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Research Article

Non-formal Online Teaching: A Way Out for Next Generation

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A B S T R A C T

Introduction: Human physiology is the science of mechanical, physical & biochemical functioning of human being, which lays the foundations of good clinical practice; it is also important core component of medical education. Therefore, there is a great need to improve the physiology teaching.

Methods: First year BDS (Bachelor of Dental Surgery) students (n=50) in Human Physiology course volunteered to be a part of the experimental group. For first four weeks, students were free to use standard textbooks for the topics covered. They were also given lectures on the power point by the course instructors. On fifth week, they were asked to assess only internet for selected physiology topics. As soon as they completed their online study, they were asked to fill the questionnaire.

Results: Our results indicated that the students liked exploring the internet. It made learning more interesting and improved the understanding of the concepts. However, the students also insisted on the importance of the information available in the textbooks.

Conclusion: The aim of our study was to dissociate the learning process from the textbooks. From the response of the students, it can be concluded that the digital learning and textbooks will complement each other.

Keywords: Digital Learning, Human Physiology, Online Teaching

Introduction

The technological advancement has transformed the higher education. The digital information has revolutionized this field. The international organizations such as United Nations and World Bank Organization also recognizes that information communication technology can play a critical role in upgrading medical education.[1]

In traditional methods, the didactic lectures were effective method for imparting information to the students; however, this method could not ensure the effective understanding of the topic. Last two decades the technological advances have changed the way students acquire knowledge, the teachers are not only the source for gaining information, the text books also comes with interactive CD and websites information. The present generation has grown up with computers, they acquire information from Google or Wikipedia, and they no longer sit in the library to consult the books.[2]

Human Physiology is an important part of medical teaching and it lays down the basis of good clinical practice. With technological advancement, the physiology teaching has been transformed.[3] In 1998 under Harvey project, digital

resource of Physiology teaching was established.[4] Another important step was taken by American Physiological Society, it initiated the teaching program, its main aim was to increase teacher's skill in developing, assessing and inquiry-based teaching.[5]

The abundance of on-line information has redefined the significance of the textbooks. The present study was taken up to access whether the students understanding of physiology topics was better from the classroom lectures, textbooks or from the material available on the internet.

Methods

The study was undertaken in Seema Dental College and Hospital. First Year BDS (Bachelor of Dental Surgery) students (n=50) in human physiology course volunteered to be a part of the experimental group. For first four weeks, students were free to use standard textbooks for the topics covered. They were also given lectures on the power point by the course instructors. On fifth week, they were asked to assess only internet for selected physiology topics. As soon as they completed their online study, they were asked to fill the questionnaire. It had eight questions, each student was asked to read the question carefully and decide if he agree (mildly or strongly) or he disagree (mildly or strongly).

Results

The questioner was given to (n=50) BDS students. The result was calculated in percentage andgraphs were plotted (Figure 1-8).

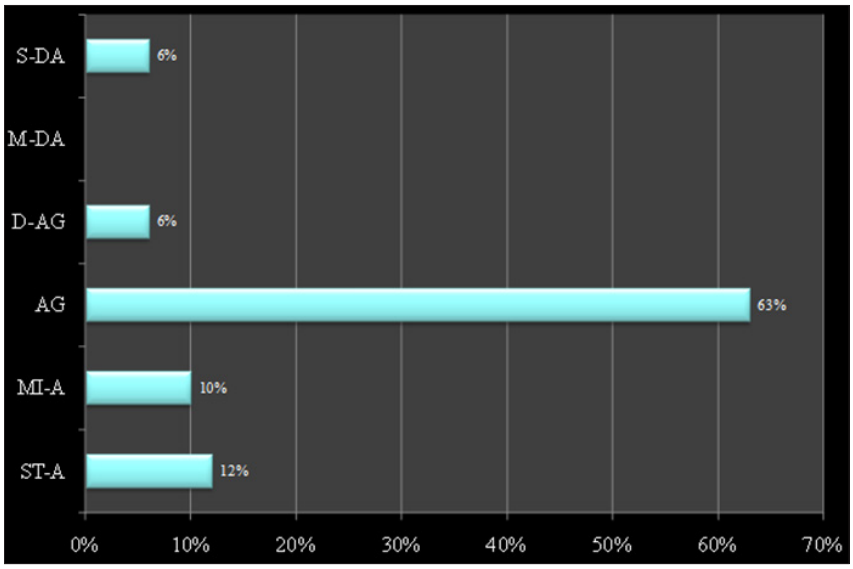

Figure 1.The Content of the Textbook Were Easy to Understand

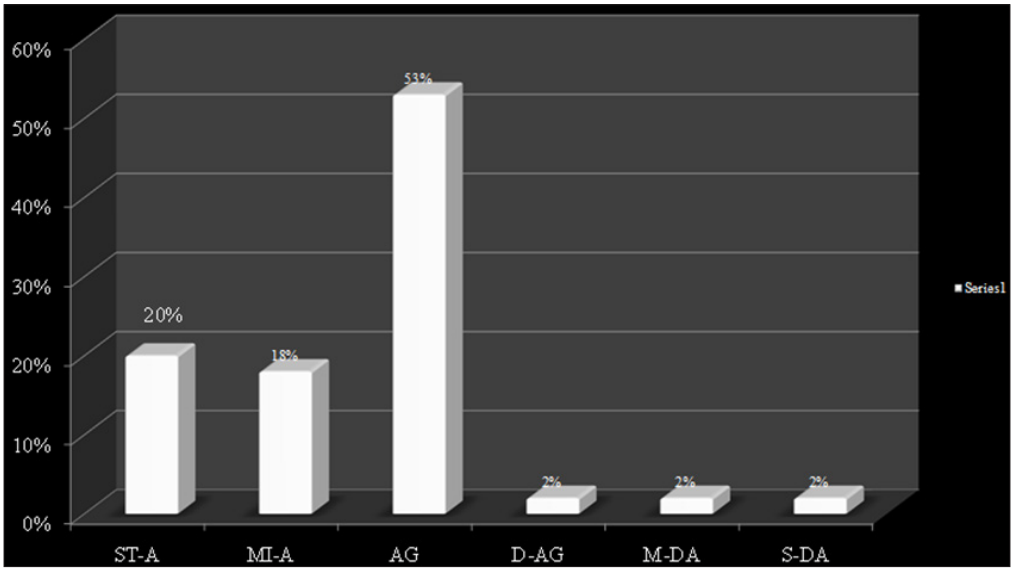

Figure 2.The Visual Aids in the Textbook Were Easy to Understand

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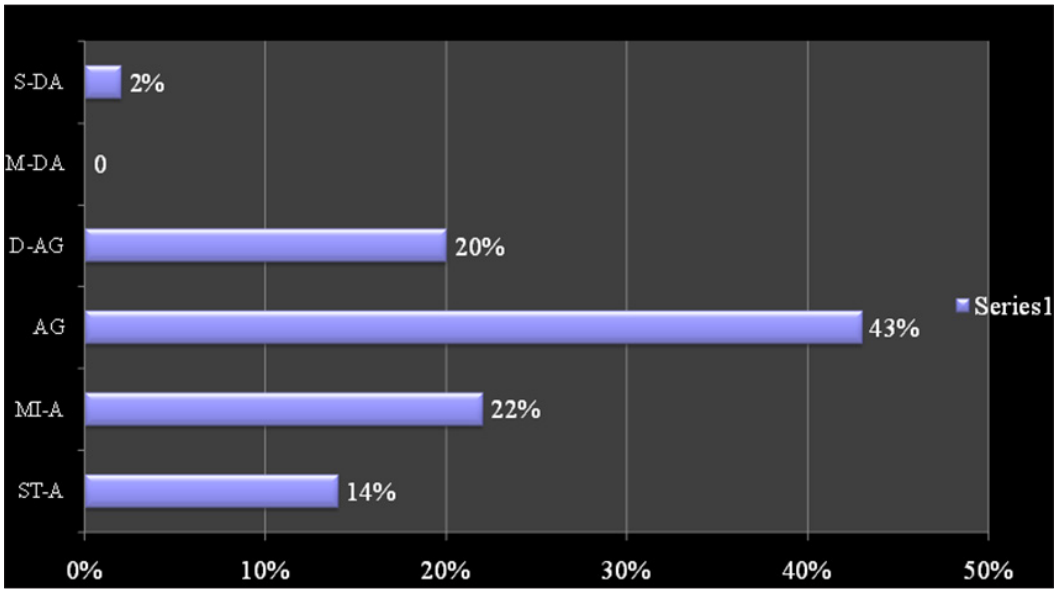

Figure 3.The Power Point Presentation Made the Topic More Clear

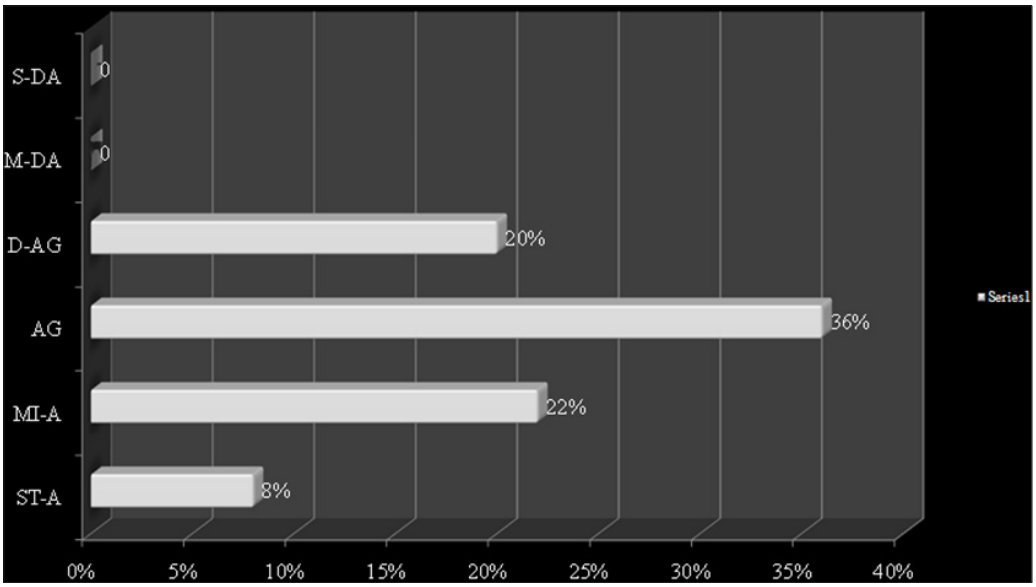

Figure 4.Topic Understanding was Better from Material Online

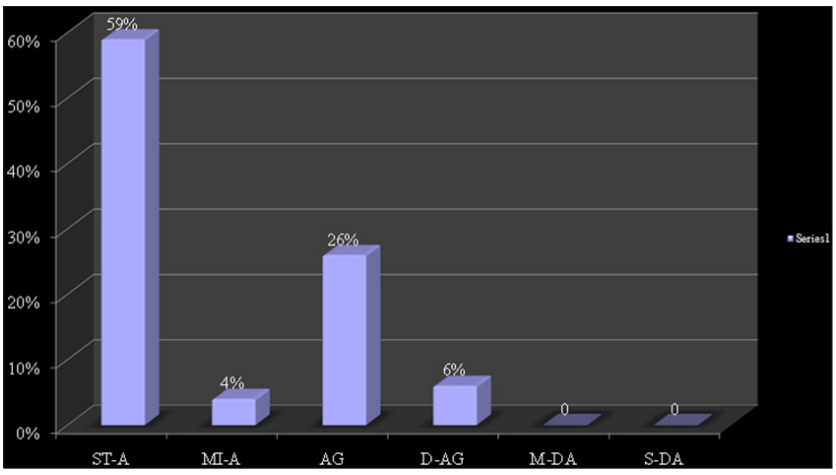

Figure 5.Project Work Helped in Improving the Topic Depth

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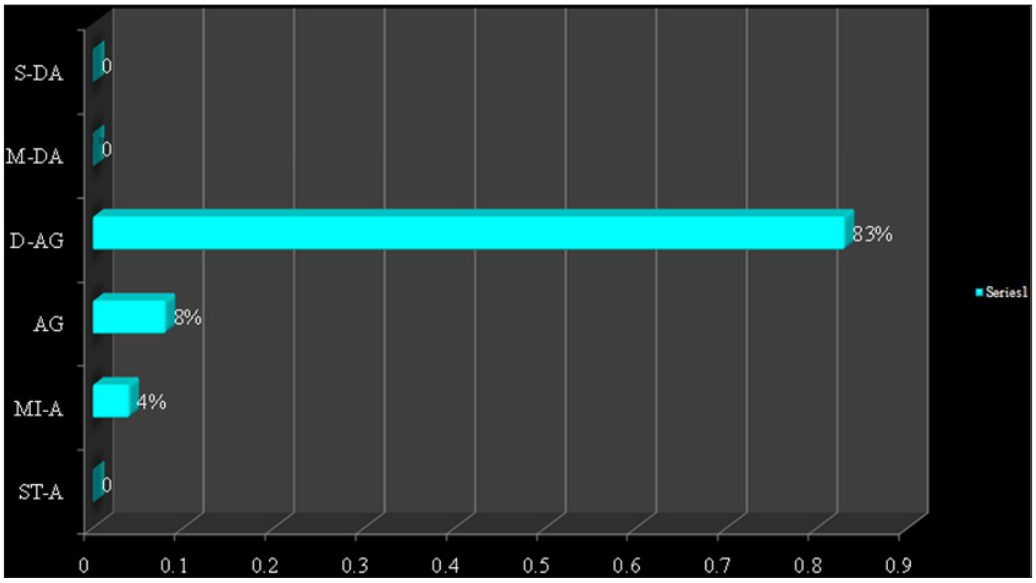

Figure 6.Textbooks are not Required

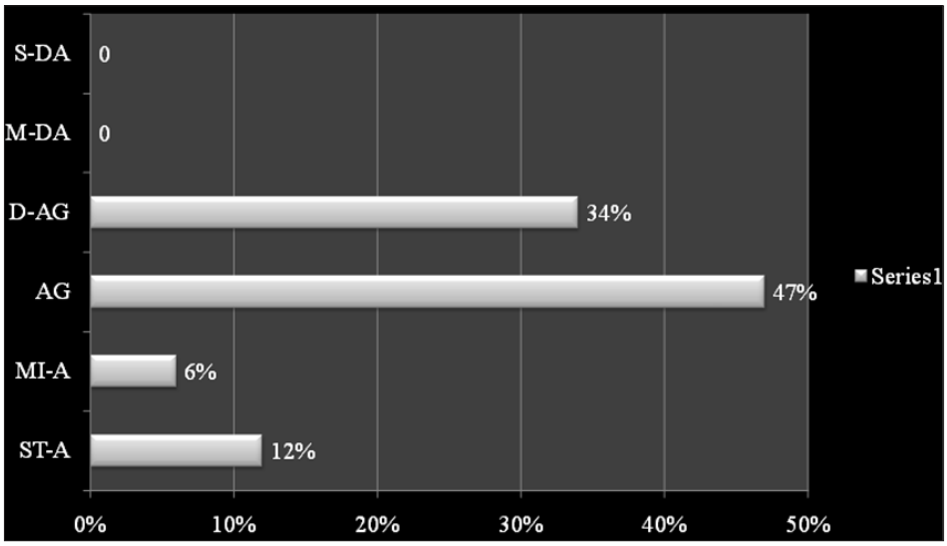

Figure 7.Textbooks should be Part of Medical Teaching

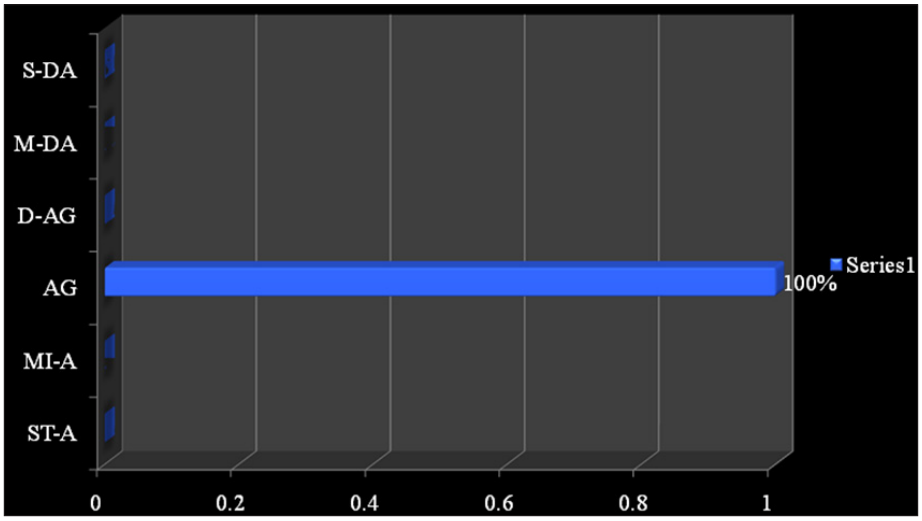

Figure 8.Textbooks and the Internet should Complement Eachother

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Discussion

This study was undertaken to understand what impact the electronic information has on our new generation students. If it can open new frontiers to obtain knowledge, can teaching instructors, lectures and textbooks be replaced by them? It is a big question. Our results indicate that, thereis a balance in the students approach, textbooks and lectures are still most preferred choice, and however the interested students go to internet and get extra information.

We asked the students, if use of the textbooks in present times is limited. A strong disagreement was observed. The textbooks are still more reliable, easily accessible. Getting information is not dependent on electricity and internet connectivity. Some other studies have similar inference. Banerjee et al.[6] reported the preference of medical students for textbooks since they are time tested, readily available and information is well defined as compared to internet where endless knowledge is available. Understanding, assimilating and utilizing it is difficult. Nurjana et al.[7], published a self-reported assessment of ICT use by medical students at the international medical university Malaysia. Their results also presented similar mildest of the undergraduate students, that textbook literature is the prime source for clarifying concepts and holistic learning. Stavrianeas.[8] and Simon et al.[9] also reported similar findings. Though their test group was full of praises for new approach to Physiology teaching, however they were also not ready to part with their textbooks.

Conclusion

With the access to electronic media becoming easy the students are exposed to vast sea of latest information and they no longer want to confined to old traditional methods, however ourfindings suggest that though the students wants to explore new frontiers but they want the books and lectures to be the foundation.

Conflict of Interest: None

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