Homework with work on the text in the subject English

Article title:	Five Major Shifts in 100 Years of Engineering Education
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Questions as a retelling plan

1. What was the first major shift in engineering education in the United States? And when did it occur?
2. What results did the realisation of the program get to engineering education?
3. On what was based the second major shift in engineering education in the United States? And was it?
4. How many crititaties in the second major shift were put into general use? And what were they?
5. Why did design become fundamental in the fourth major shift in engineering education in the United States?
6. In what situations did scientists understand the need for changes in engineering design?
7. Why are researches in education, learning, and social behavioral sciences continuing to evolve?
8. How student engagement helps science to develop more rapidly?
9. What are the main factors influencing the consciousness of students and the intellectual audience to increase the importance of science in modern reality and attracting it?
10. Why is the engineering education debate still ongoing? And how useful are they to us?

Identifying sentence constructs

№	Sentence	
	Original	Translation
1	This change toward more math and science was accelerated by experiences in World War II, when engineers generally did not perform as well as physicists in solving unusual problems	Этот переход в сторону математики и естественных наук был ускорен опытом Второй мировой войны, когда инженеры, как правило, не так хорошо, как физики, справлялись с необычными задачами.
2	Through ABET and its predecessors “accreditation has provided quality control for engineering education in the United States, seeking to assure that graduates of accredited programs are prepared for professional practice”	Через ABET и его предшественников «аккредитация обеспечила контроль качества инженерного образования в Соединенных Штатах, стремясь гарантировать, что выпускники аккредитованных программ подготовлены к профессиональной практике»
3	Initially, most professors strongly resisted assessment, but many eventually acquiesced after realizing that direct instructor assessment for student outcomes, which satisfies ABET, can take little additional time for the technical criteria	Первоначально большинство профессоров сильно сопротивлялись оценке, но многие в конечном итоге согласились, поняв, что прямая оценка преподавателем результатов студентов, которая удовлетворяет ABET, может потребовать немного дополнительного времени для технических критериев.
4	As far as team size, 49% of 1994 respondents indicated that teams were composed of four to six students, while 60% of 2005 survey respondents indicate team sizes in this range	Что касается размера команды, то 49% респондентов 1994 года указали, что команды состояли из четырех-шести студентов, в то время как 60% респондентов опроса 2005 года указали, что размер команды находится в этом диапазоне.
5	A surprising theme shown in the pie charts is the number of programs that gave full weight to a single factor. Some based final	Удивительная тема, показанная на круговых диаграммах, - это количество программ, в которых полностью учитывается один фактор. Некоторые

	grades on only group deliverables, while 2% based grades solely on group evaluations	основывают итоговые оценки только на основе результатов группы, в то время как 2% основывают оценки исключительно на групповых оценках.
6	First-year engineering design courses have been shown to have positive influences on student development and retention.	Было доказано, что первый год обучения на курсах инженерного проектирования положительно влияет на развитие и удержание студентов.
7	Another helpful source of information is a review of first-year design education in Canada and the United States conducted by a member of the Canadian Design Engineering Network	Еще один полезный источник информации - обзор первого года обучения дизайну в Канаде и США, проведенный членом Canadian Design Engineering Network.
8	Although the shift toward increasing emphasis on engineering design has resulted in changes to engineering curricula in the first and senior years, design content and experiences in the second and third years of the engineering curricula have not changed significantly.	Несмотря на то, что смещение акцента на инженерное проектирование привело к изменениям в инженерных учебных программах на первом и старшем курсах, содержание проектирования и опыт обучения на втором и третьем годах обучения в инженерных программах существенно не изменились.
9	Student engagement or involvement in learning is the second area for which there is evidence of the influence of research in psychology, education, and learning science on the practice of engineering education.	Вовлеченность студентов или их участие в обучении - вторая область, для которой есть свидетельства влияния исследований в области психологии, образования и науки об обучении на практику инженерного образования.
10	One of the most common ways that engineering faculty members have embraced student involvement is through the use of cooperative learning. Cooperative learning and its underlying theoretical framework, social interdependence theory, have been systematically	Одним из наиболее распространенных способов вовлечения студентов в инженерный факультет является совместное обучение. Совместное обучение и лежащая в его основе теоретическая основа, теория социальной взаимозависимости, систематически изучаются в

	studied in engineering education for over 50 years; the first study with engineering students was conducted at the Massachusetts Institute of Technology (MIT) in 1948	инженерном образовании более 50 лет; первое исследование со студентами инженерных специальностей было проведено в Массачусетском технологическом институте (MIT) в 1948 году.

Word with transcription

№	Word		
	Original	Translation	Transcription
1	embracing	включающий в себя	[ɪmˈbreɪs]
2	engagement	вовлечение	[ɪnˈgeɪdʒ.mənt]
3	inquiry	запрос	[ɪnˈkwaɪə.ri]
4	curriculum	курс обучения	[kəˈrɪk.jʊ.ləm]
5	scholarly	свойственный ученым	[ˈskɒl.ə.li]
6	acknowledgment	признание	[əkˈnɒl.ɪdʒ.mənt]
7	intelligent	разумный	[ɪnˈtelɪdʒənt]
8	emphasized	акцентированный	[ˈem.fə.saɪz]
9	efficacy	эффективность	[ˈef.ɪ.kə.si]
10	deliverable	результат	[dɪˈlɪv.ər.ə.bl̩]

Text reading part

File name: text_reading_part_andreev_iu7-54b.mp3

Link for the listening audio via Google Drive:
https://drive.google.com/file/d/1oErhHDwwVjZHLf5rtmnnoAUZNNY4ks_H/view?usp=sharing

As illustrated in both the first and third major shifts, there are continuing healthy debates about goals for undergraduate engineering education, e.g., how important are design skills, how important are analytical and modeling skills, how important are professional skills, especially in comparison to content of a particular engineering discipline. In addition to debates about content for engineering programs, there are continuing healthy debates about how to achieve these goals. For example, engineering education journals, conferences, and reports have explored approaches to teaching engineering. Research on learning and teaching has developed new approaches (fourth major shift) for achieving goals established for engineering education. Research has shown that students learn more with methods such as cooperative learning, problem-based learning, and inquiry-based learning when compared to approaches that emphasize information delivery through presentation. Finally, the use of technologies to achieve educational goals is growing, but in most cases growth has been slower than expected. Growth is faster when the technology is inexpensive and easy to use (e.g., clickers) or is used extensively in industry (e.g., spreadsheets and simulators).

Text retelling part

File name: text_retelling_part_andreev_iu7-54b.mov

Link for the watching video via YouTube: https://youtu.be/S_uguAnPA_w
Link for the watching video via Google Drive:
https://drive.google.com/file/d/1WzaZYTE_gYk7J7ljKznXCNYBxXhhBoI0/view?usp=sharing