



## The academic impact and value of an international online surgery lecture series

Daisuke Hashimoto<sup>1</sup> · Aiste Gulla<sup>2,3</sup> · Sohei Satoi<sup>1,4</sup> · Tomohisa Yamamoto<sup>1</sup> · So Yamaki<sup>1</sup> · Yuki Matsui<sup>1</sup> · Chisato Ohe<sup>5</sup> · Makoto Yamasaki<sup>1</sup> · Madoka Hamada<sup>6</sup> · Tsukasa Ikeura<sup>7</sup> · Masaaki Shimatani<sup>7</sup> · Raoul Breugelmans<sup>8</sup> · Algirdas Utkus<sup>9</sup> · Tomas Poskus<sup>2,3</sup> · Arturas Samuilis<sup>10</sup> · Marius Miglinas<sup>2,3</sup> · Arvydas Laurinavicius<sup>11,12</sup> · Koichi Tomoda<sup>13</sup> · Vaiva Hendrixson<sup>14</sup> · Mitsugu Sekimoto<sup>1</sup> · Kestutis Strupas<sup>2,3</sup>

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### Abstract

Due to the worldwide travel restrictions caused by the 2019 coronavirus disease pandemic, many universities and students lost opportunities to engage in international exchange over the past 2 years. Teleconferencing systems have thus been developed to compensate for severe travel restrictions. Kansai Medical University in Japan and Vilnius University in Lithuania have a collaborative research and academic relationship. The two universities have been conducting an online joint international surgery lecture series for the medical students of both universities. Fifteen lectures were given from October 2021 to May 2022. The lectures focused on gastrointestinal surgery, gastroenterology, radiology, pathology, genetics, laboratory medicine, and organ transplantation. A survey of the attendees indicated that they were generally interested in the content and satisfied with attending this lecture series. Our efforts were successful in providing Japanese and Lithuanian medical students with the opportunity to engage in international exchange through lectures held in each other's countries.

**Keywords** International collaboration · Medical students · International education · Medical English · Gastroenterology · Surgery

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Daisuke Hashimoto and Aiste Gulla have contributed equally to this paper.

✉ Sohei Satoi  
satoi@hirakata.kmu.ac.jp

<sup>1</sup> Department of Surgery, Kansai Medical University, 2-5-1 Shin-Machi, Hirakata City, Osaka 573-1010, Japan

<sup>2</sup> Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>3</sup> Center of Abdominal Surgery, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania

<sup>4</sup> Division of Surgical Oncology, University of Colorado Anschutz Medical Campus, Aurora, CO, USA

<sup>5</sup> Department of Pathology and Clinical Laboratory, Kansai Medical University, Osaka, Japan

<sup>6</sup> Department of Gastrointestinal Surgery, Kansai Medical University Hospital, Osaka, Japan

<sup>7</sup> Third Department of Internal Medicine, Kansai Medical University, Osaka, Japan

The worldwide spread of the 2019 coronavirus disease (COVID-19) [1] has resulted in lost learning opportunities for college students [2–5]. Furthermore, due to the worldwide travel restrictions caused by the COVID-19 pandemic,

<sup>8</sup> Department of English, Kansai Medical University, Osaka, Japan

<sup>9</sup> Department of Human and Medical Genetics, Institute of Biomedical Science, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>10</sup> Department of Radiology, Nuclear Medicine and Medical Physics, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>11</sup> Department of Pathology, Forensic Medicine and Pharmacology, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>12</sup> National Center of Pathology, Affiliate of Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania

<sup>13</sup> Department of Otorhinolaryngology, Kansai Medical University, Osaka, Japan

<sup>14</sup> Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

the efforts of universities to globalize their operations through study abroad programs, accepting international students, and other activities have been greatly affected [6]. Studying abroad by physically visiting a foreign location (so-called "conventional, face-to-face" study abroad programs) has value that can only be gained through experiencing the local community [7, 8]. These include interactions among students outside of class time, extracurricular activities, the development of diverse personal networks, and the experience of living in the local community [9]. The value of study abroad experiences has gained new recognition under the constraints of the COVID-19 disaster.

During the restrictions of international travel due to the long-term effects of the COVID-19 pandemic, the usefulness of new forms of learning that employ digital technology has become apparent. Digital learning is, therefore, becoming a prominent new trend [10]. The barriers to conducting classes that include discussions with overseas students have been lowered, and it has become easier to create a co-curricular environment with overseas students. In addition, the promotion of online exchanges with overseas universities will enable us to offer a variety of classes with students from overseas. The combination of international exchange and education before studying abroad is also possible. The program will also create a variety of forms of exchange and will give more students a global viewpoint than ever before.

Kansai Medical University (KMU) in Japan and Vilnius University (VU) in Lithuania have had a collaborative research and academic relationship since 2018. The two universities have been conducting an online joint international surgery lecture series (JISLS). The purpose of this paper is

to present the results of the lecture series and a survey of the participants.

The objectives of this lecture series are to continuously provide medical students with a high-quality, up-to-date surgical education, even in the COVID-19 pandemic; to create an international exchange between the two universities; and to give medical students in both countries whose native language is not English the opportunity to learn English. DH, AG, and SS held a series of teleconferences and e-mail meetings for the above purpose beginning in August 2021 and finally decided to hold the JISLS.

DH, AG, and SS invited doctors from all disciplines relevant to multidisciplinary care, with a focus on surgery, to lecture. The lectures were planned to take place twice a month, on Mondays at 09:00 Lithuanian time (16:00 Japan time; or 15:00, while Lithuania was on daylight saving time), via Zoom® meeting [11].

The fifth- and sixth-year medical students from KMU ( $n = 80$ ) and VU ( $n = 40$ ) attended this lecture series. All students who attended the lecture series received the survey. The survey was sent in a paper-based or web-based form in May 2022. The survey material probed the attendees' understanding and satisfaction with the lectures. An online platform was created using Google® Forms [12]. The survey was open for 30 days, and 2 e-mail reminders including a link to the online survey were sent during this period.

The international lecture series was launched on October 25, 2021 (Table 1). In the first lecture, MS (from KMU) and KS (from VU) each gave opening remarks. The lectures focused on gastrointestinal surgery areas, such as upper gastrointestinal surgery, lower gastrointestinal surgery, and hepatobiliary/pancreatic surgery. The latest findings in

**Table 1** Lecture program

Date	Topic	Lecturer	Category	Univ
Oct 25th, 2021	Clinical and radiological evaluation of a patient with jaundice	A. Gulla	Pancreatic surgery	VU
Nov 8th, 2021	Pancreas surgery: from planning to making it happen	D. Hashimoto	Pancreatic surgery	KMU
Nov 22nd, 2021	Pancreas cancer research: latest updates and discoveries	A. Gulla	Research of pancreas	VU
Dec 6th, 2021	Surgical approach for pancreatic disease	S. Satoi	Pancreatic surgery	KMU
Dec 20th, 2021	Radiology diagnostic opportunities and limitations in pancreatic diseases	A. Samuilis	Radiology	VU
Jan 17th, 2022	Rectal Gastrointestinal Stromal Tumor. Advances in Surgery	M. Hamada	Colorectal surgery	KMU
Jan 31st, 2022	Digital Intelligence for Tissue Pathology Testing	A. Laurinavicius	Pathology	VU
Feb 14th, 2022	What we can learn from autopsy: a case of obstructive jaundice	C. Ohe	Pathology	KMU
Feb 21st, 2022	Principles of surgery for colorectal cancer	T. Poskus	Colorectal surgery	VU
Mar 7th, 2022	How fun surgery is!	M. Yamasaki	Esophageal surgery	KMU
Mar 28st, 2022	Value of genetic testing for oncology surgery	A. Utkus	Genetics in oncology	VU
Apr 11th, 2022	Acute pancreatitis, Chronic pancreatitis, Autoimmune pancreatitis	T. Ikeura	Gastroenterology	KMU
Apr 25th, 2022	Laboratory testing of lipoproteins in surgery	D. Karciauskaitė	Clinical laboratory	VU
May 16th, 2022	Understanding and preventing organ transplant rejection	M. Miglinas	Transplant surgery	VU
May 30th, 2022	Recent advances of ERCP using balloon assisted endoscopy	M. Shimatani	Gastroenterology	KMU

KMU Kansai Medical University, VU Vilnius University

fundamental medicine as well as clinical medicine were discussed. Other lectures were given on gastroenterology, radiology, pathology, genetics, laboratory medicine, and organ transplantation. After each 45-min lecture, there was a 15-min discussion period. For KMU students, RB provided a pre-lecture introduction and post-lecture commentary on medical English related to the areas to be covered in each day's lecture. Some students were active in speaking up. However, in most lectures, students from both universities were encouraged by the speaker to ask questions. Encouraging active expression may be one of the issues to be addressed in the future. Fifteen lectures were given through May 30, 2022 (Table 1).

The response rate of the survey was 87.5% (105 out of 120). Among KMU students, the response rate was 91.3% (73 out of 80), and among VU students, the response rate was 80.0% (32 out of 40).

Students at both universities were interested in the content of the lectures overall (Fig. 1A). There was some variation in whether or not the students were able to understand the English spoken by the lecturers (Fig. 1B). The VU students understood English well, but the KMU students had problems comprehending spoken English (Fig. 1B). Reflecting the level of comprehension of English, there was some variation in the degree to which the students were able to understand the entire lecture (Fig. 1C), as the VU students understood the entire lecture well, while the KMU students had some difficulty. In addition, some of the content was felt to be too specialized for students from both universities. However, this was not limited to JISLS but is a common gap between students and instructors in medical school education. The presentation slides were reportedly easy to understand for students from both universities (Fig. 1D). Finally, many students from both universities, especially VU, were satisfied with the lectures (Fig. 1E). At KMU, a better understanding of English may lead to improved satisfaction.

Thus, KMU and VU successfully provided international exchange opportunities for 120 students via a web-conference system under the influence of COVID-19 behavior restrictions. Student satisfaction was high, although some variation in English comprehension was observed. This year's [what is 'this year'? Jan-Dec 2022?] lectures started on November 21, 2022, with 14 lectures scheduled. New speakers include an oncologist from KMU and a PhD student from VU studying at KMU to convey the importance of international exchange by members of a generation close to that of the students themselves.

Until about 10 years ago, students wishing to study abroad faced a series of high barriers. No matter how much preparation was done, the differences in language and lifestyle

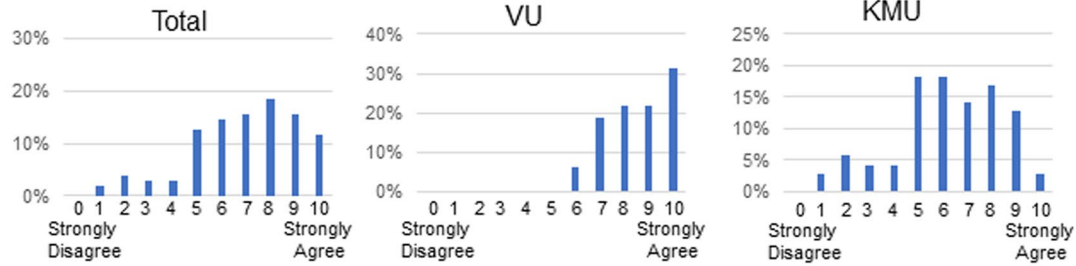
caused tremendous stress [8]. The development of web conferencing systems and clearer images and sound have made more intimate virtual international exchanges possible [10]. Our efforts have given medical students the opportunity to learn not only foreign languages and medical procedures but also foreign cultures and customs. Students who wish to study abroad may now have a more concrete image of what it would be like to study in a foreign country without having to leave their home countries. COVID-19 travel restrictions are already being eased, and it is becoming possible to visit other countries again. We, therefore, hope that our efforts will motivate more medical students to study abroad.

One of the problems revealed in this study is the low English proficiency of Japanese medical students. The survey results showed that Japanese students understood the presentation slides well. However, their conversational skills, including listening skills, need considerable improvement. In the past, Japanese students studied English for 6 years in junior high and high school [13]. Currently, English education begins in elementary school. However, conversational skills are not easily developed with the standard curriculum. One reason may be that the grammatical structure and pronunciation of Japanese and English are completely different. However, the survey results showed that the Lithuanian students understood spoken English well. This may be due to the fact that lectures in Lithuania are given in English, while lectures in Japanese medical schools are given in Japanese using Japanese textbooks.

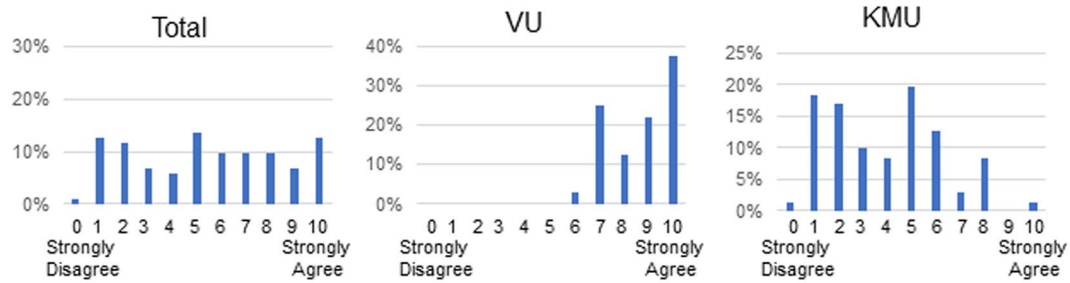
Western medicine entered Japan via the Netherlands during the Edo period (1603–1868) and later via Germany [14, 15]. During that time, efforts were made to translate Western textbooks into Japanese. While this contributed greatly to the development of medicine in Japan, it also created an environment in which English did not need to be used as an everyday language. In recent years, changes in the environment have occurred, such as the requirement that presentations be given in English at domestic academic conferences in Japan. An important mission of the JISLS is reducing the barrier to learning conversational English for medical students in Japan. The issue of Japanese people not being good at conversational English cannot be solved through medical education alone. Reforms are already underway, but Japan will need to place more emphasis on conversation as a nation. In addition to JISLS, KMU holds many other international exchange events with international students.

In conclusion, our efforts proved successful in providing Japanese and Lithuanian medical students the opportunity to engage in international exchange through lectures held in each other's countries. These efforts will continue even after COVID-19 behavioral restrictions are relaxed.

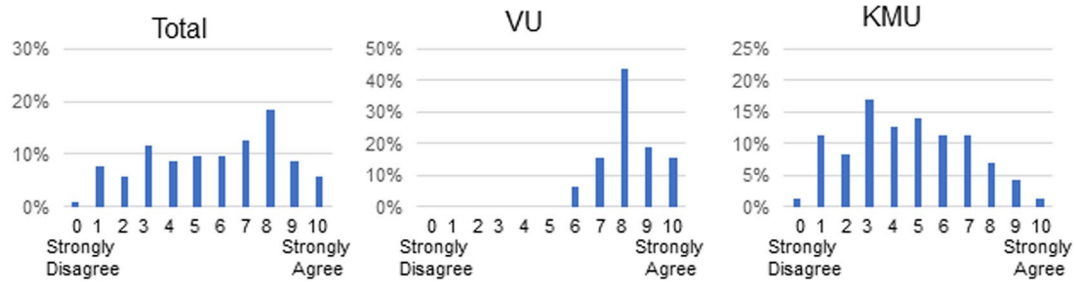
(A) You were interested in the content of this lecture.



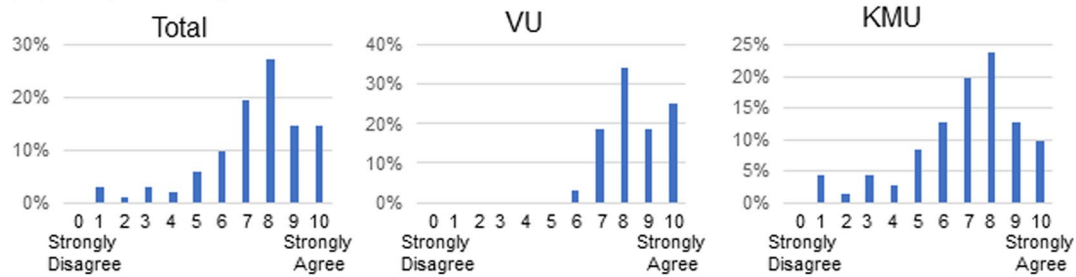
(B) You could understand speaker’s English.



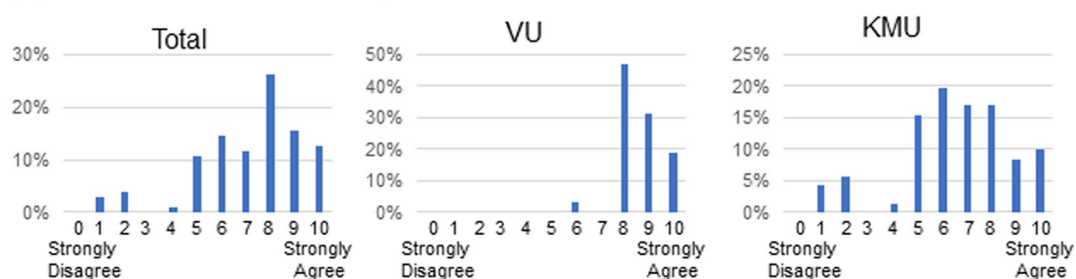
(C) You could understand the whole content of this lecture.



(D) The provided presentation slides and data were useful.



(E) You are satisfied with taking this lecture.



**Fig. 1** Results of the survey obtained from the students. Responses were received from 105 students (KMU,  $n=73$  and VU,  $n=32$ ). *KMU* Kansai Medical University, *VU* Vilnius University

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## Declarations

**Conflict of interest** All authors report no conflicts of interest.

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