. (2-tailed)	.036	.048	.354	.062	.	.079	.000	.187
	N	50	50	50	50	50	50	50	50
Navigation Ease	Pearson Correlation	.316(*)	.457(**)	.239	.360(*)	.251	1	.352(*)	.339(*)
	Sig. (2-tailed)	.026	.001	.095	.010	.079	.	.012	.016
	N	50	50	50	50	50	50	50	50
Use of Color	Pearson Correlation	.394(**)	.317(*)	-.095	.276	.647(**)	.352(*)	1	.201
	Sig. (2-tailed)	.005	.025	.511	.052	.000	.012	.	.162
	N	50	50	50	50	50	50	50	50
User Satisfaction	Pearson Correlation	.159	.423(**)	.368(**)	.409(**)	.189	.339(*)	.201	1
	Sig. (2-tailed)	.271	.002	.009	.003	.187	.016	.162	.
	N	50	50	50	50	50	50	50	50

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

3.2 Analysis

After collecting the data from the 50 users the results were analyze using SPSS, which is a type of statistical software. The first analysis that was performed with the data was the reliability test. This test determines if the population was well represented. In the analysis we obtained an alpha of .7279, which is about 73%. This means the survey covered a good portion of the population (potential customers). Even though the alpha is high it could improve by either increasing the sample size or modifying the variables to make them mutually exclusive.

The second analysis performed was the Descriptive analysis, which focuses on the mean of the results for each variable. If the mean of the variables is below 3 the variables were either not important to the study or the variables do not measure the goal of the survey correctly. In the analysis performed the mean of all the variables was close or above 4, which means that the variables were somewhat important to the goal of the survey,(to test user satisfaction), and the variables measure the goal correctly. The deviation of the mean for all the variables was below 1, which makes the mean more significant since the results are not scatted. This in turn states that most of the interviewees gave a good rating to the aspects of the web site investigated in the survey.

Although we obtained good results not all were favorable. The lowest mean obtained was the mean for the quality of videos (mean = 3.9867). This could be because the users did not agree with the quality of videos, or the variable was not measure correctly, or it is not significant to the survey's main goal. The best mean obtained was the mean for the Download Time as shown on the table above (mean = 5.1). This mean proves that we have achieved one of the most important goals of our project, which was

to minimize download time. Although most of the results were good, they do not meet up to our expectations, since we were looking for a mean of 5 or 6 for all the variables. This might be because we did not measure the variables correctly or external problems with the populations we interviewed affected the results.

The next analysis performed was the frequency analysis, which displays the percentage of people that answer a question the same way. First, the frequency of the layout structure was obtained. The results were scatted, but all range between 3.98 and 5.63. This means that most of the people interviewed at least agreed with the layout structure of the web site. 20% of the users rated the layout above 5, and the rest gave the layout a 4. This means that although the layout structure is appealing to most users there is still room for improvement.

After the frequency for the layout structure was calculated, the download time frequency was then determined. The results supported the findings of the descriptive analysis. An amazing 72% of the people interviewed rated favorably the download time of the web site. This people strongly or extremely agreed with the statements about the download time. Only 28% of the people somewhat agreed with the download time, since they gave the statements a rating of 4. Overall all the people interviewed were satisfied with the amount of time they had to wait for the website's content, images and videos to download.

Similar results were obtained when the frequency analysis was performed on the help quality. Most interviewees gave the help quality a rate of 4 and 5. This tells us that although the results were positive the help quality needs to improve to completely satisfy the users, since only 16% rated the quality of videos above 5. In frequency analysis for

the content quality the results vary more than the help quality results. The lowest responses obtain was 3.33 and the highest was a 6. Although more than 90% of the people interviewed rated the content quality above 4, 72% of these people stayed between 4 and 5. This means that content is satisfactory but not excellent, therefore in order to meet the customers' expectations the content need to improve.

The frequency analysis of the navigation ease in the website displayed favorable results. 94% of the people interviewed rated the navigation ease above 4. Although the results were good, the highest percentage (20%) is for the value 4.25 and the lowest is for the value 5.75. This means that the customers are not extremely satisfy with the navigation ease. This could be because the variable was measure wrong or not enough people were sample. Ultimately, all the external variables that could affect the results need to be investigated. After they analyzed and any errors corrected, if the results are the same, the navigation ease needs to be improve to have a higher percentage for the values between 5 and 6.

The frequency analysis for the use of color showed that 50% of the users extremely like the colors. 34% of the users at least agreed with the colors and only 6% disagree with the color. This means that most of the users were satisfy with the use of colors, therefore this aspect of the web site will probably will not be change dramatically. In our survey we also asked users about their satisfaction. The frequency analysis showed that 80% of the users were satisfied with the web site. Only 20% of the users disagreed with web site. The results were favorable, but they still need to improve, since only 18% of the users said that they were strongly satisfy with the website.

Variable	Calculated F	Tabulated F	R	R square
Layout Structure	1.241	4.04	.159	.025
Download Time	10.431	4.04	.423	.179
Quality of Video	7.5	4.04	.368	.135
Help Quality	9.659	4.04	.409	.150
Content Quality	1.788	4.04	.189	.036
Navigation Ease	6.250	4.04	.115	.097
Use of Color	2.018	4.04	.201	.040
All variables	3.149	2.24	.587	.344

The following test performed on the data was the regression analysis, and the results are shown above. From this analysis we obtained 4 important numbers: F, which is the regression indicator, numbers to obtain to calculate the tabulated F, R and R square. First, the calculated and tabulated Fs were compared to determine the relationship between the independent and dependent variables. The results were that only the layout structure, content quality, and use of color were not related to the user satisfaction because the Tabulated F is bigger than the calculated F. These results might be inaccurate because of external reasons, such as the sample size was too small, bias results, or because the variables did not measure user satisfaction accurately. The other variables, quality of videos, download time, help quality, and navigation ease, all are related to the user satisfaction since the calculated F for each variable is bigger than the tabulated F.

The other numbers obtain from this requirement was R, which determines if the independent variable is correlated to dependent variable. Since all the Rs for all the variables are positive that means that as the variables go up in effectiveness the user satisfaction will also increase, and vice versa if they go down in quality the user

satisfaction will decrease. The closer R is to zero the less correlation exists between two variables. The smallest correlations that exist are between the use satisfaction and the following variables layout structure, content quality and navigation ease. These results are also supported by the R square, which indicates to what extent an independent variable is capable of explaining the changes in the dependent variable. The R square for layout structure is only 2.5%, for content quality is 3.6% and for use of color it is 4%. This means that the previously mentioned variables do not explain to a great degree the changes in user satisfaction. The other variables such as download time, quality of videos, help quality, and navigation ease only explain between 10%-18% of the changes in the variables. Overall of the variables only explained 34.4% of the changes in user satisfaction.

After completing the manual stepwise regression test the following table was obtained:

Variable	**R square**
Download time	17.9%
Help Quality	15%
Quality of Videos	13.5%
Navigation ease	9.7%
Use of Color	4%
Content Quality	3.6%
Layout Structure	2.5%

This table lists from highest to lowest the explanation power of each variable. As shown here the highest variable only explains about 18% of the changes in users satisfaction. Most of the R squares are low meaning that they don't explain a lot of the changes the dependent variable. This might be because of the results obtained in correlation analysis.

In the correlation analysis we see that a lot of the variables are correlated. The most significant number in the correlation chart is .647 which is the correlation between content quality and use of color. After pluging this number in the VIF equation

$$VIF = 1/(1-r^2)$$

which gives the multicolinearity of the variables we see that many of the variables are mutually exclusive. The VIF between the content quality and the use of color is 1.72 which indicated that both of these variables are mutually exclusive. Although there are many examples like this, some variables are not mutually exclusive and this might be one of the problems causing discrepancies the rest of the analysis.

In an attempt to modify the data and obtain better results the variables that were related were group. Layout structure and use of color were grouped together to form appearance. Content quality and help quality were group together to form content effectiveness. Finally, download time and quality of videos were group together to develop the new variable called new quality of videos and navigation ease remained the same. The new data obtained from these variables was analyzed and compared to the previous results.

3.2 SPSS for new variables

Reliability

```
 ****** Method 1 (space saver) will be used for this analysis ******
_

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =     50.0                    N of Items =  5

Alpha =    .7463
```

Frequencies

Statistics

		Navigation Ease	Apperance (layout structure & use of color)	Content Effectiveness(content quality & help quality)	New Quality of videos(download time & quality of videos)	User Satisfaction
N	Valid	50	50	50	50	50
	Missing	0	0	0	0	0

Frequency Table

Navigation Ease

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.75	3	6.0	6.0	6.0
	4.00	7	14.0	14.0	20.0
	4.25	10	20.0	20.0	40.0
	4.50	4	8.0	8.0	48.0
	4.75	9	18.0	18.0	66.0
	5.00	6	12.0	12.0	78.0
	5.25	8	16.0	16.0	94.0
	5.50	2	4.0	4.0	98.0
	5.75	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Apperance (layout structure & use of color)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.93	2	4.0	4.0	4.0
	3.99	1	2.0	2.0	6.0
	4.08	1	2.0	2.0	8.0
	4.14	1	2.0	2.0	10.0
	4.17	1	2.0	2.0	12.0
	4.18	1	2.0	2.0	14.0
	4.19	1	2.0	2.0	16.0
	4.22	1	2.0	2.0	18.0
	4.24	1	2.0	2.0	20.0
	4.31	1	2.0	2.0	22.0
	4.35	1	2.0	2.0	24.0
	4.39	1	2.0	2.0	26.0
	4.41	1	2.0	2.0	28.0
	4.42	1	2.0	2.0	30.0
	4.44	1	2.0	2.0	32.0
	4.45	1	2.0	2.0	34.0
	4.46	2	4.0	4.0	38.0
	4.48	1	2.0	2.0	40.0
	4.54	1	2.0	2.0	42.0
	4.57	1	2.0	2.0	44.0
	4.58	1	2.0	2.0	46.0
	4.59	1	2.0	2.0	48.0
	4.67	1	2.0	2.0	50.0
	4.70	1	2.0	2.0	52.0
	4.81	1	2.0	2.0	54.0
	4.84	1	2.0	2.0	56.0
	4.88	1	2.0	2.0	58.0
	4.92	1	2.0	2.0	60.0
	4.96	1	2.0	2.0	62.0
	4.97	1	2.0	2.0	64.0
	4.98	1	2.0	2.0	66.0
	5.00	1	2.0	2.0	68.0
	5.02	1	2.0	2.0	70.0
	5.08	1	2.0	2.0	72.0
	5.09	1	2.0	2.0	74.0
	5.18	1	2.0	2.0	76.0
	5.21	1	2.0	2.0	78.0
	5.25	1	2.0	2.0	80.0
	5.26	1	2.0	2.0	82.0
	5.27	1	2.0	2.0	84.0
	5.31	1	2.0	2.0	86.0
	5.34	2	4.0	4.0	90.0
	5.38	1	2.0	2.0	92.0

	5.54	1	2.0	2.0	94.0
	5.55	1	2.0	2.0	96.0
	5.58	1	2.0	2.0	98.0
	5.63	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Content Effectiveness(content quality & help quality)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.92	2	4.0	4.0	4.0
	4.00	3	6.0	6.0	10.0
	4.08	2	4.0	4.0	14.0
	4.17	4	8.0	8.0	22.0
	4.17	1	2.0	2.0	24.0
	4.25	6	12.0	12.0	36.0
	4.33	2	4.0	4.0	40.0
	4.33	1	2.0	2.0	42.0
	4.42	1	2.0	2.0	44.0
	4.42	1	2.0	2.0	46.0
	4.50	2	4.0	4.0	50.0
	4.58	1	2.0	2.0	52.0
	4.58	2	4.0	4.0	56.0
	4.67	2	4.0	4.0	60.0
	4.67	2	4.0	4.0	64.0
	4.75	1	2.0	2.0	66.0
	4.83	2	4.0	4.0	70.0
	4.83	3	6.0	6.0	76.0
	4.92	1	2.0	2.0	78.0
	5.00	4	8.0	8.0	86.0
	5.08	1	2.0	2.0	88.0
	5.17	1	2.0	2.0	90.0
	5.25	2	4.0	4.0	94.0
	5.33	1	2.0	2.0	96.0
	5.42	1	2.0	2.0	98.0
	5.67	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

New Quality of videos(download time & quality of videos)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.33	1	2.0	2.0	2.0
	3.58	1	2.0	2.0	4.0
	3.75	1	2.0	2.0	6.0
	3.83	1	2.0	2.0	8.0
	4.00	3	6.0	6.0	14.0

	4.08	2	4.0	4.0	18.0
	4.08	1	2.0	2.0	20.0
	4.17	1	2.0	2.0	22.0
	4.17	4	8.0	8.0	30.0
	4.25	2	4.0	4.0	34.0
	4.33	3	6.0	6.0	40.0
	4.33	2	4.0	4.0	44.0
	4.42	4	8.0	8.0	52.0
	4.50	4	8.0	8.0	60.0
	4.58	1	2.0	2.0	62.0
	4.58	1	2.0	2.0	64.0
	4.67	3	6.0	6.0	70.0
	4.83	1	2.0	2.0	72.0
	4.92	1	2.0	2.0	74.0
	4.92	3	6.0	6.0	80.0
	5.08	1	2.0	2.0	82.0
	5.17	1	2.0	2.0	84.0
	5.25	3	6.0	6.0	90.0
	5.42	1	2.0	2.0	92.0
	5.50	1	2.0	2.0	94.0
	5.67	1	2.0	2.0	96.0
	5.75	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

User Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.80	2	4.0	4.0	4.0
	3.00	1	2.0	2.0	6.0
	3.40	1	2.0	2.0	8.0
	3.60	3	6.0	6.0	14.0
	3.80	3	6.0	6.0	20.0
	4.00	6	12.0	12.0	32.0
	4.20	8	16.0	16.0	48.0
	4.40	7	14.0	14.0	62.0
	4.60	4	8.0	8.0	70.0
	4.80	6	12.0	12.0	82.0
	5.00	4	8.0	8.0	90.0
	5.20	2	4.0	4.0	94.0
	5.40	2	4.0	4.0	98.0
	5.60	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Navigation Ease	50	3.75	5.75	4.6250	.52306
User Satisfaction	50	2.80	5.60	4.3320	.62936
Apperance (layout structure & use of color)	50	3.93	5.63	4.7452	.48323
Content Effectiveness(content quality & help quality)	50	3.92	5.67	4.5717	.43514
New Quality of videos(download time & quality of videos)	50	3.33	5.75	4.5433	.55206
Valid N (listwise)	50				

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Navigation Ease(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.339(a)	.115	.097	.59814

a Predictors: (Constant), Navigation Ease

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.236	1	2.236	6.250	.016(a)
	Residual	17.173	48	.358		
	Total	19.409	49			

a Predictors: (Constant), Navigation Ease
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	2.443	.760		3.214	.002
	Navigation Ease	.408	.163	.339	2.500	.016

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Apperance (layout structure & use of color)(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.219(a)	.048	.028	.62050

a Predictors: (Constant), Apperance (layout structure & use of color)

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.928	1	.928	2.411	.127(a)
	Residual	18.481	48	.385		
	Total	19.409	49			

a Predictors: (Constant), Apperance (layout structure & use of color)
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.981	.875		3.407	.001
	Apperance (layout structure & use of color)	.285	.183	.219	1.553	.127

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Content Effectiveness(content quality & help quality)(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.350(a)	.122	.104	.59572

a Predictors: (Constant), Content Effectiveness(content quality & help quality)

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.375	1	2.375	6.691	.013(a)
	Residual	17.034	48	.355		
	Total	19.409	49			

a Predictors: (Constant), Content Effectiveness(content quality & help quality)
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.019	.898		2.248	.029
	Content Effectiveness(content quality & help quality)	.506	.196	.350	2.587	.013

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	New Quality of videos(download time & quality of videos)(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.528(a)	.278	.263	.54022

a Predictors: (Constant), New Quality of videos(download time & quality of videos)

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.401	1	5.401	18.506	.000(a)
	Residual	14.008	48	.292		
	Total	19.409	49			

a Predictors: (Constant), New Quality of videos(download time & quality of videos)
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.600	.640		2.501	.016
	New Quality of videos(download time & quality of videos)	.601	.140	.528	4.302	.000

a Dependent Variable: User Satisfaction

Regression

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method

1	Navigation Ease, Content Effectiveness(content quality & help quality), New Quality of videos(download time & quality of videos), Apperance (layout structure & use of color)(a)	.	Enter

a All requested variables entered.
b Dependent Variable: User Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.556(a)	.309	.247	.54600

a Predictors: (Constant), Navigation Ease, Content Effectiveness(content quality & help quality), New Quality of videos(download time & quality of videos), Apperance (layout structure & use of color)

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.994	4	1.498	5.026	.002(a)
	Residual	13.415	45	.298		
	Total	19.409	49			

a Predictors: (Constant), Navigation Ease, Content Effectiveness(content quality & help quality), New Quality of videos(download time & quality of videos), Apperance (layout structure & use of color)
b Dependent Variable: User Satisfaction

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.550	.994		.553	.583

	New Quality of videos(download time & quality of videos)	.502	.170	.440	2.947	.005
	Content Effectiveness(content quality & help quality)	.153	.244	.106	.627	.534
	Apperance (layout structure & use of color)	.077	.213	.059	.361	.720
	Navigation Ease	.094	.180	.078	.524	.603

a Dependent Variable: User Satisfaction

Correlations

Correlations

		Navigation Ease	Apperance (layout structure & use of color)	Content Effectiveness(content quality & help quality)	New Quality of videos(download time & quality of videos)	User Satisfaction
Navigation Ease	Pearson Correlation	1	.398(**)	.369(**)	.451(**)	.339(*)
	Sig. (2-tailed)	.	.004	.008	.001	.016
	N	50	50	50	50	50
Apperance (layout structure & use of color)	Pearson Correlation	.398(**)	1	.597(**)	.148	.219
	Sig. (2-tailed)	.004	.	.000	.306	.127
	N	50	50	50	50	50
Content Effectiveness(content quality & help quality)	Pearson Correlation	.369(**)	.597(**)	1	.408(**)	.350(*)
	Sig. (2-tailed)	.008	.000	.	.003	.013
	N	50	50	50	50	50
New Quality of videos(download time & quality of videos)	Pearson Correlation	.451(**)	.148	.408(**)	1	.528(**)
	Sig. (2-tailed)	.001	.306	.003	.	.000
	N	50	50	50	50	50
User Satisfaction	Pearson Correlation	.339(*)	.219	.350(*)	.528(**)	1
	Sig. (2-tailed)	.016	.127	.013	.000	.
	N	50	50	50	50	50

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

3.4 Analysis of New Data

With the new data the same tests were performed. First a reliability analysis was executed and the results increased from 72% to 74%. Although it is not a big change, it is still positive since that means that the population was represented even more by just grouping variables together. Another test performed on the new data is, a descriptive analysis. This analysis showed similar results to the analysis done with the old data. All the variabe had a mean of 4 or more, which means that most of the people interviewed were satisfy with all the variables tested in the survey.

Another analysis we performed on the new data is a regression analysis and the following data was collected:

Variable	Calculated F	Tabulated F	R	R square
New Quality of Videos	18.506	4.04	.278	.263
Content Effectives	6.691	4.04	.350	.122
Navigation Ease	6.250	4.04	.339	.115
Appearance	2.411	4.04	.219	.048
All variables	5.06	2.58	.556	.309

The regression analysis produced very similar results as the old analysis. All the variables are related to the user satisfaction, except appearance, since the tabulated f is smaller than the calculated F. All the Rs are positive meaning that the all the variable are positively correlated to the user satisfaction. R square which determines to which extent the changes in the variables explain the changed in the dependent variables (user satisfaction) did not changed dramatically. Actually when all the variables were compare all of them only explain 30.9% which is about 4% less than the old analysis.

By doing that statistical analysis of the results obtained from the surveys, we realized that most of the users were satisfy with the main features of our website. Most of the responses were between 4 and 5, which shows that the users agree or extremely agreed with the website design. The analysis also showed that the data collected might not be a 100% accurate since the variables do not fully explained the changes in user satisfaction. We modify the data to try to obtain better results, but this process did not worked out. The reason the data might not be accurate might be because of erroneous grouping of variables, a small sample size, and bias answer from the people interviewed. Overall the statistical analysis allowed us to see the possible challenges our site design might have, this in turn improved our design and in the future will give the customer a better design web site.

4. Implementation Test

Implementation test analyses the versatility of the software created to run in different platforms. Our web site was first created and tested in our personal laptops, and then the NJIT server hosted our web site. All of the main features and content ran perfectly in both our laptops and the NJIT server.

We also tested to see if our page would be seen with the same precision in a windows operating system and a Unix operating system. The results were excellent since there was not difference in our web site look and execution.

In addition to testing our web site in different operating systems we also tested the website in different browsers. The web site was originally design to run on Internet Explorer, therefore the web site performance is at it's maximum when view in IE. Although it runs significantly good in Netscape there are some differences. Some of the XML code is not displayed and therefore some of the quick links do not function properly. Other than this the web site runs exactly like it would in Internet explorer.

Overall our website is efficient in all types of browser and operating systems, therefore we can meet the requirements of almost any of our customers.