

Non-print Materials vs. Print Materials: Impact on the Learning Styles of the Millennials in the Kingdom of Bahrain

Dr. Rosita Guzman Castro (*Author*)
 Director, Center for General Education
 AMA International University-Bahrain
 Salmabad, Kingdom of Baharin

Abstract:- This study aimed to determine the impact of the learning styles of the millennials regarding their preferences on the use of non-print versus print materials. The respondents were the select students from higher education institutions in the Kingdom of Bahrain during the 3rd Trimester, SY 2017-2018. This study made use of the descriptive research method, where a questionnaire was used to find out the preferences and learning styles of the millennials in terms of print and non-print materials. The results of the study showed that: millennial respondents regardless of sex and employment status strongly agree on the importance of print materials; majority of the millennials are visual learners; both the male and female millennial respondents accepted the hypothesis of no significant difference on their preferences of the non-print and print materials. Both working and unemployed millennial respondents accepted the hypothesis of no significant difference on their preferences of the use of the print materials while for the non-print materials the respondents rejected the null hypothesis of no significant difference. Hence, the alternative hypothesis of significant difference is accepted. There were statistically significant differences on the learning styles by male and female, working and unemployed respondents. Majority of the millennials were visual learners and they associate learning by seeing, between the learning styles and the reading preferences of the respondents correlation was highly statistically significant in terms of the non-print materials and linear moderate positive correlation for the print material preferences.

Keywords:- *Print Materials, Non-Print Materials, Learning Styles, Millennials.*

I. INTRODUCTION

The acquisition of knowledge and information through reading from non-print and print materials is an intricate process. Reading is essential for a society to function well. It is a fundamental skill in finding a good job, (Gregory, C.L 2008) [1]. Throughout the generations, print materials have demonstrated to be a remarkably dynamic acquisition of information and remain to be the most valuable avenue for reading. The competencies and methods we have acquired in understanding the texts have progressed over centuries of interaction with printed

materials. College students involve greatly with prints—they examine, investigate, assess and create their own written outcome from them.

As described by Nicholas, A. (2008) in his study, the millennial generation is considered to be literate generation in the workforce. This is also known as the Web/ Net Generation, those born from 1981- 2001. They have been raised in an age of rapid web access. It is imperative that they acquire the format that delivers the best learning product; be it in print or non-print. The millennials' learning and communication style is through multi-media. Acquisition of learning has even shifted into web-based devices such as, online journals and i-pod downloads [2]. This statement is supported by Byers M.N. (2015), printed materials like books are an integral part of people's lives. The purpose of a book is to transmit information. Whether that information be rationally driven or for personal motive, books are always part of people's lives.[3] However, books have taken a far-reaching effect recently, transitioning over to a digital age, books are no exemption.

From the aforementioned statements the researcher established an understanding to delve into millennials' preferences either print or non-print materials. Through this study, the researcher will be able to determine the pros and cons of non-print versus print materials with regard to the impact on the learning styles of the said respondents.

A. Statement of the Problem

This study aimed to determine the impact of the learning styles of the millennials regarding on their preferences on the use of non-print versus print materials. Specifically, it sought to answer the following:

- What are the preferences of the respondents in terms of non print and print materials when classified as to a. sex and b. employment status?
- What are the learning styles of the respondents when classified as to a. sex and b. employment status?
- Is there a significant difference on the preferences of the respondents in terms of non print and print materials when classified as to a. sex and b. employment status?
- Is there a significant difference on the learning styles of the respondents when classified as to a. sex and b. employment status?

- Is there a significant relationship between the preferences on non print and print materials and the learning styles of the respondents?

➤ *Hypotheses*

- There is no significant difference on the preferences and learning styles of the millennial respondents when classified as to a. sex and b. employment status.
- There is no significant difference on the preferences of the respondents in terms of non print and print materials when classified as to a. sex and b. employment status.
- There is no significant relationship between the preferences on non print and print materials and the learning styles of the millennial respondents.

B. Significance of the Study

This study serves as a vital piece of information for educators in terms of knowing what best infrastructure to be recommended for the type of learners. They should learn how to adapt to the changing needs of the times.

To librarians, this study serves as guides for purchasing print and non print materials. The system should always excite the learners.

D. Conceptual Framework

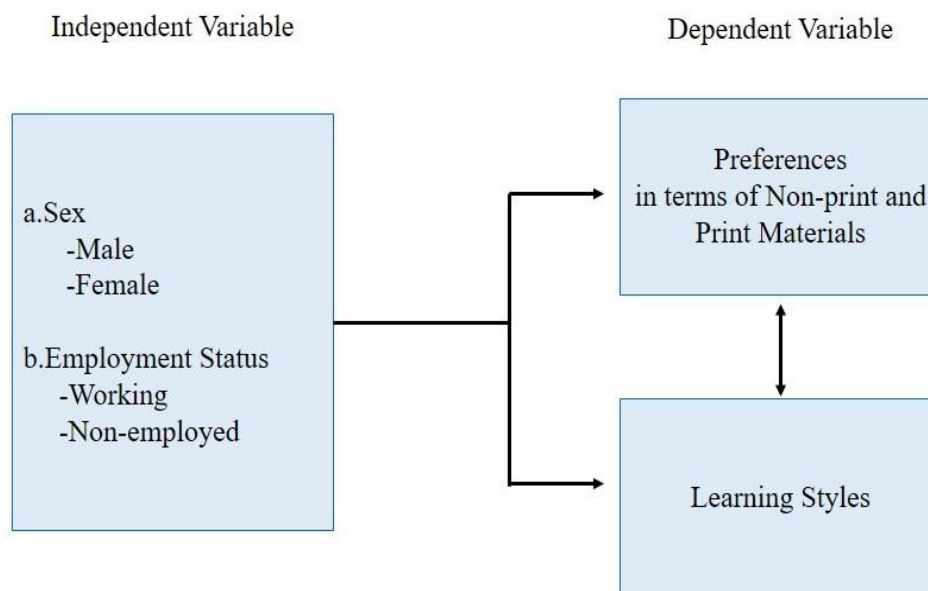


Fig 1

Figure 1 exhibits the paradigm of the study. The group of respondents classified in terms of sex and employment status serves as the independent variable and their preferences on the use of non-print and print materials as correlates to their preferences and learning styles on the different formats act as the dependent variables.

E. Theoretical Framework

This theory is anchored on Niche Gratification; this was first introduced by Elihu Katz. This used to elucidate the motive that readers pertain in choosing among print and

Lastly, the millennial generation will have a greater consumer impact than previous generations, so knowing whether they prefer print or digital which directly affect their learning styles could help determine what the future of the print / non print industry will be and as this also serves as basis for the educational institution to keep the system relevant.

C. Scope and Limitation of the Study

This study focused on the impact on the learning styles of the millennials from selected higher education institution in the Kingdom of Bahrain during the 3rd Trimester, SY 2017-2018 in terms of their preferences in using non-print and print materials. This study made use of the descriptive research method, where a questionnaire was used for the target respondents. Weighted mean and Standard Deviation were used to analyze the responses of the millennial respondents while five-Point Likert Scale, was also applied in the interpretation of the data. In terms of the difference of the responses of respondents, T-Test will be employed. To obtain the significant relationship between the preferences and learning styles of the millennial respondents, Pearson-Product Moment Correlation was carried out. The test of hypothesis is at 0.05 level of significance.

non-print systems. It also investigates how these systems meet the requirement of the user. According to the theory, the older and newer media formats are competing with each other as cited by Cowin. The digital or non-print format offers more challenging features to already established products. This theory was recapitulated by Cowin's (2013) [4] literature recommends pros and cons to digital format, as well as its level of popularity. Several studies reveal that the printed materials are still preferred format, while other researches prove that other consumers seek non print format because they offer latest technological attributes.

This research uses Niche Gratification Theory as a support for showing the relationship of the usage of printed materials and other digital formats, as well the expectations for usage of these formats in relation to the respondents' learning styles.

II. LITERATURE REVIEW

Higher education institutions demand textbooks as one of the essential instruments used for learning. Likewise, textbook is vital to class verbal exchange and discourse. Habitual readers are persistently engaged with new ways of thinking, alternative perspectives, and a frequent endeavor for self-betterment. In this web generation, however, the essence of the textbook is slowly diminishing.

The study of Smith and Caruso (2010) proved, "eighty percent of college and university students depend on laptops, and growing number are acquiring tablets, smart phones, and other devices for learning" [5]. A report submitted by Amazon in 2011 revealed that acquiring of digital formats (e-books) had exceeded those of print books. In this information period, this signaled a vital change in the manner that people utilize information (Gibson & Gibb, 2011; Hamblen, 2011) [6]. Concomitantly, Rainie et al. (2012) [7] reported that there had been a complementary decline in the percentage of Americans reading print materials (from 78% in 2011 to 75% in 2012).

Learning can be influenced by both the format of the non-print and print materials. With digital advances being created in technology to make lives more efficient easier and convenient, the printing industry could be in peril of having learners to decide a digital format versus a printed one. However, there are some learners who prefer to use the print materials over the non-print ones.

A pilot study was carried out in the University of Washington regarding Amazon's Kindle, research study suggested that "it was difficult for Kindle e-reader to shift between reading styles, such as skimming a report's designs and figures or references just before reading the entire material. Students usually switch as they read the printed material" [8].

A paper-based materials encourage reading cognition, this was supported by Marmarelli & Ringle (2010), "students sensed that turning over the pages in print is crucial and indispensable in order to get a broad sense of an article's content and organization prior to engage in the reading material more fully." [9].

Most millennials favor print reading materials rather than utilizing digital format for their academic activities. This was reinforced by the study of Acherman & Goldsmith (2011) [10], "millennials are in favor to read using print materials rather than study on screen."

Macedo-Rouet et al. (2003) presented their findings they gathered from forty seven undergraduate university students. The study made interesting revelations on the use of non-print over print materials "non-print readers obtained slightly lower comprehension scores than printed material readers. Remarkably interesting, the researchers observed that the comprehension decrease was restricted to questions pertaining complementary documents that were not immediately recognizable on the computer screen"[11].

This statement reaffirmed in the study conducted by Woody et al. (2010) [12] regardless students have the chance to access technology at their convenience; they still prefer reading printed materials than digital formats. As reported by Kakirman Yıldız (2012) [13]; three periods portray the digital programs; digital immigrants, digital hybrids and digital natives. The student-teachers who are the subject of this study were born in 1990-1994 are considered digital hybrids. Digital hybrids endeavor to take the benefit of hi-tech competencies but they are not as capable as the digital natives. The printed materials are much closer and essential to them. As Duran (2013)[14] cited the research findings of Jamali et al. (2009), Noordhidawati and Gibb (2008) that because of the reasons of technological inadequacies and not having ample knowledge and skills to read e-books, students are not conveying positive attitude towards reading digital formats.

Relative to this study, Grimshaw & Dungworth (2004) conducted a research a group of students in UK, regarding the use of non-print versus the print materials. The researchers found no significant difference between the reading comprehension scores of learners reading the non-print versions and those using the printed ones [15].

III. RESEARCH METHODOLOGY

This study made use of the descriptive research method, where a questionnaire was used to find out the preferences and learning styles of the millennials in terms of print and non-print materials during the 3rd trimester of AY 2017-2018.

The respondents of the study were the select students from higher education institutions in the Kingdom of Bahrain. The questionnaire was partially adapted from Ms. Niljun Tosun's (2014) [16] research study with modification done by the current researcher to suit to the present study.

Weighted mean and Standard Deviation were used to analyze the responses of the millennial respondents while five-Point Likert Scale, was also applied in the interpretation of the data. In terms of the difference of the responses of respondents, T-Test will be employed. To obtain the significant relationship between the preferences and learning styles of the Millennial respondents, Pearson-Product Moment Correlation was carried out. The test of hypothesis is at 0.05 level of significance.

➤ *Data Gathering Procedure*

The researcher distributed the questionnaire to the entrusted students and they distributed it to selected universities and administered the instrument to the target respondents. Utmost care was taken in order not to disrupt the schedule of the target respondents. The answered questionnaire was retrieved for the tallying of data.

Afterwards, tables were prepared for the interpretation of data. The gathered data was encoded and summarized after which analysis and interpretations were done by the researcher with the help of an expert statistician. Findings from the data interpreted were disclosed for the writing of conclusions and recommendations.

IV. RESULTS AND DISCUSSION

| Print Materials | Male | | Female | | Working | | Non-Employed | |
|---|-------------|----------------|-------------|----------------|-------------|----------------|--------------|----------------|
| | Mean | DI | Mean | DI | Mean | DI | Mean | DI |
| 1. I prefer book because it is portable and easier to read than reading in a digital format; I understand the text clearly in printed materials | 4.48 | Agree | 4.57 | SA | 4.58 | Strongly Agree | 4.24 | Agree |
| 2. I get more pleasure reading a book because I can flip every page of it and I learn better doing that | 3.96 | Agree | 4.43 | Agree | 4.01 | Agree | 3.93 | Agree |
| 3. I really like the smell of the book. I am motivated to read through smelling. I easily grasp the ideas in doing this. | 4.54 | Strongly Agree | 4.14 | Agree | 4.53 | Strongly Agree | 4.45 | Agree |
| 4. I understand the text better when I read the book in my hands | 3.88 | Agree | 4.57 | Strongly Agree | 3.86 | Agree | 4.10 | Agree |
| 5. I do not have technology to read e-books, so I read handy book. This is my way of learning | 4.00 | Agree | 4.14 | Agree | 3.81 | Agree | 4.55 | Strongly Agree |
| 6. I retain more of what I read in print because I can highlight phrases there | 4.52 | Strongly Agree | 4.14 | Agree | 4.38 | Agree | 4.79 | Strongly Agree |
| Grand Mean | 4.23 | Agree | 4.33 | Agree | 4.20 | Agree | 4.35 | Agree |

Table 1:- Preference of the Respondents in Terms of Print Materials when Classified by Sex and Employment Status

Based on the responses given by the millennials in Table 1, both female (Mean 4.57) and working students (Mean 4.58) strongly agree on the statement “I prefer book because it is portable and easier to read than reading in a digital format; I understand the text clearly in printed materials”. The male (Mean 4.54) and working (Mean 4.53) millennial respondents placed strong agreement in terms of the motivation they get through smelling the pages of the book and that they easily grasp the ideas by doing it. Likewise, the female group (Mean 4.57) strongly agree in the statement that they understand the text better when they read the book in their hands. For the non-employed respondents, (Mean 4.55) they strongly agree to the

statement that they do not have technology to read e-books, so they read handy book. That is their way of learning. Similarly, a mean score of 4.52 by the male respondents and a mean score of 4.79 by non-employed proved that they had strongly agree on the importance of print materials because they can learn and retain more of what they read and highlight essential phrases there. The findings of the study were supported by Marmarelli & Ringle (2010) “students sensed that turning over the pages in print is crucial and indispensable in order to get a broad sense of an article’s content and organization prior to engage in the reading material more fully.” [9].

| Non-Print Materials | Male | | Female | | Working | | Non-Employed | |
|--|-------------|--------------|-------------|----------------------------|-------------|----------------|--------------|----------------------------|
| | Mean | DI | Mean | DI | Mean | DI | Mean | DI |
| 1. I learn better in digital format because I can accessed it everywhere | 3.98 | Agree | 3.43 | Neither Agree nor Disagree | 3.97 | Agree | 3.86 | Agree |
| 2. I understand and enjoy a narrative stories more times when it is in digital than in print format | 4.29 | Agree | 3.43 | Neither Agree nor Disagree | 4.57 | Strongly Agree | 3.34 | Neither Agree nor Disagree |
| 3. Searching a file in non-print digital layout on DVD is faster than searching a print book. This speeds up my learning process | 3.87 | Agree | 3.86 | Agree | 4.04 | Agree | 3.41 | Neither Agree nor Disagree |
| 4. I can adjust the font size with my e-book that I cannot do with a book. By doing this I learn and understand the text faster | 3.94 | Agree | 4.43 | Agree | 4.06 | Agree | 3.72 | Agree |
| 5. Real time news/ events updates are just one thing that makes non-print distinctive. This is one of the avenues of learning, reading through social media sites. | 3.99 | Agree | 4.43 | Agree | 4.23 | Agree | 3.45 | Neither Agree nor Disagree |
| 6. I feel more comfortable to listen to an audio book than read a book. I understand clearly when I enjoy listening to every statement of the audio book. | 4.15 | Agree | 4.43 | Agree | 4.26 | Agree | 3.93 | Agree |
| Grand Mean | 4.04 | Agree | 4.00 | Agree | 4.19 | Agree | 3.62 | Agree |

Table 2:- Preference of the Respondents in Terms of Non-Print Materials When Classified by Sex and Employment Status

It can be gleaned in table 2, compared to the print in table 1 versus the non-print materials the female millennial respondents (Mean 3.43) neither agree nor disagree that they learn better in digital format because they can accessed it everywhere. The female (Mean 3.43) and non-employed respondents (Mean 3.34) neither agree nor disagree for the statement “I understand and enjoy a narrative stories more times when it is in digital than in print format.” However, the working respondents (Mean 4.57) strongly agree on the significance of reading narrative stories in digital than in print format. The male, female, working millennial respondents agree in terms of searching a file in non-print digital layout on DVD which they believed much faster than searching a print book and it speeds up their learning process. The same goes with their agreement on real time news/ events updates that made the non-print distinctive to them. They also agreed that one of the avenues of learning is reading through social media sites. While the non-employed respondents neither agree nor disagree about it. This findings reaffirmed the study conducted by Smith and Caruso, “eighty percent of college and university students depend on laptops, and growing number are acquiring tablets, smart phones, and other devices for learning” [5]. A report submitted by Amazon in 2011 revealed that acquiring of digital formats (e-books) had exceeded those of print books. In this information period, this signaled a vital change in the manner that people utilize information (Gibson & Gibb, 2011; Hamblen, 2011) [6]

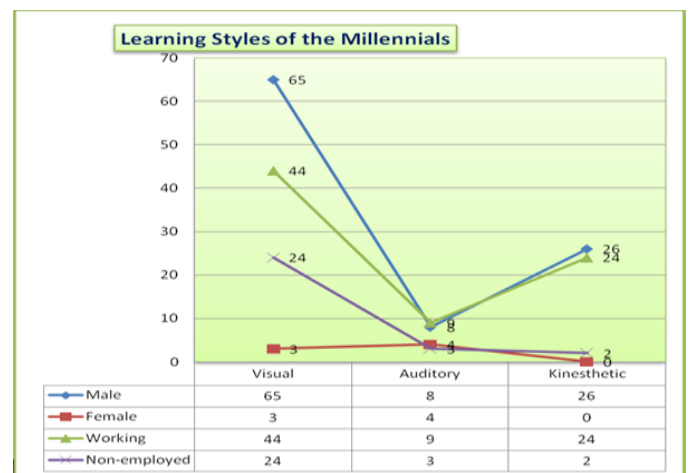


Table 3:- Learning Styles of the Respondents When Classified by Sex and Employment Status

As to the learning styles of the Millennial respondents in terms of sex and employment status male (65/106 or 61.32%) and working (44/106 or 41.50%) respondents are visual learners. Next in rank Female (3/106 or 2.83%) and non-employed (24/106 or 22.64%) are also visual learners. The rest of the learners are kinesthetic male (26/106 or 24.53%) working (24/106 or 22.64%) and non-of the females are kinesthetic learners. Lowest in rank are auditory learners. Majority of the millennials are visual learners, they associate learning by seeing, and taking detailed notes and highlight important phrases from the reading materials. The findings of this study corroborated with a pilot study carried out in the University of

Washington regarding Amazon’s Kindle, research study suggested that “it was difficult for Kindle e-reader to shift between reading styles, such as skimming a report’s designs and figures or references just before reading the

entire material. Students usually switch as they read the digital material, students learned more in highlighting relevant statements that needed in the acquisition of information [8].

| Print Materials | | t-value | p-value | Decision |
|---------------------|---|---------|---------|-----------|
| 1 | I prefer book because it is portable and easier to read than reading in a digital format; I understand the text clearly in printed materials | -.347 | .730 | Accept Ho |
| 2 | I get more pleasure reading a book because I can flip every page of it and I learn better doing that | -1.612 | .110 | Accept Ho |
| 3 | I really like the smell of the book. I am motivated to read through smelling. I easily grasp the ideas in doing this. | .962 | .372 | Accept Ho |
| 4 | I understand the text better when I read the book in my hands | -1.736 | .086 | Accept Ho |
| 5 | I do not have technology to read e-books, so I read handy book. This is my way of learning | -.650 | .517 | Accept Ho |
| 6 | I retain more of what I read in print because I can highlight phrases there | 2.457 | .041* | Reject Ho |
| Grand Mean | | -.574 | .585 | Accept Ho |
| Non-Print Materials | | t-value | p-value | Decision |
| 1 | I learn better in digital format because I can accessed it everywhere | 1.747 | .084 | Accept Ho |
| 2 | I understand and enjoy a narrative stories more times when it is in digital than in print format | 2.904 | .004* | Reject Ho |
| 3 | Searching a file in non-print digital layout on DVD is faster than searching a print book. This speeds up my learning process | .028 | .978 | Accept Ho |
| 4 | I can adjust the font size with my e-book that I cannot do with a book. By doing this I learn and understand the text faster | -2.037 | .065 | Accept Ho |
| 5 | Real time news/ events updates are just one thing that makes non-print distinctive. This is one of the avenues of learning, reading through social media sites. | -1.243 | .217 | Accept Ho |
| 6 | I feel more comfortable to listen to an audio book than read a book. I understand clearly when I enjoy listening to every statement of the audio book. | -.687 | .493 | Accept Ho |
| Grand Mean | | .176 | .860 | Accept Ho |

*significant at .05 level

Table 4:- Significant Difference on the Preferences of the Respondents in Terms of Non Print and Print Materials When Classified as to Sex

The data in table 4 directly delved whether there were significant differences on the preferences of the respondents in terms of print and non-print materials when classified as to Sex. There is no significant difference on the preferences of the Millennial respondents in terms of the print and non print for both male and female based on the following variables: "I prefer book because it is portable and easier to read than reading in a digital format; I understand the text clearly in printed materials", p-value =.730; "I get more pleasure reading a book because I can flip every page of it and I learn better doing that", p-value = .110; "I really like the smell of the book. I am motivated to read through smelling," p-value= .372; "I easily grasp the ideas in doing this, p-value= .086; I understand the text better when I read the book in my hands and I do not have technology to read e-books, so I read handy book. This is my way of learning," p-value =.517. For item, "I retain more of what I read in print because I can highlight phrases there" rejected the null hypothesis of significant difference, p-value=0.41* in terms of their preferences of print and non-print materials for reading. For the non-print materials, the following findings are revealed: "I learn better in digital

format because I can accessed it everywhere," p-value=.084; "Searching a file in non-print digital layout on DVD is faster than searching a print book. This speeds up my learning process," p-value= .978; "I can adjust the font size with my e-book that I cannot do with a book. By doing this I learn and understand the text faster," p-value= .065; "Real time news/ events updates are just one thing that makes non-print distinctive. This is one of the avenues of learning, reading through social media sites,"p-value=.217; "I feel more comfortable to listen to an audio book than read a book. I understand clearly when I enjoy listening to every statement of the audio book," p-value=.493. The millennial respondents agreed that there are no significant differences on their reading preferences of non-print or print materials in five items mentioned above. While they rejected the null hypothesis in item 2, p-value= .004* therefore they find it more significant for them to read in digital format than in print format. As to the grand means (Print, p-value=.585; non-print, p-value=.860). In terms of sex, both the male and female millennial respondents accepted the hypothesis of no significant difference on their preferences of the non-print and print materials.

| Print | | t-value | p-value | Decision |
|------------|--|---------|---------|-----------|
| 1 | I prefer book because it is portable and easier to read than reading in a digital format; I understand the text clearly in printed materials | 1.999 | .053 | Accept Ho |
| 2 | I get more pleasure reading a book because I can flip every page of it and I learn better doing that | .401 | .691 | Accept Ho |
| 3 | I really like the smell of the book. I am motivated to read through smelling. I easily grasp the ideas in doing this. | .636 | .526 | Accept Ho |
| 4 | I understand the text better when I read the book in my hands | -1.418 | .159 | Accept Ho |
| 5 | I do not have technology to read e-books, so I read handy book. This is my way of learning | -6.459 | .000* | Reject Ho |
| 6 | I retain more of what I read in print because I can highlight phrases there | -4.402 | .000* | Reject Ho |
| Grand Mean | | -1.713 | .094 | Accept Ho |

| Non-Print | | t-value | p-value | Decision |
|------------|--|---------|---------|-----------|
| 1 | I learn better in digital format because I can accessed it everywhere | .796 | .428 | Accept Ho |
| 2 | I understand and enjoy a narrative stories more times when it is in digital than in print format | 9.933 | .000* | Reject Ho |
| 3 | Searching a file in non-print digital layout on DVD is faster than searching a print book. This speeds up my learning process | 4.860 | .000* | Reject Ho |
| 4 | I can adjust the font size with my e-book that I cannot do with a book. By doing this I learn and understand the text faster | 1.244 | .216 | Accept Ho |
| 5 | Realtime news/ events updates are just one thing that makes non-print distinctive. This is one of the avenues of learning, reading through social media sites. | 2.864 | .008* | Reject Ho |
| 6 | I feel more comfortable to listen to an audio book than read a book. I understand clearly when I enjoy listening to every statement of the audio book. | 1.929 | .057 | Accept Ho |
| Grand Mean | | 5.171 | .000* | Reject Ho |

*significant at .05 level

Table 5:- Significant Difference on the Preference of the Respondents in Terms of Non Print and Print Materials When Classified as to Employment Status

Between the preferences of the Millennial respondents in terms of non-print and print formats when grouped as to employment status it can be gleaned that for print format items 1-4 the millennial respondents accepted the null hypothesis of no significant difference in their preferences of these reading formats while in items 5 and 6 the working and non-employed respondents agreed that there is a significant difference on the statement, “I do not have technology to read e-books, so I read handy book, this is my way of learning”, p-value=.000* and the same is true with the statement, “I retain more of what I read in print because I can highlight phrases there”, p-value=.000*

Correspondingly, for the non-print format the working and unemployed millennial respondents agreed that there is significant difference in statements, “I understand and enjoy a narrative stories more times when it is in digital than in print format”, p-value=.000*; “Searching a file in non-print digital layout on DVD is faster than searching a print book. This speeds up my learning process”, p-value=.000*; and “ Real time news/ events updates are just one thing that makes non-print distinctive. This is one of the avenues of learning, reading through social media sites”, p-value= .008*. On the contrary, statements; “I learn better in digital format because I can accessed it everywhere”, p-value =.428; “ I can adjust the font size with my e-book that I cannot do with a book. By doing this I learn and understand the text faster”, p-value=.216 and “I feel more comfortable to listen to an audio book than read a book. I understand clearly

when I enjoy listening to every statement of the audio book”, p-value=.057. In terms of employment status, both working and unemployed millennial respondents accepted the hypothesis of no significant difference on their preferences of the use of the print materials while for their preferences of the use of non-print materials they rejected the null hypothesis hence, the alternative hypothesis of significant difference is accepted.

| Learning Style | | Significance | Interpretation |
|----------------|------------------|--------------|---------------------------|
| Sex | Chi-square value | 16.299 | |
| | p-value | .000* | Statistically Significant |
| Working Status | Chi-square value | 7.248 | |
| | p-value | .027* | Statistically Significant |

*significant at .05 level

Table 6:- Significant Difference on the Learning Styles of the Respondents When Classified as to Sex and Employment Status

As perceived in the data in table 6 by millennial respondents there were statistically significant difference on the learning styles (visual, auditory and kinesthetic) by male and female; working and unemployed respondents. Majority of the millennials are visual learners, they associate learning by seeing, and taking detailed notes and highlight important phrases from the reading materials.

| | | Print | NonPrint |
|----------------|-------------------------|-------|----------|
| Learning Style | Correlation Coefficient | -.158 | .224 |
| | p-value | .062 | .007* |

*significant at .01 level (Kendall's tau-b)

Table 7:- Significant Relationship between the Preferences on Non Print and Print Materials and the Learning Styles of the Respondents

Between the learning styles and the reading preferences of the respondents correlation is highly statistically significant at .007* in terms of the non print materials and linear moderate positive correlation at .224 for print materials preference. In this digital era millennial respondents confirmed that they still value printed materials over the digital format. This is because when one holds and reads a book, an individual will not only grasp the statements and its connotation and denotation, but one also subconsciously recalls the physical position of the words. Whether an article is toward the beginning or last part of the book, you remember it. This statement reaffirmed in the study conducted by Woody et al. (2010) [12] regardless students have the chance to access technology at their convenience; they still prefer reading printed materials than digital formats. As reported by Kakirman Yıldız (2012) [13]; three periods portray the digital programs; digital immigrants, digital hybrids and digital natives. The student-teachers who are the subject of this study were born in 1990-1994 so the students are digital hybrids. Digital hybrids, endeavor to take the benefit of technological competencies but they are not as capable as the digital natives. The printed materials are much closer and essential to them. As Duran (2013) cited the research findings of Jamali et al. (2009), Noordhidawati and Gibb (2008) [14] that because of the reasons of technological inadequacies and not having ample knowledge and skills to read e-books, students are not conveying positive attitude towards reading digital formats.

V. CONCLUSIONS

Based on the findings of the study, the following conclusions are hereby formulated:

- Millennial respondents, regardless of sex and employment status, strongly agree on the importance of print materials.
- Majority of the millennials are visual learners whether male and female; working and unemployed.
- In terms of sex, both the male and female millennial respondents accepted the hypothesis of no significant difference on their preferences of the use of the non-print and print materials. In terms of employment status, both working and unemployed millennial respondents accepted the hypothesis of no significant difference on their preferences of the use of the print materials while for their preferences of the non-print materials the respondents rejected the null hypothesis "*there is no significant difference on their preference in terms of the*

non-print" Hence, the alternative hypothesis of significant difference is accepted.

- There are statistically significant differences on the learning styles by male and female, working and unemployed respondents. Majority of the millennials are visual learners, they associate learning by seeing, and taking detailed notes and highlight important phrases from the reading materials.
- Between the learning styles and the reading preferences of the respondents correlation is highly statistically significant in terms of the non-print materials and linear moderate positive correlation for the print material preferences.

RECOMMENDATIONS

In the light of the significant findings and conclusions of the study, the following recommendations are offered:

- Although there is an increase of digital format sales in recent years, they have not yet replaced print materials. Librarians and faculty members should include latest printed formats to be used by the students for various type of learners however priority should be given to the visual learners, during the course review.
- Printed formats are not limited to books, there should be available updated reading materials for the visual learners;
- Further work or researches should replicate this study to determine its usefulness or applicability in the academe.

REFERENCES

- [1]. Gregory, C.L. (2008). "But I want a real book" : An Investigation of undergraduates' usage and attitudes toward electronic books. *Ref. & User Services Quarterly* 47 (3) : 266-273 retrieved dated Oct. 26, 2017
<http://libresources.amaiu.edu.bh:2186/ehost/detail/>
- [2]. Nicholas, A. (2008). "Millennial Attitudes Toward Books and E-books." *Faculty and Staff- Article and Papers, Digital Commons @ Salve Regina*
- [3]. Byars, M.N. (2015) "Printed Books Versus Digital Books" *Faculty of the Graphic Communication Department, California Polytechnic State University, San Luis Obispo*
- [4]. Cowin, Christi (2013). *Printed Books Versus E-Book Formats: A Study Using Niche Gratification Theory*, Department of Journalism, Graduate School, University of Alabama.
- [5]. Smith, S. D., & Caruso, J. B. (2010). *The ECAR study of undergraduate students and information technology, 2010 (Research Study, Vol. 6)*. Boulder, CO: EDUCAUSE Center for Applied Research, October 29, 2017
<http://libresources.amaiu.edu.bh:2186/ehost/results>
- [6]. Gibson, C., & Gibb, F. (2011). An evaluation of second-generation ebook readers. *The Electronic Library*, 29(3), 303-319.
<http://libresources.amaiu.edu.bh:2186/ehost/results>

- [7]. Rainie, L., Zickuhr, K., Purcell, K., Madden, M., & Brenner, J. (2012). The rise of e-reading. Pew Research Center's Internet & American Life Project. Retrieved from <http://libraries.pewinternet.org/files/legacy-pdf/>
- [8]. Hickey, Hannah (May 2, 2011). College students' use of Kindle DX points to e-readers role in academia. <http://www.washington.edu/news/2011/05/02/college-students-use-of-kindle-dx-points-to-e-readers-role-in-academia/>
- [9]. Marmarelli, Trina and Martin Ringle (2010a). The Reed College Kindle study. http://www.reedinststitute.org/cis/about/kindle_pilot/Reed_Kindle_report.pdf
- [10]. Ackerman, R., & M. Goldsmith (2011). Metacognitive regulation of text learning: On screen versus on paper. *Journal of Experimental Psychology: Applied* 17(1): 18-32. retrieved dated October 27, 2017 <http://libresources.amaiu.edu.bh:2186/ehost/results>
- [11]. Macedo-Rouet, M., Rouet, J.-F., Epstein, I. and Fayard, P. (2003), "Effects of online reading on popular science comprehension", *Science Communication*, Vol. 25 No. 2, pp. 99-128.
- [12]. Woody, W.D., Danie, D.B. ve Baker, C.A. (2010). E-books or textbooks: Students prefer textbooks. *Computers & Education*, 55, 945-948.
- [13]. Kakırman Yıldız, A. (2012). Dijital yerliler gerçekten yerli mi yoksa dijital melez mi?, *International Journal of Social Science*, V. 5, Issue 7, 819-833, December 2012.
- [14]. Duran, E. (2013). Investigation on views and attitudes of students in Faculty of Education about reading and writing on screen. *Educational Research and Review*, Vol. 8 (5), 203-211, March 2013. <http://libresources.amaiu.edu.bh:2186/ehost/results>
- [15]. Grimshaw, S. and Dungworth, N. (2004), "Electronic books: children's reading practices and comprehension", *School Libraries in View*, Vol. 19, <http://libresources.amaiu.edu.bh:2186/ehost/results>
- [16]. Tosun, N. (2014) A Study on Reading Printed Books or E-Books: Reasons for Student-Teachers Preferences, *Trakya University, Faculty of Education* October 24, 2017 <http://libresources.amaiu.edu.bh:2186/ehost/results>