Technological Cross Country Adaptation

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Abstract- In a globalized world, technology is essential to fulfill the needs of organizations. Understanding how users adapt to technological changes is a priority. Today, the developed and underdeveloped countries share an important role within markets. Underdeveloped countries possess key elements for globalization such as tax-free zones for non local investors, and employment and economic development zones. Due to the expansion of markets, employees around the world must be adequately trained and updated with the latest in technological advances. This study was designed to evaluate and understand the technological adaptability across the countries of Honduras and the U.S. The researchers used an online survey to acquire the opinion of 102 participants this sample was divided by 46 persons from the US and 56 from Honduras. An online method was used to acquire data, asking the participants to answer anonymously a questionnaire developed by the researcher. This survey contained items of perception of importance, usage and interest towards technology. The results reflect no difference between the perception and usage between both countries. However when it comes perception of importance, age makes a difference.

Index Terms- adaptation, cross country, technology, hardware, Honduras, software, United States of America

I. INTRODUCTION

According to Ryan (1992) acceptance for delivering technological solutions can be a difficult proposition for any organization. Ryan (1992) explained that introducing technological advances into an organization is a great thing to do in order to improve their situations. Although Ryan (1992) also states that theoretically it seems to be easy to present these ideas to organizations, although the difficulty in this operation is to actually have the personnel adopt the changes with easiness. Awareness, education, testing and understating are steps very important according to Ryan (1992) in order to seek technological business reengineering successfully. Other factors were found to interfere technological adaptability, such as perception, usage and interest.

A study by Bull, Castellacci, and Kasahara (2014) established that Central American countries have a lower technological and economical levels than other Latin American countries. Therefore adopting to new technologies should be a slower task for Central Americans, hence for the US residents should be easy and fast due to their economical accessibility for acquiring gadgets (Bull et al., 2014). In contrast for Kumar (2014) people in the US maintain a more independent way of adopting new ideas, such as measuring utilities, and if the characteristics fit the intended goal. Japanese individuals think about new technologies differently as they try to find the good points about the tested products instead of focusing on weaknesses (Kumar, 2014).

The technological products offered to standard customers in the market possess characteristics that overcome the needs required. In addition, Kumar (2014) also states that a country’s economy suffers high and low peaks which is a variable that people use to decide what to acquire. It should also be considered the fact that people may sometimes disagree in regards to the need to replace old gadgets for new ones (Kumar, 2014). Consumers have difficulty keeping pace with the technologies fast evolution. In cultures were the old gadgets cover their needs, the new versions are not bought (Kumar, 2014). Some technological gadgets have changed how consumers feel about updating their devices. For instance Crichton (2014) from TecCrunch blog argues that this computer brand war was not only for hardware, as it could also be detected in software. For example Windows, reigned and practically had a software monopoly in which they were contending against beta developers such as Linux, Solaris, Apple itself (Crichton, 2014). Economides (2001) reveals in his study how Windows’ was so dominant in the industry that 19 states in the US sued Microsoft first monopolizing the computer industry and doing illegal business actions. second attempt for monopoly within web browsers; web browser (internet explorer) with Microsoft Windows bundle. And lastly a third party browsers resulting in frustrating opportunities in becoming a standard option for the user (Economides, 2001).
The latest hardware example is when Heather (2012) from CNN exposed how technology was affected by the Apple iPhone in January 9, 2007. According to Heather, Apple revolutionized the mobile industry when the iPhone was released. The iPhone was the first multi-touch screen device that was available for the standard user. It gave people the chance to test three products in one: the iPod, a real internet browser on a mobile device and a Phone (Heather, 2012). And the release of this phone changed the entire mobile industry.

Business Insider writer Colt (2014) presents how outside the US before the iPod, Apple's was not the mega company that it is today. Establishing as well that whoever experienced Apple products had a bad understanding of the brand and of their standards (Colt, 2014). According to Colt, their products had a poor design and it took a while for people to actually adopt Apple devices. Steve Jobs era was a hallmark by unveiling the iPhone. It has been 8 years since the iPhone’s market launch, their market share has grown in a substantial way and now it is normal to see not only individuals, but companies upgrading their hardware into Apple computers (Farber, 2014).

For a deeper understanding on how the technological market is affected it is necessary to understand the target audience. Individuals interests and needs obviously vary according to age. According to Reuteman (2015), Millennials are those born during the 80’s and before the 2000’s are also called Generation Y. These Millennials represent approximately 80 million americans. These individuals tend to accept change and adapt easier to technological adaptation. Although they accept change they also have a tendency of rebelliousness for following directions from managers, specially from Generation Y (Reuteman, 2015). Generation Y feel they should accomplish goals in a much higher speed than any other generation. (Reuteman, 2015). Reuteman (2015) also states that Millennials are taking over the workforce and that older leaders feel threaten by these Generation Y individuals.

According to Bagozzi there is another factor that goes into play among groups when it comes to technology such as peer pressure. Technological social influence occurs when someone feels the need to acquire the gadget that their most individuals possess. Bagozzi states that even for a standard user the desire for a high-end technology device is a must. Most of the time, opinions of others affect the belief and decisions of users. According to Bagozzi humans are not meant to be isolated beings, and most of the time, decisions are based on social pressure. Bagozzi also stated that in organizations the technological decisions are taken in order to fit or affect other people or group conditions. According to Bagozzi, internalization is also important because it determines technology acceptance and adaptation.

Bagozzi argues that Internalization can be defined as the action of a member that suffers a cultural, technological or expertise change due to ethnicity, family, or other variables that affect their processes of socialization and psychological adaptation to develop new skills and needs to fulfill them. Bagozzi also states that transformation may be caused by job training, education, indoctrinations in organizations, or collectivities. The internalization process within technology is detected when a person from a group takes the skills and gadgets to extraneous groups (Bagozzi, 2008). The authors propose to understand the behavior and technological adaptability of users in different countries by investigating if age is correlated with technological advances.

II. METHODS

A total number of 102 participants were recruited by snowball sampling, social media and instant messaging such as Whatsapp, Line, Viber to collect data in Miami, FL, USA and Tegucigalpa, Fco. Morazán, Honduras.

A. Instrumentation

The instrument, was an online survey which was constructed with 35 questions. It was designed by the investigators in order collected data from participants. Because participants were recruited in countries with different languages, the researchers designed the surveys in english and spanish (see Appendixes A & B). The questionnaire contained both multiple choice (containing demographic questions) and a Likert scale questions. McLeod (2008) published about frequency scales or Likert scale designed to measure opinions or attitudes from participants in questionnaires. A website was created with the domain of www.rmssurvey.com in order to collect data from U.S. and Honduran participants. The primary researcher decided to built his own survey because Google provides a free and stable platform that can easily be attached to any website.

B. Procedure

In both locations the data will be collected by snowball sampling, instant messaging applications and social media campaigns. Although convenient sampling will be used for obtaining the necessary data to perform tests, the primary researcher will ask all the participants to please share to their family and friends.

C. Participants

In this study the variable of technological adaptability is based in a sample of people living in the US and in Honduras. All participants were over 18 years old, not students from the Albizu University. The participants had to read the inform consent in order to complete the survey, in which they were informed about the minimal risks of taking the survey. The sample was collected by sending a link of the website created by the primary researcher to his email personal list. The participants were also asked to forward the link after filling in the survey to their friends and family. Also a social media campaign was held in the primary researcher Facebook timeline, he asked his contacts to please fill in the survey. Last but not least instant messaging within apps such as WhatsApp, LINE, Viber that reinforced the petition from the primary researcher to his contacts to fill in the survey.

A total of 102 responses from the anonymous online survey questionnaire were received from both countries. The primary researcher took in consideration demographic aspects such as gender, age, nationality, and language skills. In Honduras a total of 56 participants filled in the online survey, and in the US 46 persons participated. In the US 44.4% of the participants were males and, 55.6% females. On the other hand in Honduras 41.1% were males and 59.9% females. This helped the primary researcher establish that there is a tendency in which females collaborate more with online surveys than the male population in both of the countries.
Data Analyses

Once the primary researcher collected the data from both countries through the online method, an analysis of descriptive statistics were used to summarize the data in detail generating descriptive data. Correlation tests were used trying to find a relationship between variables such as interest and perception of importance, perception of importance and usage of technology, and between interest and perception of importance. Also analysis of variance statistics for evidence of difference between variables helped the primary researcher find if there was a significant difference between the age of the participants of both countries in study. The alpha level or level of significance was established by the standard 0.05.

III. RESULTS

The results are described in sections. The first section describes the data acquired in both the countries of US and Honduras. The results presented in sections include the descriptive statistics, correlations and a statistical t-test. In table 1 the descriptive statistics defined that 46 persons from the US and 56 from Honduras participated in the survey. There were no missing data. From the US 39.1% of the participants were males and 60.9% females. In Honduras 41.1% of the participants were males and 58.9% of the participants were females. Also in the US 30.4% of the surveyed participants hold a high school or 12 year educational level (see Table 1). Also 69.6% of the US participants possess higher education. In Honduras 21.4% of the surveyed participants have a 12 year educational level and 78.6% of these participants possess a higher educational level. The US participants results show a mean of 31.76, median of 30 and a mode of 29, with a range of 32. The Honduran participants have a mean 31.76, median of 32, mode of 32, with a range of 28.

The regression line in the scatterplot for interest and perception of importance towards technology shows a linearity and homoscedasticity (Table 2). The correlations tests in table 2 shows a positive correlation \( r = .653 \) between interest and perception of importance; and \( p = .000 \) which is less than the specified .05 alpha level, indicating that this is a statistically significant correlation. Our findings revealed a strong and positive correlation suggesting that those with a higher interest in a technology tend to get a higher perception of importance (.653). This correlation was statistically significant (.000). As such, we reject the \( H^0 \) fail to reject the H1.

Next in table 3 the regression line in the scatterplot for the perception of importance and usage of technology is linear and homoscedastic. Also the correlations show a positive correlation \( r = .428 \) between perception of importance and usage; and \( p = .000 \) which is greater than the specified .05 alpha level, indicating that this is a statistically significant correlation. Therefore the higher the perception of importance towards technology from people the higher the usage individuals present. Our findings revealed a moderate and positive correlation suggesting that those with a higher perception of importance of technology tend to use more. The correlation was statistically significant (.000) As such we reject the \( H^0 \) and fail to reject H1.

Table 4 presents a regression line in the scatterplot for the interest and usage of technology linear and homoscedastic. The test shows a positive correlation \( r = .284 \) between interest towards technology and perception of importance; and \( p = .004 \) which is less than the specified .05 alpha level, indicating that this is a statistically significant correlation. The findings revealed a weak to moderate but positive correlation suggesting that those with a higher perception of importance of technology (.284) tend to use more technology. This correlation was statistically significant (.002) as such, we reject the \( H^0 \) and fail to reject H1.

Table 5 shows the T-test statistics in which histograms with a normal curve plot show a normal distribution of perception of importance for both groups. The homogeneity of variance score shows significance \( p \) of .363, since this is greater that a level of 0.05, this suggests that there is no statistically significant difference between the variances of the two groups. The n’s are 46 and 56 in each group since n’s are greater than 30; the pretest criterion of normality is satisfied. Therefore the test determined the perception of importance by people older than 30 and younger than 30 from both countries. A group of 102 individuals were invited to complete the online survey and determined by their results using a 0.05 alpha level, the p value of .021 suggests that there was no statistical significance difference; hence, we reject the \( H^0 \).

IV. DISCUSSION

The results for this study partially supported the initial hypothesis of age being correlated with technological advances. The researchers can safely conclude that after running statistical correlation tests and discovering that participants from both countries had the same feelings towards usage, interest and perception of importance. Hence when it comes to perception of importance, there is a statistical significant between the participants both groups (table 5). In both countries there was a tendency in which women where more cooperative in order to complete the survey. Also both country participants possessed higher educational level. The strongest correlation from the surveyed participants was interest and perception of importance. In second place the researchers learned that if users perceived that a technological device or software is important then there will be a higher tendency of usage. Third which is also positive yet with a weak and moderate strength the more interest in users towards technology the higher the tendency to use technology.

The participants were very similar (homogeneity of variance .326). There was a statistical significant difference between people older 30 and younger than 30 years old. By reviewing the means (15.46 [old] vs 14.40 [young]) we can establish that people older than 30 years of age tend to have a higher perception of importance towards technology than the ones younger than 30. These findings support the Millennials theory. According to Reuteman (2015), Millennials are those born during the 80’s and before the 2000’s are also called Generation Y. Millennials represent approximately 80 million americans. These individuals tend to accept change and adapt easier to technological adaptation. Although they accept change they also have a tendency of rebelliousness for following directions from managers, specially from Generation Y (Reuteman, 2015). Generation Y feel they should accomplish goals in a much higher speed than any other generation. (Reuteman, 2015). Reuteman (2015) also states that Millennials are taking over the workforce
and that older leaders feel threatened by these Generation Y individuals.

**Limitations**

First, the sample used for this particular study was snowball sampling, also the research was conducted only to people in the US and in Honduras. The primary researcher created a website and embedded Google Forms in order to acquire data. In some cases, participants couldn't complete the survey because of compatibility issues within browser on their mobile device. This compatibility limitation was very similar in both countries and it had to do with Apple’s iPhone operating system iOS 8. Third, the instrument designed by the primary researcher to collect data was a questionnaire, and the last limitation is the number of participants in the US.

**V. CONCLUSIONS**

Organizations will be in constant change, and should understand their employees behavior. As described previously in this study it is not a matter of birth country what makes a user adapt to a technological advance or update. It’s age what really impacts the perception of importance towards technology. Users who belong to the Millennials or generation Y will most likely have a higher perception towards importance than a younger or older user. Companies need to hire personnel that will indeed accept changes and adapt to new software and hardware updates. Also it is safe to conclude that Millennials are the generations companies will want to hire based on their easiness to adapt, change and also their need of success in short periods of time.

**REFERENCES**


**AUTHORS**

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Second Author - Tony DiDonna, Ph.D., Associate Professor at Albizu University, Miami, Fl.

Correspondence Author - Richard Munir Simon at rsimon265@sunmail.albizu.edu or Dr. Toni DiDonna at tdidona@albizu.edu

**APPENDIX A**

Survey Topic: **Technological Cross Country Adaptation.**

The estimated time to complete the survey is about 15 minutes with 2 simple types of questions: Multiple choice and Scale. Just as a reminder to make the participant feel as comfortable as possible, we do NOT track IP addresses, or any information. The information acquired is for student research only.

**Instructions:**

Choose one option from a list of possible answers, or fill in the blank for each question.

- What is your gender
a. Male ______
b. Female ______

• What is your age in years?
  ________ years old

• Which best describes your racial/ethnic identity?
a. White/Non hispanic ______
b. Black/African American ______
c. Hispanic/Latino ______
d. Asian ______
e. Multiracial ______
f. Other ______

• In what country where you born?
a. US ______
b. Other _________________________________

• Are you a US Citizen?
a. Yes _____
b. No _____

Have you traveled outside of the US?
a. Yes____
b. No____

• What is your marital status
a. Single ______
b. Married______
c. Separated ______
d. Divorced ______
e. Widowed ______
f. Other ______

• How many children, if any, do you have?
a. 0 ______
b. 1 ______
c. 2 ______
d. 3+ ______

• How many languages can you speak, including your native language?
  _______________ Number of Languages

Specify which languages if the number is greater than 1.

• How many years of education have you completed? (If you finished high school you would answer 12, if you have a bachelor’s degree you would answer 16, a doctoral degree would be 20)
  ____________ Years

• Which best describes your job?
a. Entry level ______
b. Professional ______
c. Managerial ______
d. Executive ______
e. Self employed ______
f. Retired ______
g. Unemployed ______
h. Other ______

• How many years of experience do you have in your field?
  _______ Years of experience.

• I suffer a physical disability
  E.g. Arthritis
  a. Yes ______
  b. No ______

• I associate computer innovation with:
  a. Windows ______
  b. Google ______
  c. Linux ______
  d. Apple ______
  e. Other _______________________________

• My favorite Social Media is:
  a. Google + ______
  b. Twitter ______
  c. Facebook ______
  d. Vine ______
  e. Linked IN ______
  f. Instagram ______
  g. Snapchat ______
  h. NONE, I hate social media. ______

• I have a Linked In Account:
  a. Yes ______
  b. No ______
  c. I think so, but I never use it ______

• I pay for internet service at:
  a. Home ______
  b. Mobile Device(s) ______
  c. Both ______
  d. None ______

I own:
  a. Smartphone____
  b. Smartphone and Tablet____
  c. Tablet____
  d. Smartphone and PC/Laptop____
  e. Tablet and PC/Laptop____
  f. PC/Laptop____
  g. Smartphone, PC/Laptop and Tablet____
  h. All of the Above____

I use:
  a. Windows____
  b. OSX____
  c. Linux____
d. All of the above____
e. Other____

Instructions:

The following questions contain a number of statements with which some people may agree and others may disagree. Please rate how much you personally agree or disagree with these statements how much they reflect how you feel or think personally. 1 being stronger disagree and 5 being strongly agree.

- My job requires technological skills.
  
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<thead>
<tr>
<th>Strongly Disagree</th>
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<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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- I operate MS Office Suite or alternatives with ease.
  
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<th>Strongly Disagree</th>
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- I believe possess advanced computer skills.
  
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- I am glad when the Softwares I use update.
  
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- I am annoyed when my company changes to new computers.
  
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- I use the internet at home.
  
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- I use the internet at work.
  
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- I regularly check social media.
  
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- Technology blogs are interesting to me.
  
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- New character fonts and screen resolutions have made a negative impact in my work-life.
  
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- I enjoy learning new software.
  
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- Going to technological trainings make me more productive.
  
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APPENDIX B

Tema de Encuesta: Adaptación Tecnológica Entre Países

El tiempo estimado para completar la encuesta es de aproximadamente 15 minutos. Contiene dos tipos de preguntas: selección múltiple y una escala tipo Likert. Como parte de que el participante se sienta lo más cómodo posible, nos complace informarles que la encuesta es anónima, el investigador NO rastreará direcciones IP u otra información. La información recopilada será para uso estudiantil únicamente.

Instrucciones:
Escoja una opción de una lista de posibles respuestas, o llene el vacío para la pregunta.

- ¿Cuál es su género?
  Masculino _____
  Femenino _____

- ¿Cuál es su edad en años?
  ________ edad en años

- ¿Cuál describe mejor su raza?
  Blanco/No hispano _____
  Afrodescendiente _____
  Hispano/Latino _____
  Asiático _____
  Multirracial _____
  Otro _____

- ¿En qué país nació?
  Honduras _____
  Otro _______________

- ¿Reside en Honduras de forma permanente?
  Sí ____
  No _____

- ¿Ha viajado fuera de Honduras?
  Sí ____
  No _____

- Estado Civil:
  Soltero _____
  Casado _____
  Separado _____
  Divorciado _____
  Viudo _____
• ¿Cuántos hijos tiene?
  0 ___
  1 ___
  2 ___
  3+ ___

• ¿Cuántos idiomas maneja incluyendo su idioma nativo?
  __________ número de idiomas

  Especifique que idiomas si el número es mayor que 1.

• ¿Cuántos años a completado de educaron? (Si usted terminado la secundaria su respuesta seria 11/12, si ya termino su licenciatura 16, y si es PhD sería 20)
  _______ Años

• ¿Cómo describe mejor su trabajo?
  Novato ___
  Profesional ___
  Gerencial ___
  Ejecutivo ___
  Dueño de negocio ___
  Jubilado ___
  Desempleado ___
  Otro ___

• ¿Cuántos años de experiencia tiene en este campo?
  _______ Número años de experiencia

• ¿Sufre usted de alguna discapacidad física?
  Si ___
  No ___

• Yo asocio la innovación tecnológica con la marca de:
  Windows ___
  Google ___
  Linux ___
  Apple ___
  Otro ___

• Mi red social favorita es:
  Google+ ___
  Twitter ___
  Facebook ___
  Vine ___
  Linked In ___
  Instagram ___
  Snapchat ___
  Ninguna, no me agradan las redes sociales. ___

• ¿Poseo cuenta de Linked In?
  Sí ___
  No ___
  Creo, pero nunca la uso ___

• Yo pago servicio de internet para:
  Casa ___

www.ijsrp.org
• Soy dueño de:
  Smartphone ______
  Smartphone y Tableta ______
  Tableta ______
  Smartphone y Computadora ______
  Tableta y Computadora ______
  Computadora ______
  Smartphone, Tableta y Computadora ______

Yo uso:
  Windows ______
  OSX ______
  Linux ______
  Todos los anteriores ______
  Otro ______

**Instrucciones:**
Las siguientes preguntas contienen un número de declaraciones que los participantes podrán sentirse totalmente de acuerdo o en total desacuerdo. Por favor califique de manera personal lo tanto que pueden estar en acuerdo o desacuerdo de lo que usted piensa de las declaraciones. El número 1 siendo que esta en total desacuerdo con la declaración y 5 que esta totalmente de acuerdo.

- Mi trabajo requiere tener habilidades tecnológicas.
  
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<tr>
<th>Total Desacuerdo</th>
<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
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- Yo opero MS Office con facilidad
  
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<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

- Yo poseo habilidades avanzadas en uso de computadoras.
  
<table>
<thead>
<tr>
<th>Total Desacuerdo</th>
<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

- Yo me alegro y espero las actualizaciones de programas.
  
<table>
<thead>
<tr>
<th>Total Desacuerdo</th>
<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

- Yo me enfado cuando mi compañía cambia mi ordenador.
  
<table>
<thead>
<tr>
<th>Total Desacuerdo</th>
<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

- Yo uso el internet en mi casa.
  
<table>
<thead>
<tr>
<th>Total Desacuerdo</th>
<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

- Yo uso internet en mi lugar de trabajo.
  
<table>
<thead>
<tr>
<th>Total Desacuerdo</th>
<th>Desacuerdo</th>
<th>Neutral</th>
<th>Acuerdo</th>
<th>Total Acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
• Yo reviso regularmente mis redes sociales.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Los Blogs son importantes para mí
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Los nuevos estilos de letras y las resoluciones nuevas de pantallas impactan de forma negativa mi desempeño laboral.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Me gusta aprender a usar nuevos programas.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Ir a capacitaciones tecnológicas me han convertido en un empleado más productivo.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Me gusta la tecnología.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Creo que la tecnología es un mal necesario.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

• Las actualizaciones de Microsoft han facilitado mi trabajo.
  Total Desacuerdo | Desacuerdo | Neutral | Acuerdo | Total Acuerdo
  1 | 2 | 3 | 4 | 5

---

Table 1 Descriptive characteristics

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>N</td>
<td>Valid 46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Missing 0</td>
</tr>
<tr>
<td>HN</td>
<td>N</td>
<td>Valid 56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Missing 0</td>
</tr>
</tbody>
</table>

By Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>Male</td>
<td>18</td>
<td>39.1</td>
<td>39.1</td>
<td>39.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>28</td>
<td>60.9</td>
<td>60.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### Total

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>46</th>
<th>100.0</th>
<th>100.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN</td>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>41.1</td>
<td>41.1</td>
<td>41.1</td>
</tr>
<tr>
<td>Female</td>
<td>33</td>
<td>58.9</td>
<td>58.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Education

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
<th>Percent Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Valid</td>
<td>1-12</td>
<td>14</td>
<td>30.4</td>
<td>30.4</td>
</tr>
<tr>
<td></td>
<td>13-20</td>
<td>32</td>
<td>69.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
<th>Percent Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN Valid</td>
<td>1-12</td>
<td>12</td>
<td>21.4</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>13-20</td>
<td>44</td>
<td>78.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Statistics Age

#### US
- N: Valid 46, Missing 0
- Mean: 31.76
- Median: 30.00
- Mode: 29
- Std. Deviation: 7.852
- Variance: 61.653
- Range: 32
- Minimum: 20
- Maximum: 52

#### HN
- N: Valid 56, Missing 0
- Mean: 31.77
- Median: 32.00
- Mode: 32
- Std. Deviation: 6.764
- Variance: 45.745
- Range: 28
- Minimum: 22
- Maximum: 50

### Table 2 Correlations between technological interest and perception of importance

#### Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>6.85</td>
<td>1.782</td>
<td>102</td>
</tr>
<tr>
<td>Perception</td>
<td>14.94</td>
<td>2.341</td>
<td>102</td>
</tr>
</tbody>
</table>

#### Correlations

- **Interest**
  - Pearson Correlation: 1
  - Sig. (2-tailed): .653**

- **Perception**
  - Pearson Correlation: .653**
  - Sig. (2-tailed): 1
**Correlation**

Sig. (2-tailed)                              .000  
N                        102  102  

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

---

**Table 3 Correlations between perception of importance and usage of technology**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>14.94</td>
<td>2.341</td>
<td>102</td>
</tr>
<tr>
<td>Usage</td>
<td>13.77</td>
<td>1.834</td>
<td>102</td>
</tr>
</tbody>
</table>

**Correlations**

<table>
<thead>
<tr>
<th>Perception</th>
<th>Interest</th>
<th>1</th>
<th>.428**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>102</td>
<td>102</td>
<td></td>
</tr>
</tbody>
</table>

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

---

**Table 4 Correlations of interest towards technology and levels of usage**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>6.85</td>
<td>1.782</td>
<td>102</td>
</tr>
<tr>
<td>Usage</td>
<td>13.77</td>
<td>1.834</td>
<td>102</td>
</tr>
</tbody>
</table>

**Correlations**

<table>
<thead>
<tr>
<th>Interest</th>
<th>Perception</th>
<th>1</th>
<th>.284**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>102</td>
<td>102</td>
<td></td>
</tr>
</tbody>
</table>

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

---

**www.ijsrp.org**
Correlation
Sig. (2-tailed) .004
N 102 102

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

Table 5

Test of Homogeneity of Variances
Perception

Levene Statistic df1 df2 Sig.
.834 1 100 .363

ANOVA
Perception

Sum of Squares df Mean Square F Sig.
Between Groups 28.724 1 28.724 5.472 .021
Within Groups 524.923 100 5.249
Total 553.647 101