

First-Year Medicine Faculty Student Opinions On Web Videos About Anatomy And Histology Courses

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Received: 19 May 2023
Accepted: 05 August 2023

ABSTRACT

Purpose: The purpose of this study is to evaluate how accurate and safe the information in the course videos on the web is, together with student comments. It is extremely important for the future of medical education to evaluate students' perspectives and pass them on to the literature.

Method: 98 (Female N:49, Male N:49) students participated in the study. The answers given by the students were evaluated with a five-point Likert test.

Results: The study data were evaluated as percentage and frequency in excel and reflected in the table. Then, the answers given by the female and male students were compared in terms of significance with the chi-square test. When the answers given by male and female students to the fourth question were compared, a significant difference was found ($p=0.012$).

Conclusion: As a result of the study, a significant difference was found between male and female students in the fourth question (Results were evaluated within the 95% confidence interval, $p < 0.05$ was considered significant). The demand for anatomy videos is slightly higher than for histology videos. In addition, students are more determined to watch videos that pass the information control.

Keywords: Video medical education, Anatomy education, Histology education, Audit of medical lecture videos

Tıp Fakültesi 1. Sınıf Öğrencilerinin Anatomi Ve Histoloji Dersleri İle İlgili Web Videoları Hakkındaki Görüşleri

ÖZET

Amaç: Bu çalışmanın amacı, web ortamında yer alan ders videolarında yer alan bilgilerin ne kadar doğru ve güvenli olduğunun öğrenci yorumlarıyla birlikte değerlendirmektir. Öğrencilerin bakış açısının değerlendirilip literatüre geçmesi, tıp eğitiminin geleceği açısından son derece önemlidir.

Yöntem: Araştırmaya 98 (Kız N:49, Erkek N:49) öğrenci katılmıştır. Öğrencilerin verdikleri cevaplar beşli likert testi ile değerlendirilmiştir.

Bulgular: Çalışma verileri excel ortamında yüzde ve frekans olarak değerlendirilerek tabloya yansıtılmıştır. Daha sonra kız ve erkek öğrencilerin verdikleri cevaplar ki-kare testi ile anlamlılık açısından karşılaştırılmıştır. Erkek ve kız öğrencilerin dördüncü soruya verdikleri cevaplar karşılaştırıldığında anlamlı bir fark bulunmuştur ($p=0,012$).

Sonuç: Çalışma sonucunda dördüncü soruda kız ve erkek öğrenciler arasında anlamlı bir fark bulunmuştur (Sonuçlar %95 güven aralığında değerlendirilip, $p < 0,05$ değeri anlamlı kabul edildi). Anatomi videolarına olan talep histoloji videolarına göre biraz daha fazladır. Ayrıca öğrenciler bilgi kontrolünden geçen videoları izleme konusunda daha karardır.

Anahtar Kelimeler: Videolu tıp eğitimi, Anatomi eğitimi, Histoloji eğitimi, Tıp dersi videolarının denetimi

The indispensable and most basic element of anatomy education is the cadaver (1). In the histology department, the microscope and the high quality stained preparation are the most important and indispensable components of education (2). While these two important branches were previously called morphology in most universities, they have now become independent departments. In fact, anatomy examines the human body 'gross', that is, the human body in macro terms, while histology examines the human body at a smaller, micro level, as tissue (1,2).

At the present time, with the development of technology, besides the cadaver, three-dimensional simulations and various software programs have started to be produced (3). The same situation is observed through giant reflective and high resolution screens used in histology. In addition to all these advantages offered by technology, it has now become very easy for students to access information (4). Tablets and smart phones in the hands of many students provide the opportunity for students to access information from the internet, both visually and theoretically, whenever they want. Even in lessons, students can obtain photographs of cadavers, models and histological preparations with their phones or tablets (5,6).

Recently, videos with lecture content have increased considerably on websites and social media. There are countless videos on websites about anatomy and histology courses. However, it is controversial that these videos carry accurate information. While watching the videos of most instructors in anatomy and histology branches, no title (Professor professor, associate professor, assistant professor, PhD student etc.) is considered (7).

In this study, it is aimed to consider the web videos of anatomy and histology courses from the point of view of students and to bring their views to the literature. This approach can enable web videos to be moderated and made more painstakingly. Because the continuity of a situation that is wrong in education can harm generations who devote themselves to saving lives, such as medical students.

Materials and Methods

The study was conducted by taking the opinions of the first year medicine faculty students of Kafkas University

in the 2021-2022 academic year. The data collection forms used in the study were prepared in the web environment and the students filled the forms on the web software. Ninety eight (98) students (Female: 49 students, Male: 49 students) answered the questions in the data collection form. Data collection questions were prepared with a 'Five-Likert Scale' (strongly agree, strongly disagree, undecided, agree, disagree) (8,9). The answers given by the students were analyzed through the web program and then the results were entered into Microsoft Excel. Then, the answers given by the second year female and male students to the questions were compared statistically with the chi-square test.

Statistical Analysis

In the statistical analysis, the answers given by female and male students were compared. In this analysis, the SPSS 22.0 coded version software program for Windows was used. Descriptive statistics for categorical variables were expressed as frequencies and percentages. Chi-square test was used in the analysis of categorical data. The results were evaluated within the 95% confidence interval and a p value of <0.05 was considered significant.

Ethical Consideration

This study was approved by the ethics committee of Kafkas University Faculty of Medicine (Approval number: 2022/04; Decision: 17). The study was carried out with the help of the 1964 Declaration of Helsinki and later ethical standards.

Results

Students' interest in practice videos; opinions on questions 1, 2, and 3

Both female and male students show a certain interest in the videos of anatomy and histology courses on the web, and it is evident from the percentage of 'agree' in the answers to these questions (51% for females, 49% for males) that students enjoy video applications. Quite a few students answered 'disagree' to the first, second and third questions. The students who were 'undecided' on these three questions were also quite few compared to the students who agreed with the opinion, but more than those who gave the answer 'I disagree' (the percentage of the first three questions is given in Table 1).

Comparison of interest in anatomy and histology web videos with students' responses; opinions on questions 4, 5, 6 and 7

In these questions, it was investigated which of the anatomy and histology courses the students were most interested in the video. As a result of this research, both male and female students were more interested in anatomy videos. Especially in the fifth question, only one of the female students answered "I do not agree" in the opinion that 'the number of anatomy videos should be increased'. Apart from that, a total of 7 students, both male and female, are 'undecided' and the remaining majority (90 people) want anatomy videos to be increased on the web. Those who want to increase histology videos are 77 students in total (The answers are given in the 6th question in table 1,2).

For the sharp distinction of the anatomy and histology course, the percentages of the fourth question and seventh question opinion are almost the same for both men and women. For example, in the fourth question; A comment was presented as 'it is wondered if only anatomy videos were increased and histology was not needed'. While the answers 'agree' and 'disagree' are almost the same in women (but the majority of them do not agree, so they want to have histology videos), a significant difference is observed in men. While 18.4% (agree and totally agree) said that men do not need to have histology videos, 63% (disagree and totally disagree) who wanted histology videos (Table 1,2; 4.,5.,6.and 7. questions).

Responses to inspection and control of videos in web systems; opinions on questions 8, 9,10

In the eighth, ninth and tenth questions, almost all of the male and female students want to have the supervision of the practical videos posted on the internet. When we elaborated the subject in the ninth question, both male and female students supported the quality of the videos to be increased and the control (against the wrong information transfer) with the answer of 'I totally agree' to a great extent. While none of the women gave the answer 'disagree', only one of the men gave the answer 'disagree'. This is one of the most impressive data of the study. In the tenth question, both male and female students, and almost all of the class, want the videos to be supervised and at the same time, experienced teachers to explain the lesson videos.

Web control system to prevent wrong learning; Opinions on questions 11,12,13

In the eleventh question, 'not every training video should be placed on the internet in order to prevent mislearning.'

Almost all of the male and female students answered 'agree' to the opinion. The twelfth question brings with it a very controversial situation in terms of answers. educational videos posted on the internet caused the students to be 'undecided' or 'not agreeing' with this view, whether or not the academicians who taught the courses were concerned about making money. The rate of 'agreeing' and 'undecided' with this view is slightly higher than that of 'disagreeing' for both male and female students. In the thirteenth question, one of the most crucial points of the study was emphasized. While the control of the lecture videos can be evaluated by passing a jury (by listening, watching, as a referee), the fact that there are internet systems controlling this has created a very high level of satisfaction among the students.

Table 1. Percentage of frequency (f) that female students gave to the questions

Female Students N:49	Absolutely agree	Absolutely disagree	Undecided	Agree	Not Agree
1-I am interested in the fact that there are application videos on the websites of the anatomy course.	61,2		12,2	24,5	2
2-It is interesting to me that there are application videos on the websites of the histology course.	42,9		18,4	32,7	6,1
3- Application training videos for anatomy and histology on websites are useful for learning lessons.	51		8,2	40,8	
4- Anatomy practice videos on the websites are useful for learning the course, but I don't need a practice video for histology.	2	12,2	6,1	34,7	44,9
5- The number of anatomy practice videos on websites should be increased.	57,1		6,1	36,7	
6- The number of histology practice videos on websites should be increased.	38,8		16,3	34,7	10,2
7- The number of both histology practice videos and anatomy practice videos on the websites should be increased.	44,9		6,1	42,9	6,1
8- The application course videos on the websites should be audited (to prevent wrong information transfer or wrong learning).	71,4		4,1	24,5	

Table 1. Percentage of frequency (f) that female students gave to the questions (continued from Table 1)

9- I would very much like to increase the quality and control of the application course videos on the websites (to prevent wrong information transfer or wrong learning).	77,6		2	20,4	
10- I would very much like the lecturers in the big universities in our country to explain the application course videos on the internet sites and to increase the quality and control them.	67,3		2	30,6	
11- In order to prevent wrong learning, not every training video should be placed on the internet (supervision should be brought).	63,3	2	4,1	26,5	4,1
12- Educational videos on websites such as Youtube can serve the purpose of making money rather than education for academicians.	6,1	10,2	30,6	16,3	36,7
13- There should be a system that measures the knowledge and narratives of academics who put educational videos on websites such as Youtube and prevents posting wrong videos.	51		4,1	40,8	4,1

Table 2. Percentage of frequency (f) that male students gave to the questions

Male students N:49	Absolutely agree	Absolutely disagree	Undecided	Agree	Not Agree
1- I am interested in the fact that there are application videos on the websites of the anatomy course.	44,9		6,1	46,9	2
2- It is interesting to me that there are application videos on the websites of the histology course.	42,9		16,3	38,8	2
3- Application training videos for anatomy and histology on websites are useful for learning lessons.	49		2	44,9	4,1

4- Anatomy practice videos on the websites are useful for learning the course, but I don't need a practice video for histology.	8,2	22,4	18,4	10,2	40,8
5- The number of anatomy practice videos on websites should be increased.	57,1		12,2	28,6	1
6- The number of histology practice videos on websites should be increased.	53,1		12,2	30,6	4,1
7- The number of both histology practice videos and anatomy practice videos on the websites should be increased.	49		12,2	36,7	2
8- The application course videos on the websites should be audited (to prevent wrong information transfer or wrong learning).	67,3		4,1	26,5	2
9- I would very much like to increase the quality and control of the application course videos on the websites (to prevent wrong information transfer or wrong learning).	67,3		4,1	26,5	2
10- I would very much like the lecturers in the big universities in our country to explain the application course videos on the internet sites and to increase the quality and control them.	61,2		4,1	30,6	4,1
11- In order to prevent wrong learning, not every training video should be placed on the internet (supervision should be brought).	57,1		10,2	30,6	2
12- Educational videos on websites such as Youtube can serve the purpose of making money rather than education for academicians.	10,2	8,2	28,6	18,4	34,7
13- There should be a system that measures the knowledge and narratives of academics who put educational videos on websites such as Youtube and prevents posting wrong videos.	51		10,2	30,6	8,2

Table 3. P values of female and male students' answers to each question with chi-square tes

QUESTIONS	'p' Values
1-I am interested in the fact that there are application videos on the websites of the anatomy course.	0,111
2-It is interesting to me that there are application videos on the websites of the histology course.	0,787
3- Application training videos for anatomy and histology on websites are useful for learning lessons.	0,271
4- Anatomy practice videos on the websites are useful for learning the course, but I don't need a practice video for histology.	0,012
5- The number of anatomy practice videos on websites should be increased.	0,475
6- The number of histology practice videos on websites should be increased.	0,426
7- The number of both histology practice videos and anatomy practice videos on the websites should be increased.	0,509
8- The application course videos on the websites should be audited (to prevent wrong information transfer or wrong learning).	0,777
9- I would very much like to increase the quality and control of the application course videos on the websites (to prevent wrong information transfer or wrong learning).	0,557
10- I would very much like the lecturers in the big universities in our country to explain the application course videos on the internet sites and to increase the quality and control them.	0,480
11- In order to prevent wrong learning, not every training video should be placed on the internet (supervision should be brought).	0,572
12-Educational videos on websites such as Youtube can serve the purpose of making money rather than education for academicians.	0,947
13-There should be a system that measures the knowledge and narratives of academics who put educational videos on websites such as Youtube and prevents posting wrong videos.	0,446

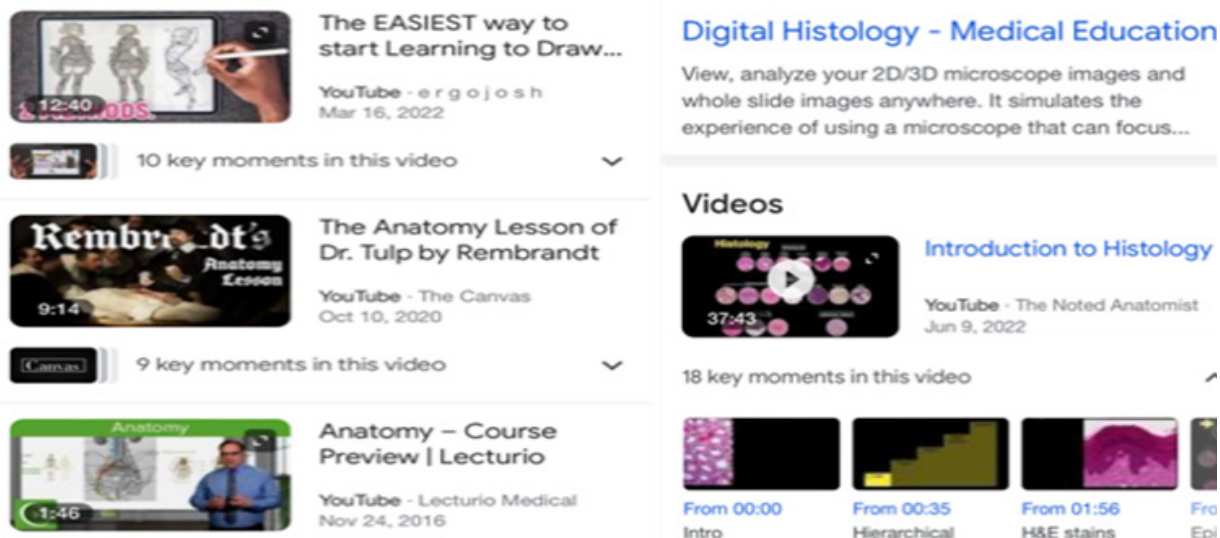
Discussion

As technology develops, its reflections in medical education are increasing day by day. One of these developments is the spread of education systems on the internet in the internet age we live in (10). Especially in the field of health, the number of lecture videos is increasing day by day (11).

In this study, the presentation of the anatomy and histology videos on the web to the students' opinions and how the students responded to the questions was a research topic that was investigated with importance.

When the answers given to the questions are examined, both anatomy and histology videos attract the attention of the students. At the same time, they like to learn the lesson from videos. In the study, it was analyzed that the interest in anatomy videos was slightly more than the interest in histology videos. But students want to increase both anatomy and histology videos on the web.

In general, the response rates of male and female students are parallel to each other, except for only one question in all questions. However, in the fourth question, a significant difference was observed in both genders. 'Anatomy practice videos on the websites are useful for learning the lesson, but I don't need practice videos for histology.' In his opinion, both male and female students gave a high percentage of 'I disagree' answers. However, both male and female students are 'undecided' and there are proportional differences between those who 'agree' with this view (table1,2).

**Figure 1. Tutorial videos about anatomy and histology courses on the web**

More female students agree with this view than male students (those who think that anatomy application videos are more necessary than histology application videos).

Another important data of the study is that the students want the videos to be supervised. Social media and you tube software has been and continues to be the most popular area of recent years. When we write down any question we can think of, an incredible amount of data emerges. However, especially when it comes to medical education, how reliable the information is creates a question mark in the minds of the students.

The final questions asked in the study were about the reliability and moderation of videos on the web. In fact, this was one of the most important parts of the study. Interestingly, the students highly prefer to listen to the video topics from the experienced educators of the top universities in Turkey. Another important point is that the training videos on the internet are required to undergo an audit.

In the twelfth question, when asked whether it is possible for educators to make money through web videos, the vast majority of both male and female students answered 'I disagree'. However, in addition to this, a large number of students, both male and female, showed a skeptical attitude and marked the answer 'I am undecided'.

Considering that social media has been used a lot in recent years, we see that videos of medical courses are spread on various internet sites and social shares (12). In particular, it is a matter of great debate whether the educators who teach the course give the information correctly (13). At the same time, it is an obvious fact that students love such practices. The need for videos by students has led to the increase of educators who teach videos. Unfortunately, this situation can also lead to an uncontrolled information pollution (13,14,15).

In this study, the extent to which web videos attract the attention of the students and the level of use of these videos by the students are discussed. At the end of the study, very striking data were reached. In particular, the increase in such studies has a significant impact on future medical education. At the same time, a control mechanism can be created by increasing the quality of medical education.

Conclusion

Evaluation of web anatomy and histology videos according to student opinions is a very important issue that will accelerate medical education. The number of these training videos is increasing day by day on the internet sites. In addition, the accuracy of the information of the people who narrate the videos and whether these people are real educators are other issues that need to be investigated. It is thought that the study will be of great benefit to the literature. This kind of work should continue.

Conflict of Interest

The author declared that there is no conflict of interest

Acknowledgements

Thanks to Sercan Kenan Başar, Yavuzhan Uray, Merve Nisa Esim and Ediz Tuna Ayata students of the Kafkas University Medicine Faculty, who helped carry out this study.

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