



Deputy Ministry of
Medical Education

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Deputy Ministry of
Medical Education

World Class Level of Higher Education in Medical Sciences: Tracking an Academic Evolution Way

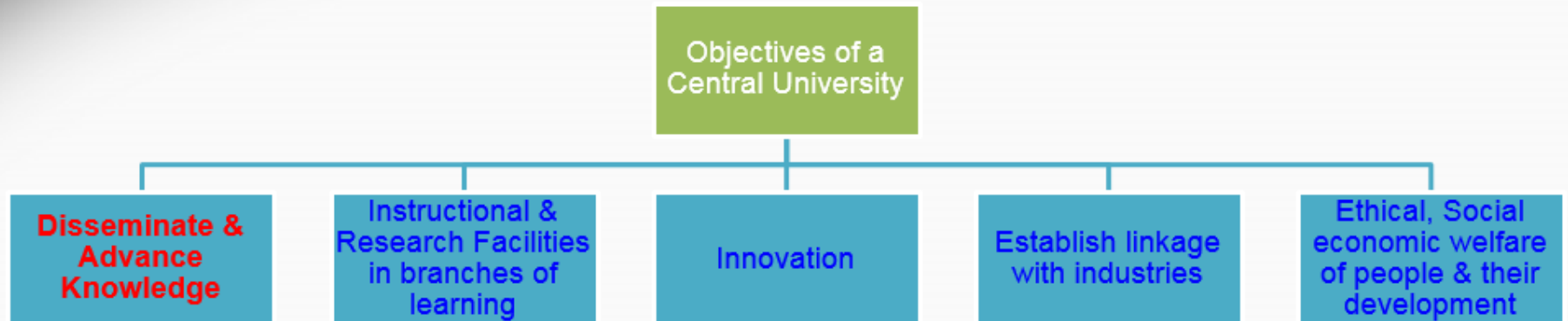
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*Professor of Endocrinology & Internal medicine
Tehran University of Medical Sciences*

Vice Minister of Education
Ministry of Health & Medical Education

World Class University

A central university has all the basic elements of a world class university.

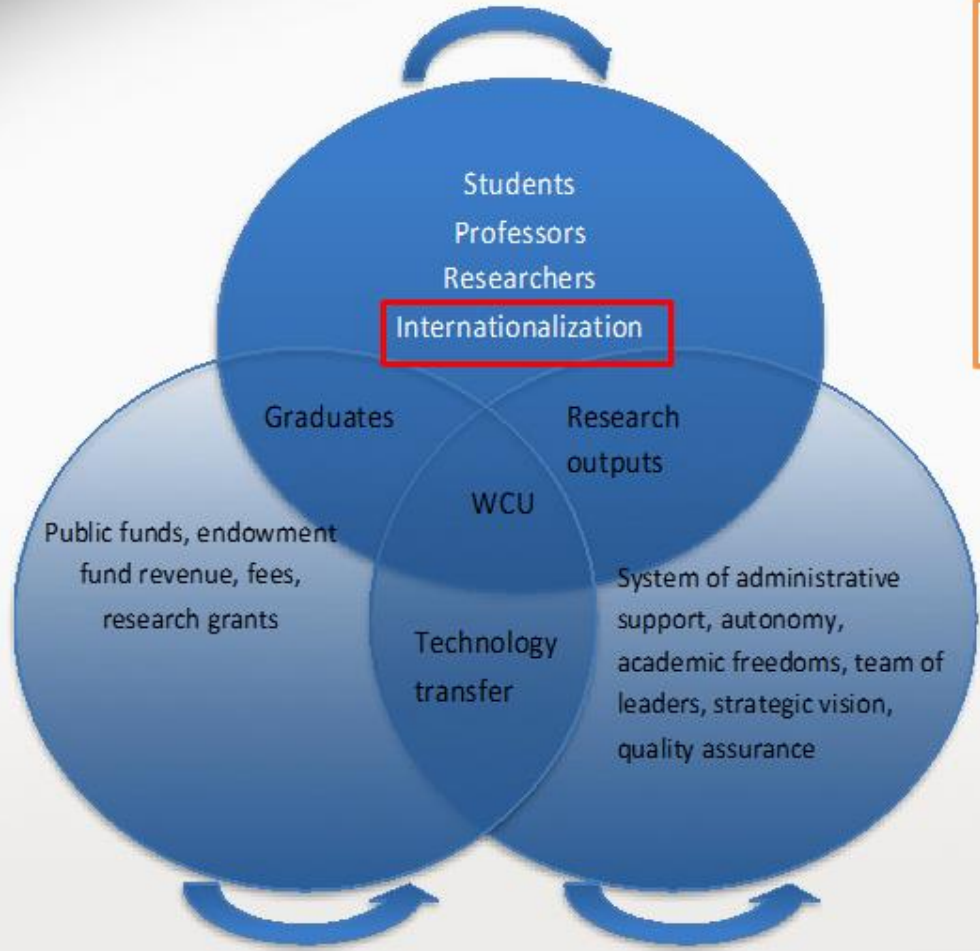


World Class University = All of the above + Organizational Growth



World Class University

Concentration of the talents



Three factor ;

- **Concentration of the talents**
- **Concentration of resources**
- **Effective management and governance**

↓

World Class University

**A critical components of
Concentration of the talents
is Internationalization**

Concentration of resources

Effective management and governance

Internationalization of Medical Sciences Education in IRAN

- **Internationalization** of higher education is at the **top of the agenda** around the **world**.

In the Part of Higher Education in **the Law of the 6th 5 -Year Development Policy of Iran**

Item 64: *“The **Ministries** of Science, Research, and Technology, and Ministry of Health are **obliged to** establishment the **Scientific based Economy, Productivity promotion, Development Internationalization, and Community Mobilization in Knowledge & Technology management process.** “*



The 6th 5 -Year Development Policy of Iran



“ **Governance** could be established **branches of Higher Education** by collaboration of well-known international **universities** regarding **Knowledge promotion** and lead to **higher rank in international ranking system.**”



Capacities of Medical Sciences Education in IRAN for Internationalization

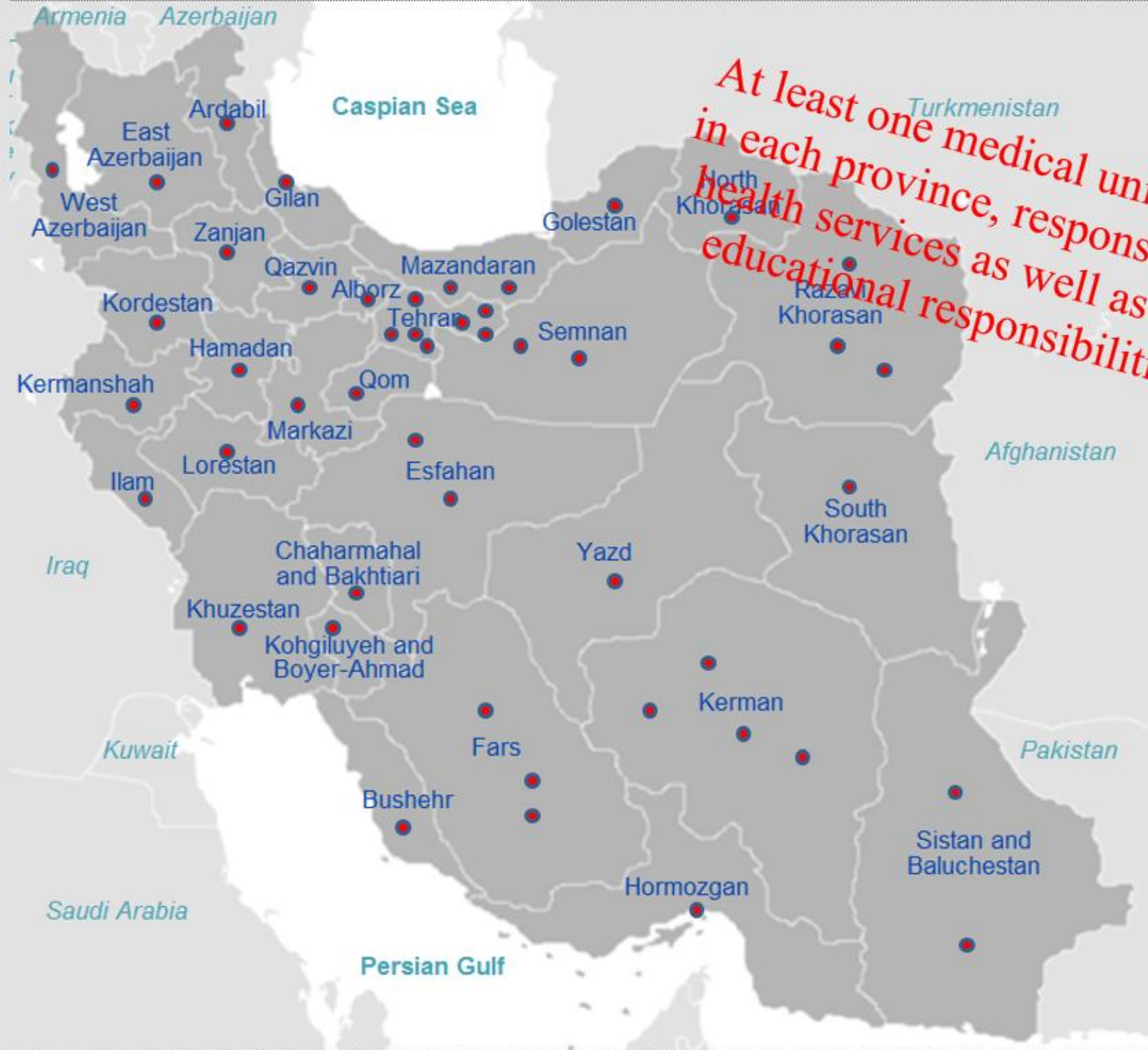


Medical Education During More Than Three Decades in Iran

Integration of Medical Education, Research and Healthcare Delivery

- Integration of medical education and healthcare delivery is the main policy in Iran Health system.
- Medical universities and faculty staffs are responsible for health services as well as their educational responsibilities.





At least one medical university in each province, responsible for health services as well as their educational responsibilities.

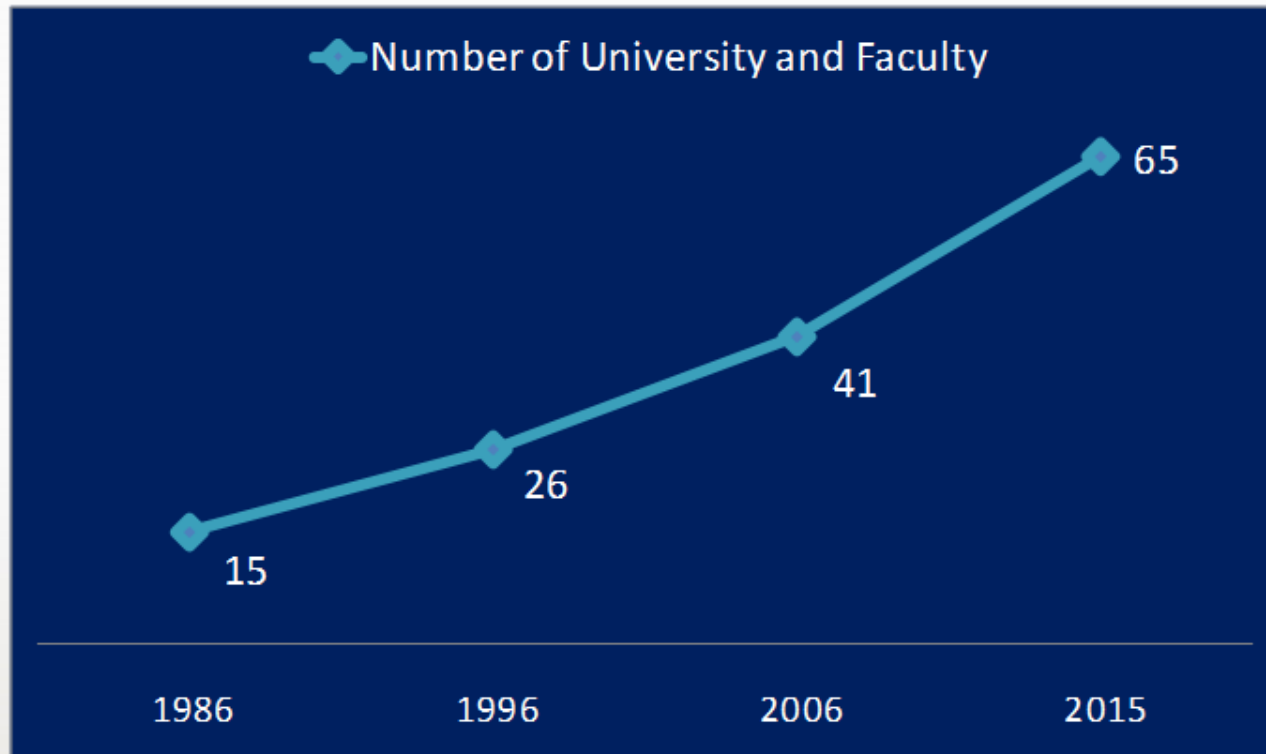
Establishment of Medical Sciences Universities and Faculties

Through the past three decades the trend of establishment and expansion of health higher education centers in the country has been as same as today's way , It means that there is at least one medical sciences university all over Iran provinces.

Year	1986	1996	2006	2015
Number of University and Faculty	15	26	34	65

More than fourfold growth in the number of universities during three decades

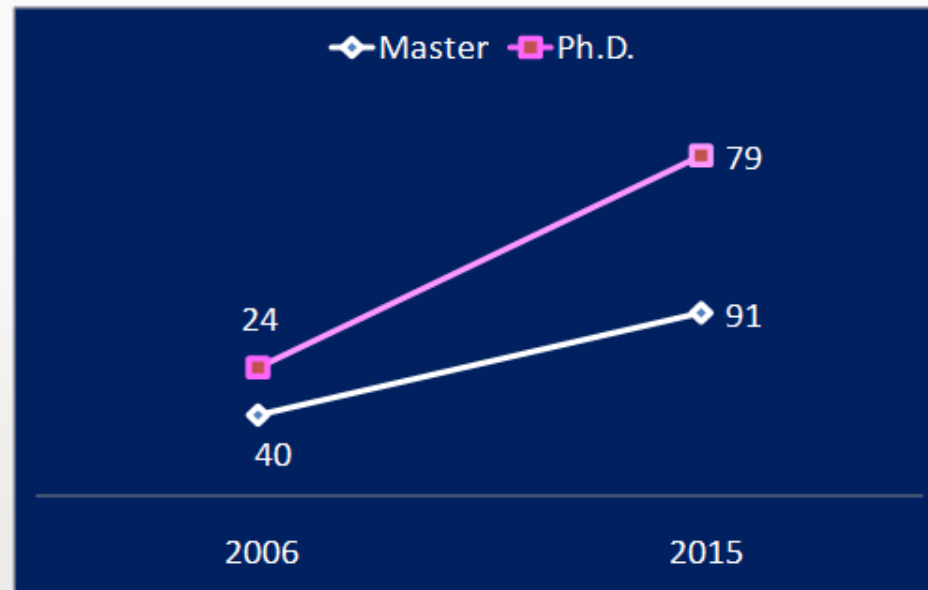
The Trend of Growth of Medical Schools During the Past Three Decades



We have **ascending trend** of Medical Sciences Universities number

The Number of Disciplines in Master and Ph.D.

Year	2006	2015
The Number of Disciplines in Master	40	91
The Number of Disciplines in Ph.D.	24	79

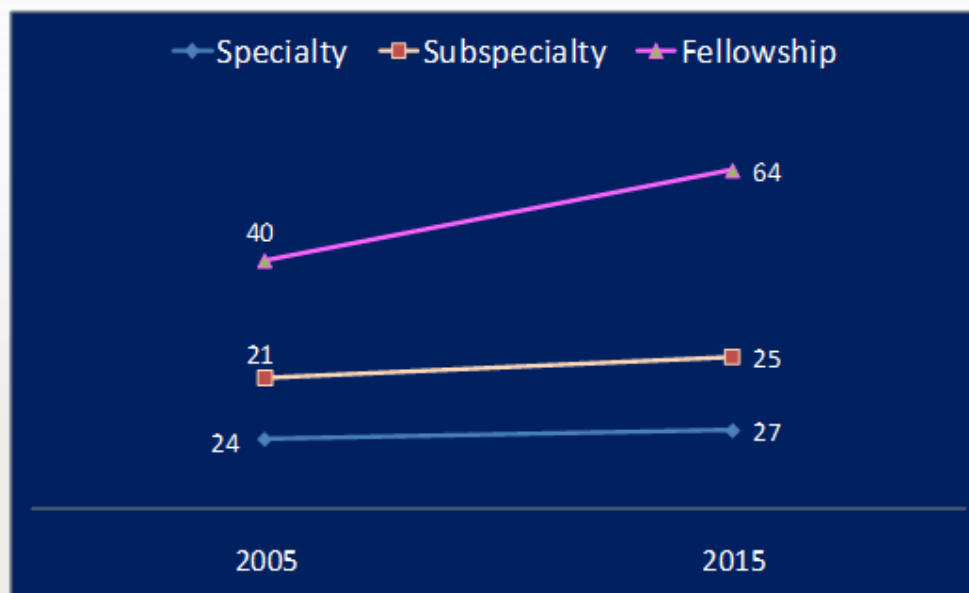


The growth is about
threefold of
postgraduate ones

The Number of Specialty and Subspecialty Programs

Year	The Number of Specialty Programs	The Number of Subspecialty Programs	The Number of Fellowship Programs
2005	24	21	40
2015	27	25	64

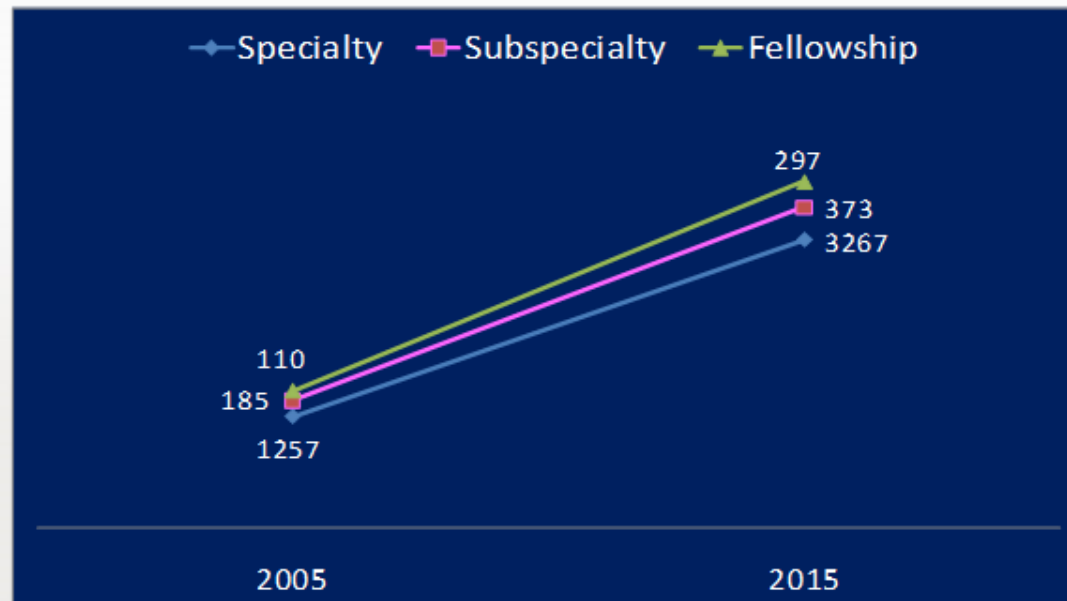
**We have trained
specialty and
subspecialty in all
area and developed
most of PhD courses.**



Admission to Specialty and Subspecialty Programs

Year	Admission to Specialty Programs	Admission to Subspecialty Programs	Admission to Fellowship Programs
2005	1257	185	110
2015	3267	373	297

**We have
ascending trend
of admission to
specialty and
subspecialty
program in the
last decade.**

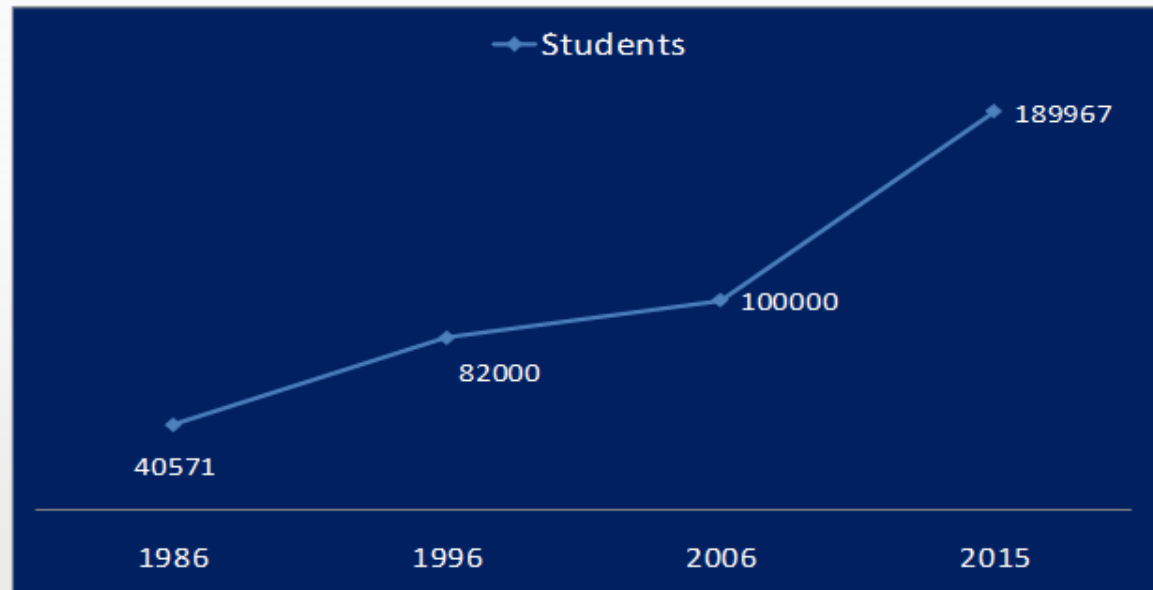


Growing Number of Students

Year	1986	1996	2006	2015
The Number of Students	40571	82000	100000	189967

Governmental Universities	Non-Governmental Universities
189967	56138
Total	
246105	

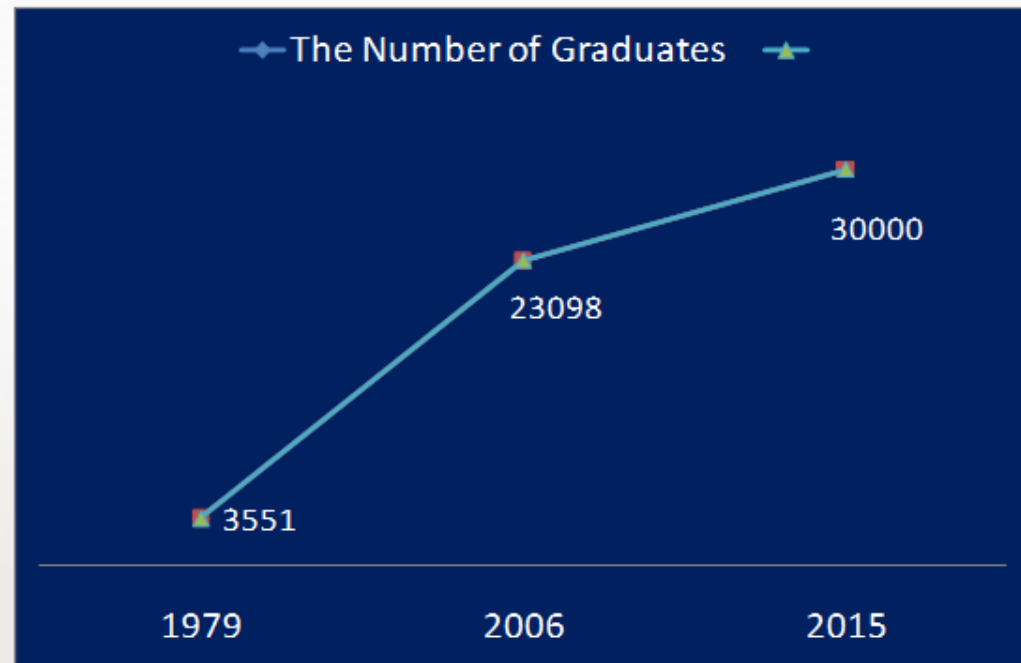
During the past three decades, the number of students has increased three folds



The Number of Graduates

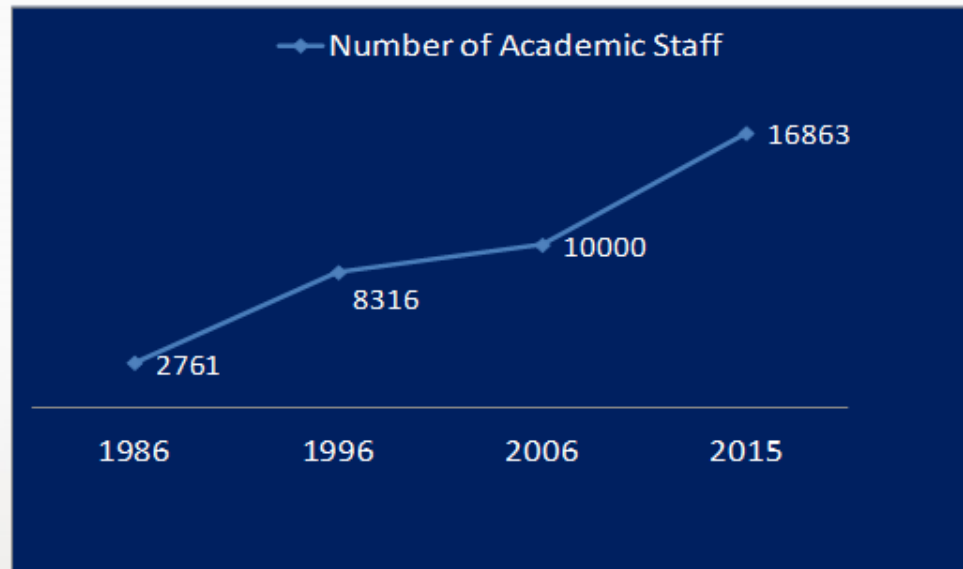
Year	1979	2006	2015
The Number of Graduates	3551	23098	About 30000

According to growing number of students, the **graduates number have increase** during the recent decades.



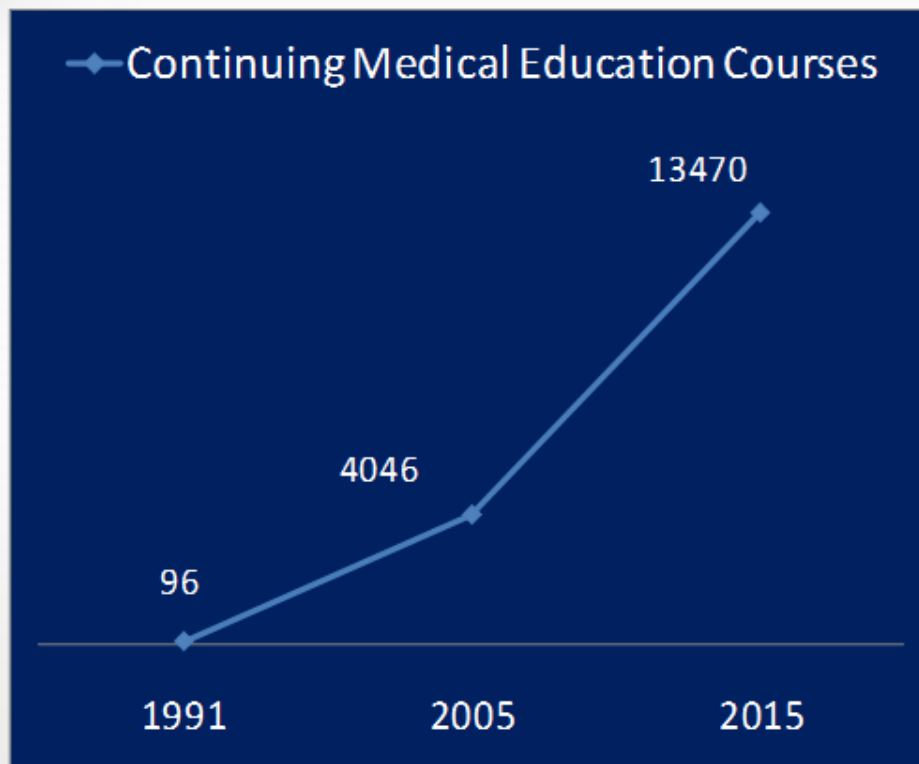
Academic Member

Year	1986	1996	2006	2015
Academic Member Number	2761	8316	10000	16863



There has been a five fold increase in the number of faculty members who are considered as the most important foundation for health professional education. We have about 20000 Academic member in governmental and non-governmental medical sciences universities.

Continuing Medical Education Courses

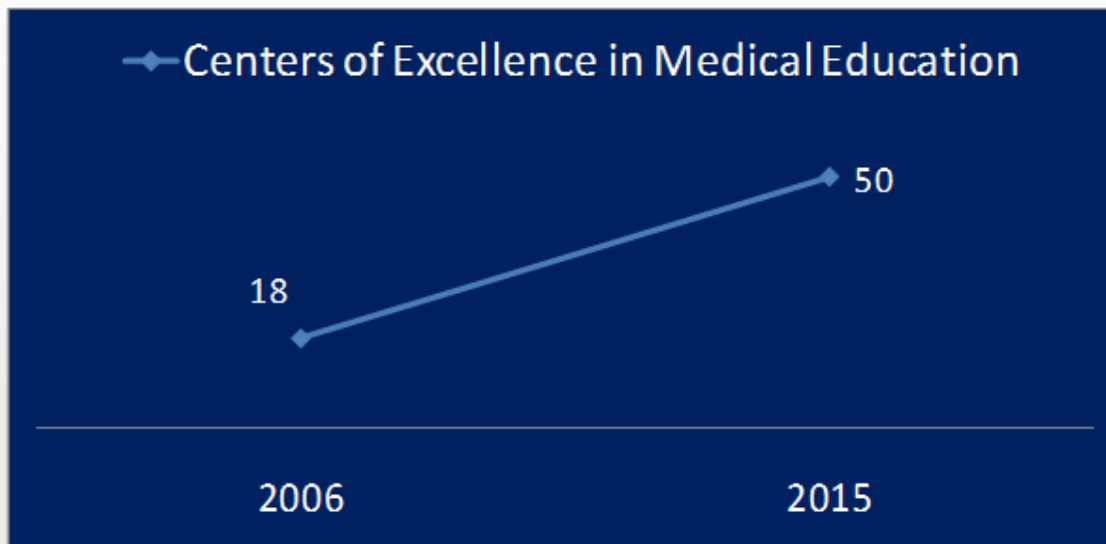


Number of programs	Year
96	1991
4046	2005
13470	2015

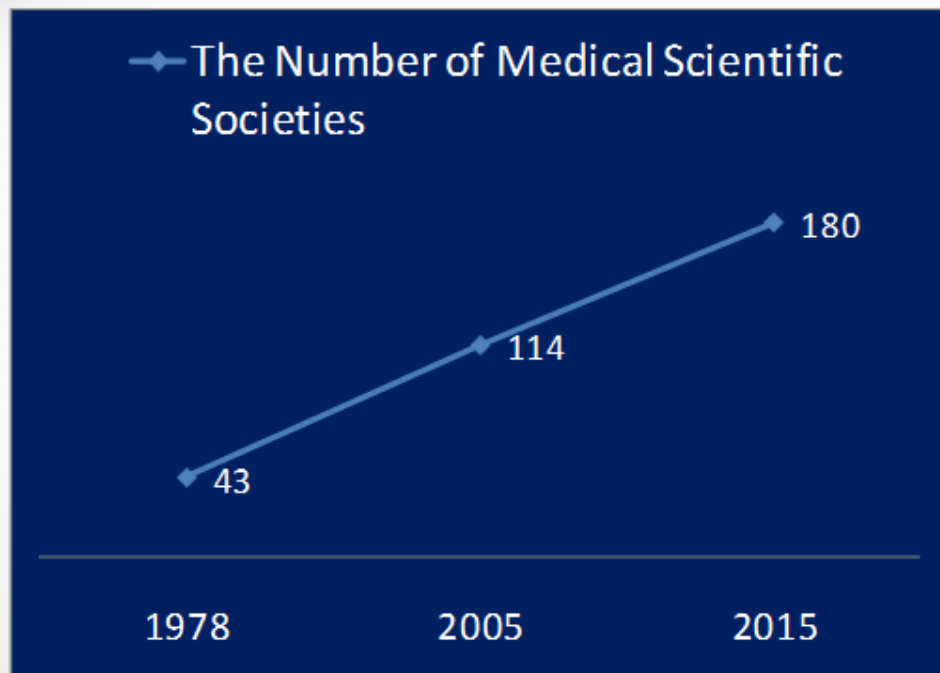
Developing medical education Courses have ascending trend and to be continued in next steps.

Centers of Excellence in Medical Education

- In early 1980s, the centers of excellence in medical education were formed
- By 2006, 18 centers of excellence were formed in Iran
- By the end of 2015, 50 centers of excellence were founded across the country



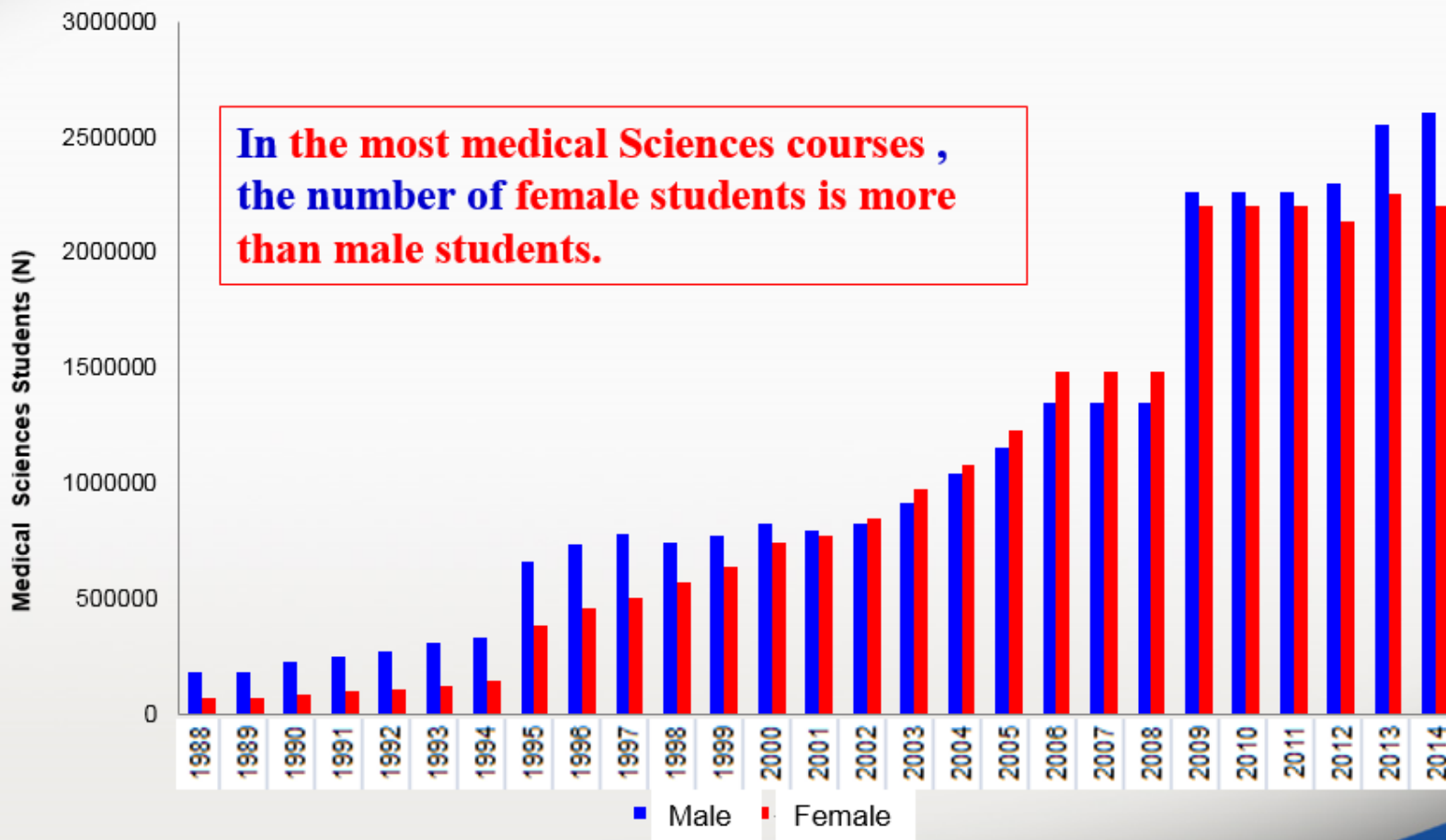
The Scientific Medical Societies



Number of Societies	Year
43	1978
114	2005
180	2015

More than fourfold growth in the number of scientific medical societies during the recent three decades.

The Ascending trend of Medical Sciences students by Sex

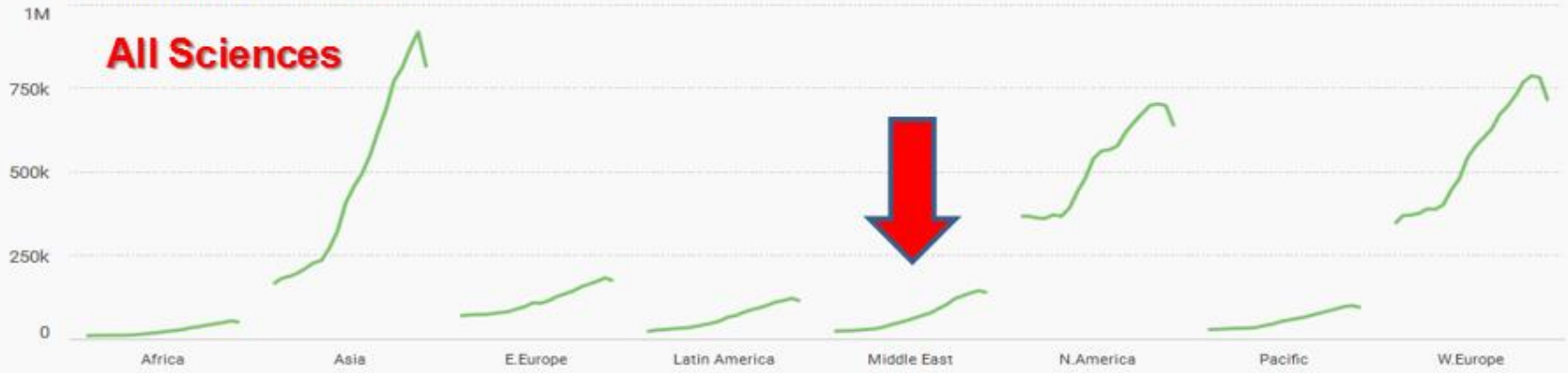




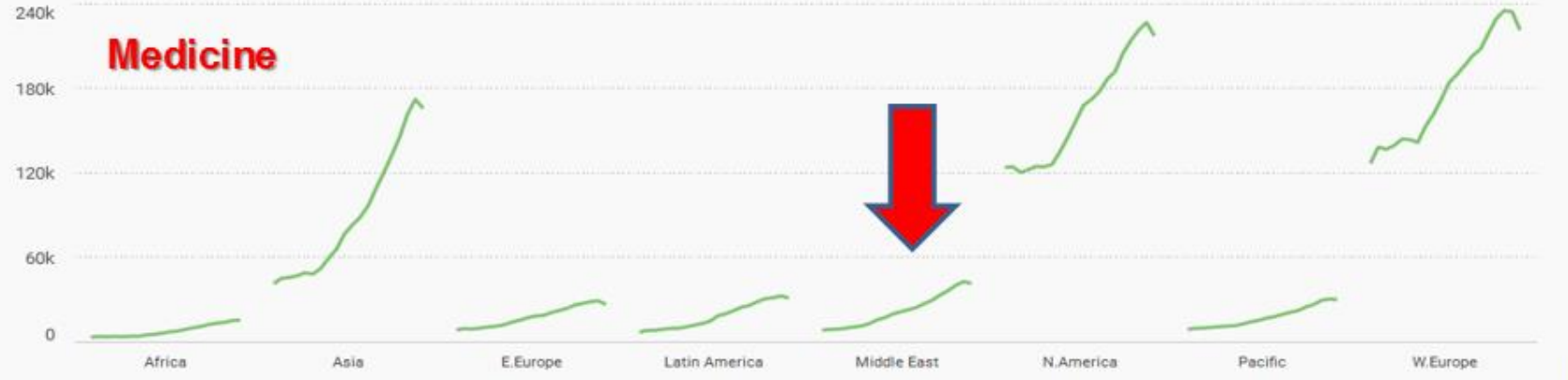
Medical Science Productions

Trends of Number of Documents by Regions in all Science and Medical Sciences

Total documents (1996-2015)

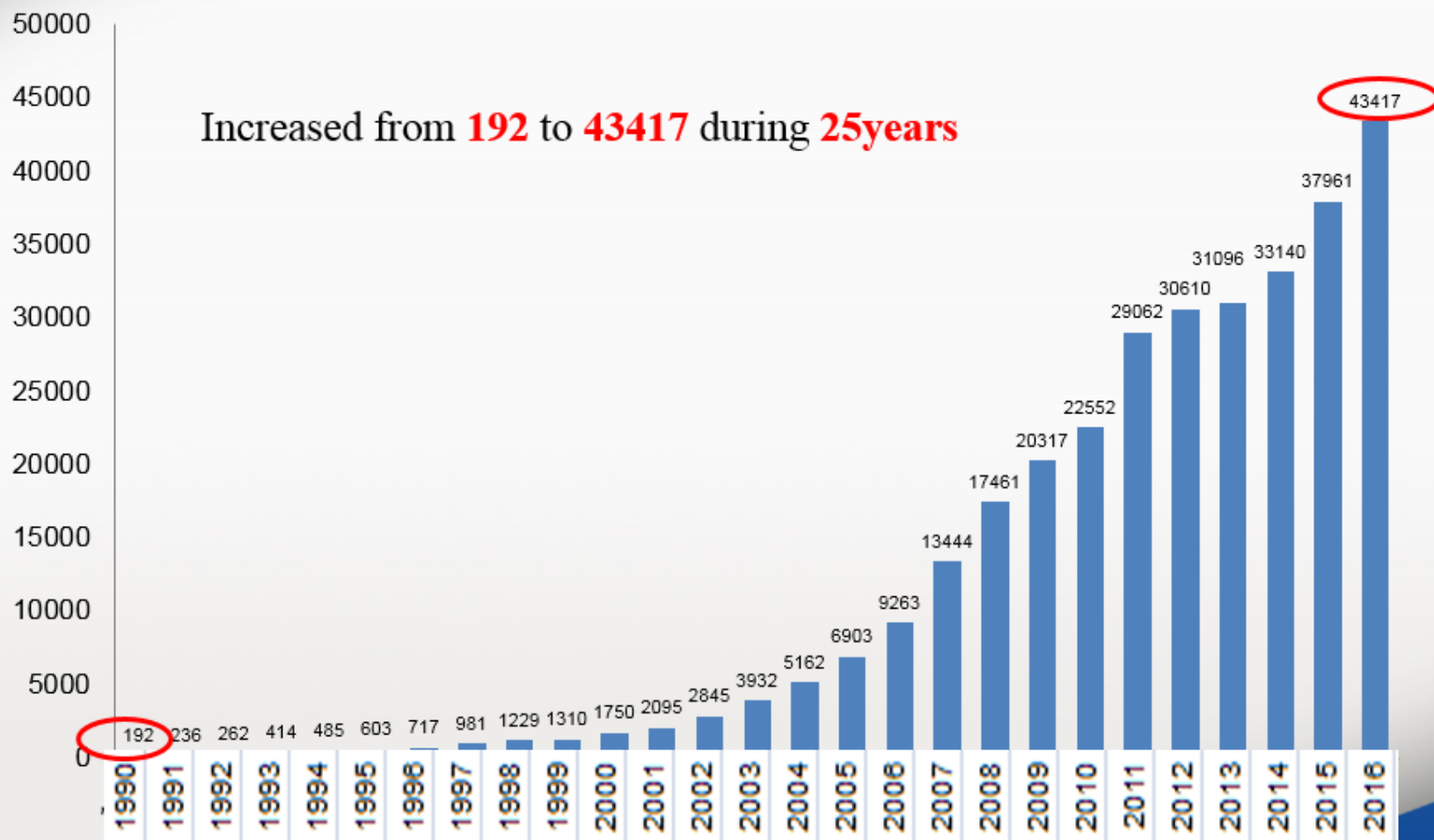


Total documents (1996-2015)

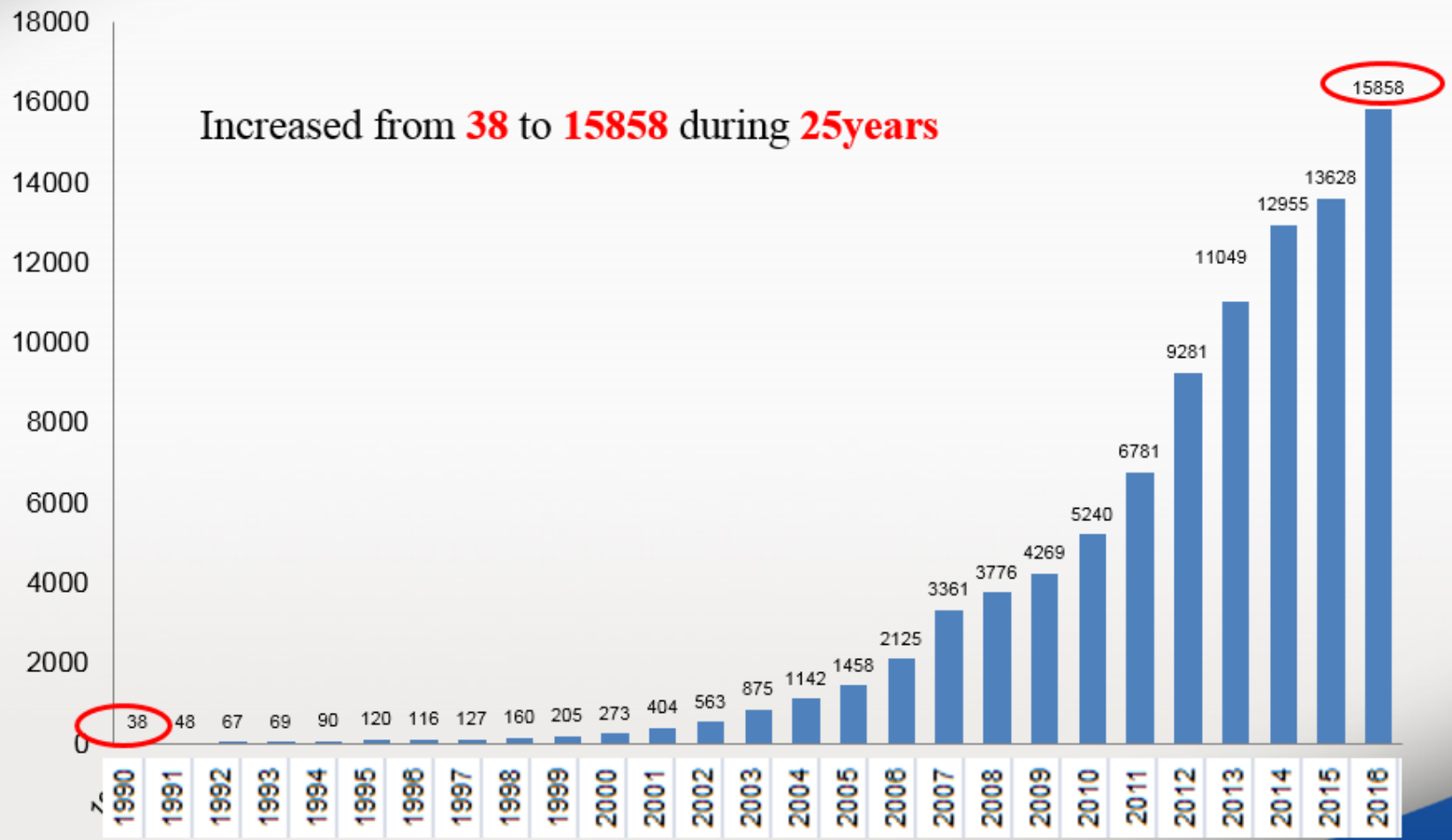


Ascending trends in Asia, North America and West Europe is remarkable. Also Middle East has ascending trend.

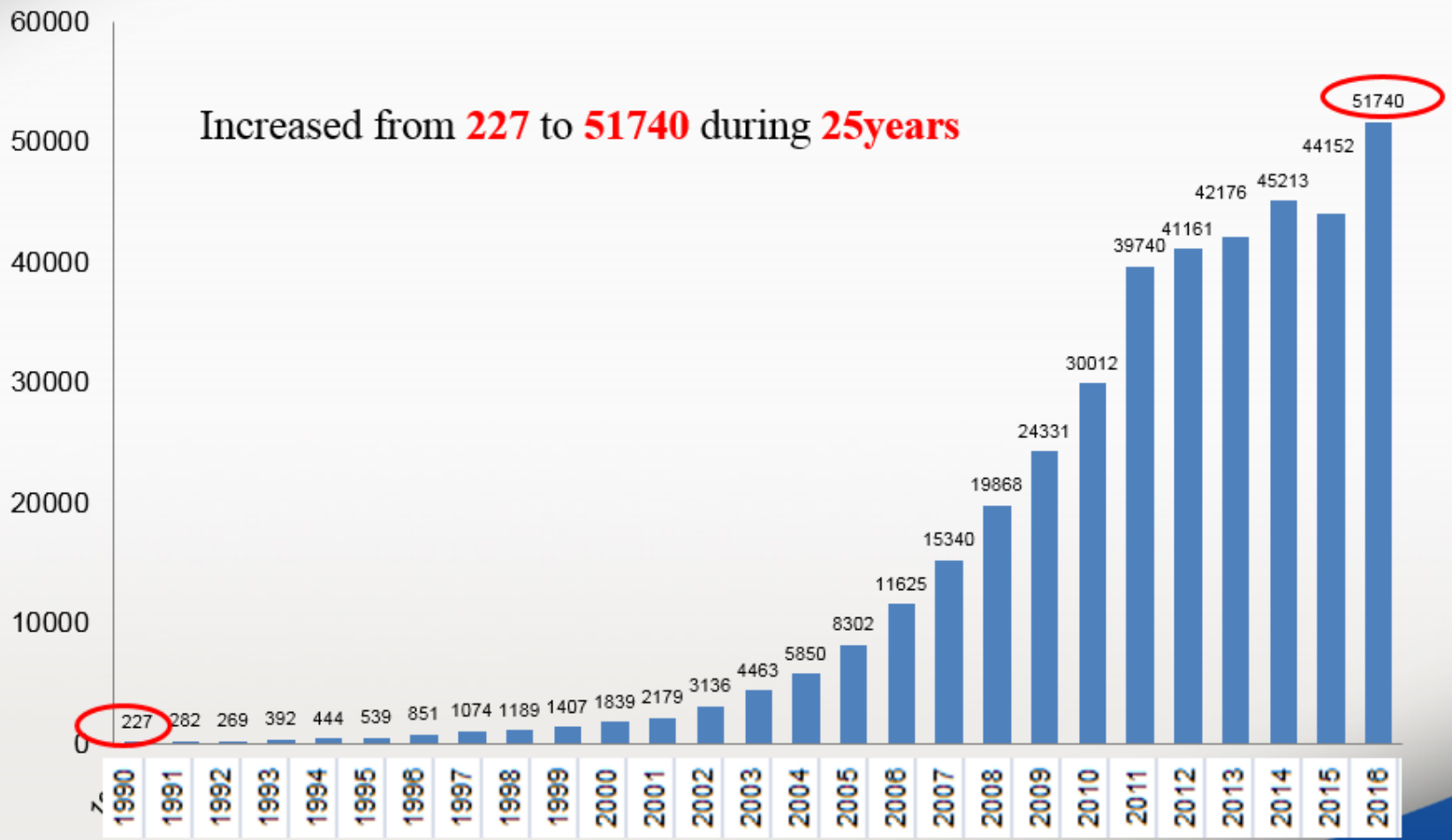
Trend of Indexed Articles in ISI IRAN



Trend of Indexed Articles in PubMed IRAN



Trend of Indexed Articles in Scopus IRAN




The Role of the Rankings in World Class University Formation

A Research on the most important reasons of **the students choice of the university** show following results;

- International reputation/ranking (33%)**
- International recognition** by potential employers (21%)
- Attractive course structure/content (14,9%)

Thus, **rankings play increasingly important role** in the WCU formation through **attracting talents and the resources** to the top-ranked institutions of higher education .

World University Rankings 2015-2016 In overall



Rank	Name	No. of FTE Students	Student:Staff Ratio	International Students	Female:Male Ratio
1	California Institute of Technology United States Explore	2,181	6.7	27%	31 : 69
2	University of Oxford United Kingdom Explore	19,718	11.0	35%	46 : 54

World University Rankings 2015-2016 According to International students Number

Rank	Name	No. of FTE Students	Student:Staff Ratio	International Students	Female:Male Ratio
601-800	American University of Sharjah United Arab Emirates Explore	5,545	15.0	84%	48 : 52
23	London School of Economics and Political Science United Kingdom Explore	9,401	11.5	70%	53 : 47



















World University Rankings 2015-2016 Ranks in IRAN

Rank	Name	No. of FTE Students	Student:Staff Ratio	International Students	Female:Male Ratio
401-500	Iran University of Science and Technology Iran Explore	12,236	28.2	n/a	29 : 71
401-500	Sharif University of Technology Iran Explore	11,177	18.4	n/a	26 : 74
501-600	Tehran University of Medical Sciences Iran Explore	13,388	8.1	2%	60 : 40



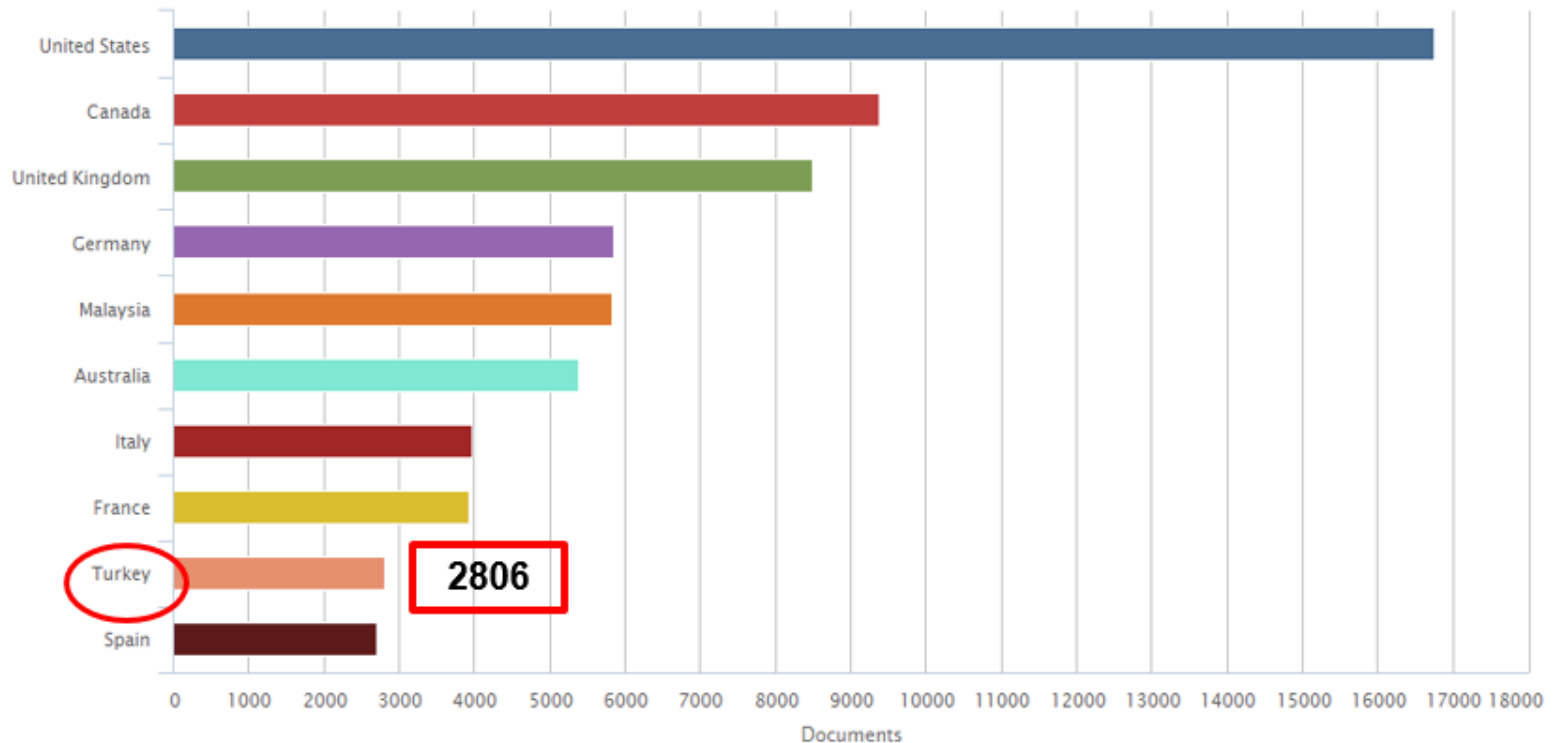
Iran Rank 16th in the world for number of documents for all science in Scopus-2015

	Country	↓ Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1	 United States	567007	487064	346567	188398	0.61	1783
2	 China	416409	401945	168552	105917	0.40	563
3	 United Kingdom	169483	142850	112788	37049	0.67	1099
4	 Germany	149773	133962	98755	34123	0.66	961
5	 India	123206	113144	37718	17210	0.31	426
6	 Japan	109305	100143	47654	15993	0.44	797
7	 France	103733	93799	64834	18515	0.63	878
8	 Italy	95836	83899	61007	21562	0.64	766
9	 Canada	89312	79115	57616	15257	0.65	862
10	 Australia	82567	71905	54061	16362	0.65	709
11	 Spain	79209	70620	45739	13221	0.58	648
12	 South Korea	73433	69469	32490	9668	0.44	476
13	 Brazil	61122	57033	20004	6339	0.33	412
14	 Russian Federation	57881	55500	16903	8142	0.29	421
15	 Netherlands	51434	45227	41441	10074	0.81	752
16	 Iran	39727	37587	14341	6632	0.36	199

Top 10 Collaborative countries by IRAN in knowledge production in Medical Sciences area (1990-2016)

Documents by country/territory

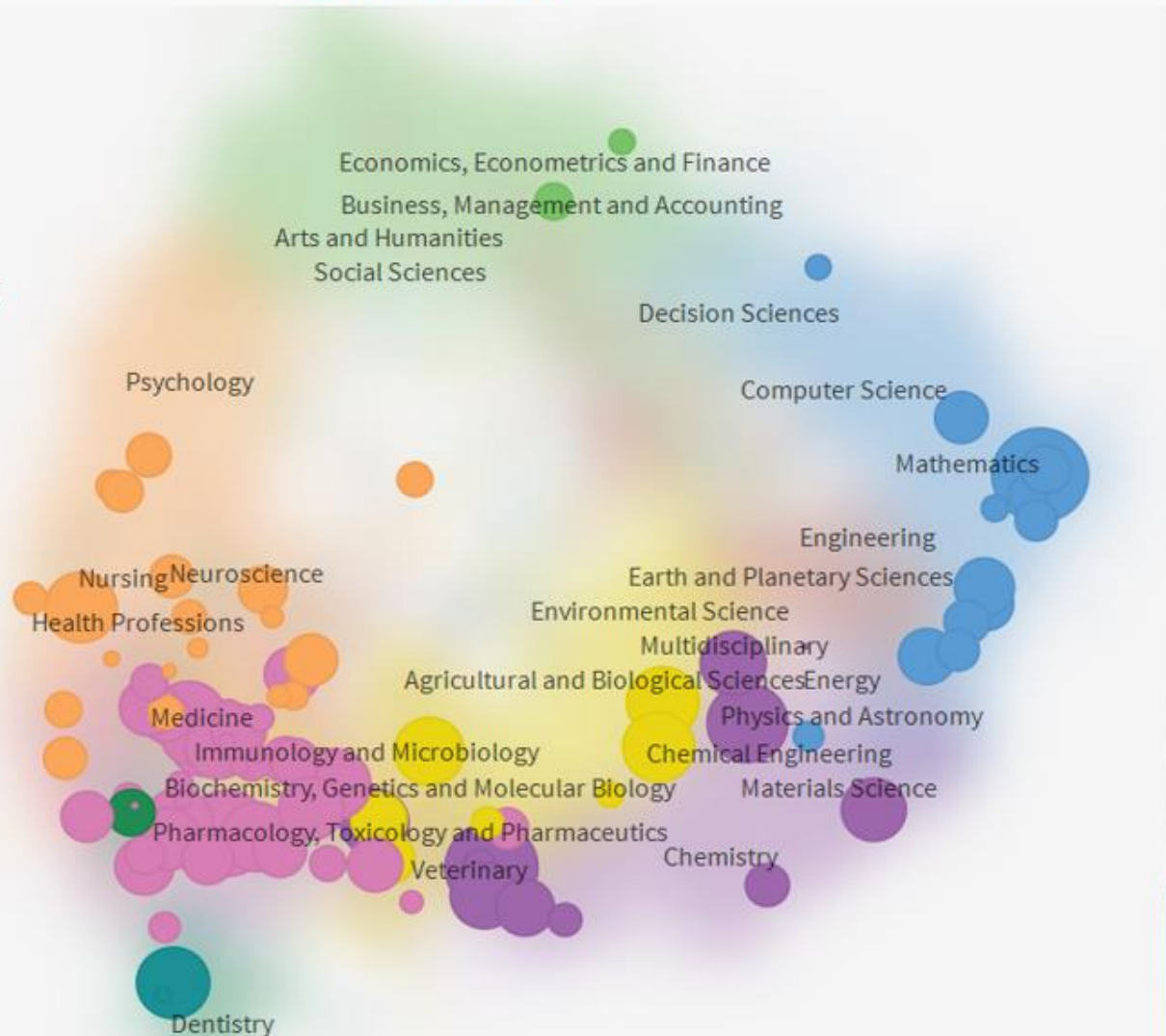
Compare the document counts for up to 15 countries/territories



United states was the most **collaborative country** in knowledge production with IRAN and **turkey** (as one of the our region's countries) had the **9th rank**.

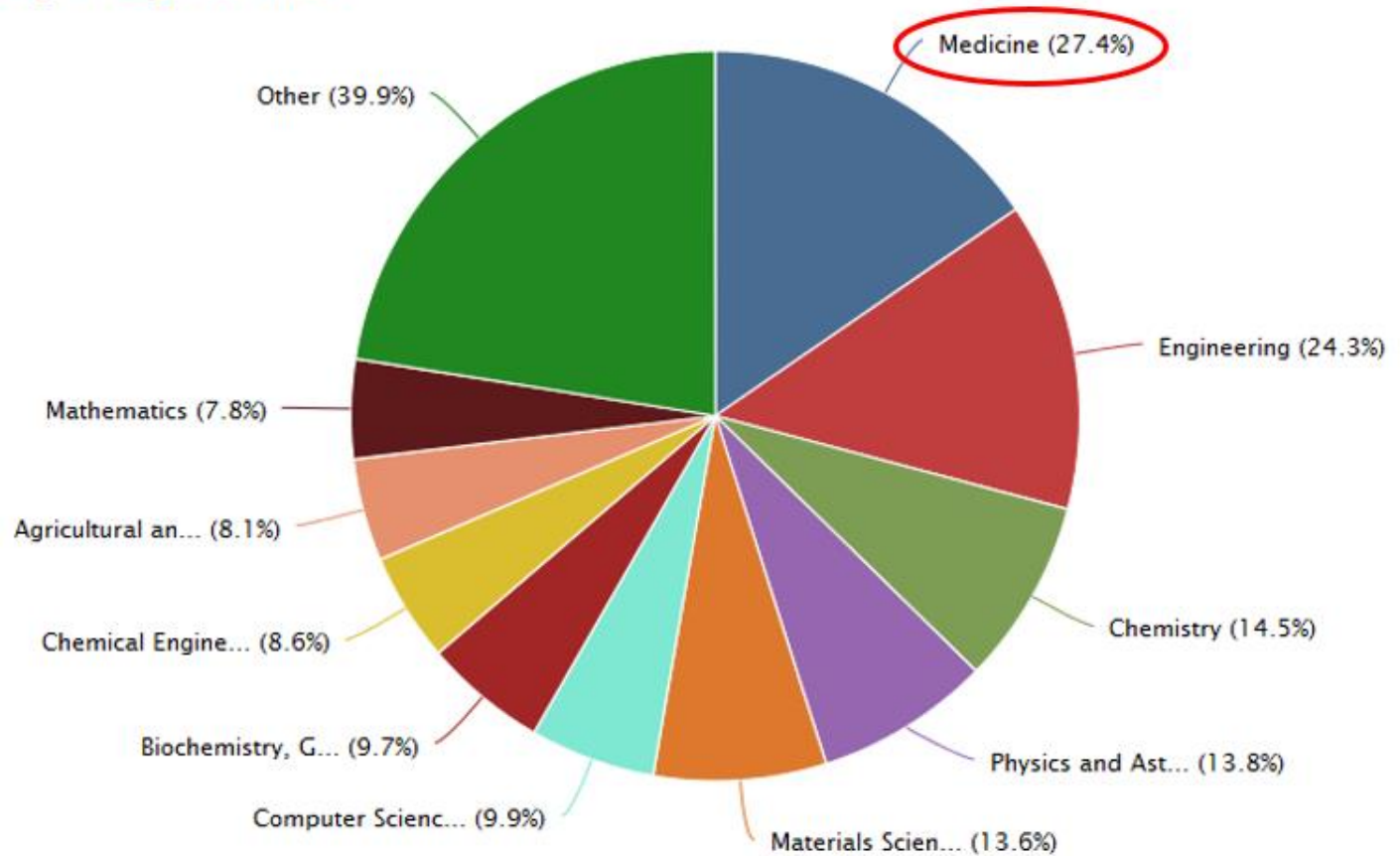
The pattern of publications of Iran in all area

10 % of all academic members in Iran affiliated to medical sciences universities, but 30% of our country scientific publications related to medical sciences. In addition, 30% of publication in our region is affiliated to Iran.



Published Documents by IRAN in various Subject Area-2015

Documents by subject area

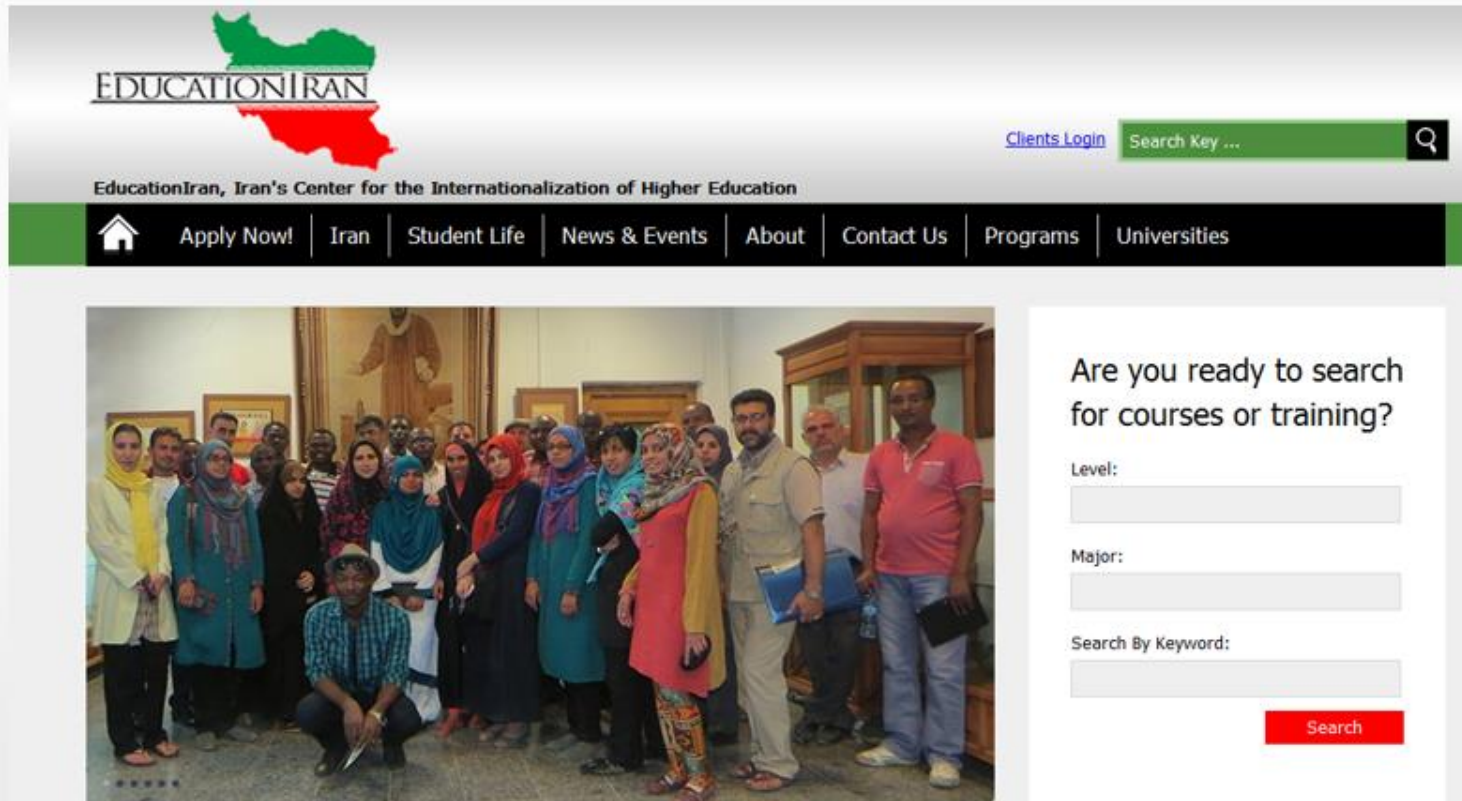


Iran Scientific Contribution to the World



	Documents	Citable Documents	Cites	Self Cites	Cites per Doc.	Self Cites per Doc.	Cited Docs.	Uncited Docs.	% International Collaboration	% Region	% World
1996	827	817	9.664	3.314	11,69	4,01	641	186	35,67	3,54	0,07
1997	1.053	1.047	11.821	4.336	11,23	4,12	791	262	31,34	4,28	0,09
1998	1.158	1.140	17.088	5.577	14,76	4,82	939	219	31,95	4,62	0,10
1999	1.370	1.358	19.752	7.612	14,42	5,56	1.125	245	24,74	5,14	0,12
2000	1.723	1.707	22.952	8.718	13,32	5,06	1.408	315	23,33	6,13	0,14
2001	2.074	2.051	27.424	10.578	13,22	5,10	1.675	399	19,38	6,88	0,15
2002	2.926	2.891	36.576	14.961	12,50	5,11	2.335	591	19,41	8,52	0,21
2003	4.174	4.088	54.852	20.172	13,14	4,83	3.374	800	24,65	10,05	0,29
2004	5.679	5.599	64.543	24.570	11,37	4,33	4.464	1.215	24,46	11,80	0,36
2005	7.506	7.348	74.224	28.291	9,89	3,77	5.598	1.908	23,07	14,93	0,45
2006	11.243	11.014	103.137	39.916	9,17	3,55	8.164	3.079	20,60	18,10	0,59
2007	14.725	14.405	126.990	48.181	8,62	3,27	10.955	3.770	21,09	21,26	0,73
2008	19.297	18.835	132.310	51.088	6,86	2,65	13.822	5.475	19,18	25,00	0,91
2009	23.859	23.367	139.002	55.211	5,83	2,31	16.849	7.010	18,12	26,43	1,07
2010	29.331	28.757	127.030	51.362	4,33	1,75	18.822	10.509	17,73	28,81	1,25
2011	38.800	37.846	100.846	42.545	2,60	1,10	21.655	17.145	16,75	32,53	1,55
2012	40.236	38.971	55.754	23.248	1,39	0,58	17.365	22.871	17,76	31,74	1,56
2013	39.240	37.313	11.825	5.525	0,30	0,14	6.494	32.746	19,76	30,15	1,53

In EducationIRAN project, all medical sciences universities capable of admitting international students have been entered.



The screenshot shows the EducationIRAN website. At the top left is the logo with the text "EDUCATIONIRAN" and a map of Iran. To the right is a "Clients Login" link and a search bar with the text "Search Key ...". Below this is a navigation bar with a home icon and links for "Apply Now!", "Iran", "Student Life", "News & Events", "About", "Contact Us", "Programs", and "Universities". The main content area features a large group photo of international students and staff on the left. On the right, there is a search form with the question "Are you ready to search for courses or training?". The form includes input fields for "Level:", "Major:", and "Search By Keyword:", followed by a red "Search" button.

The Road Ahead

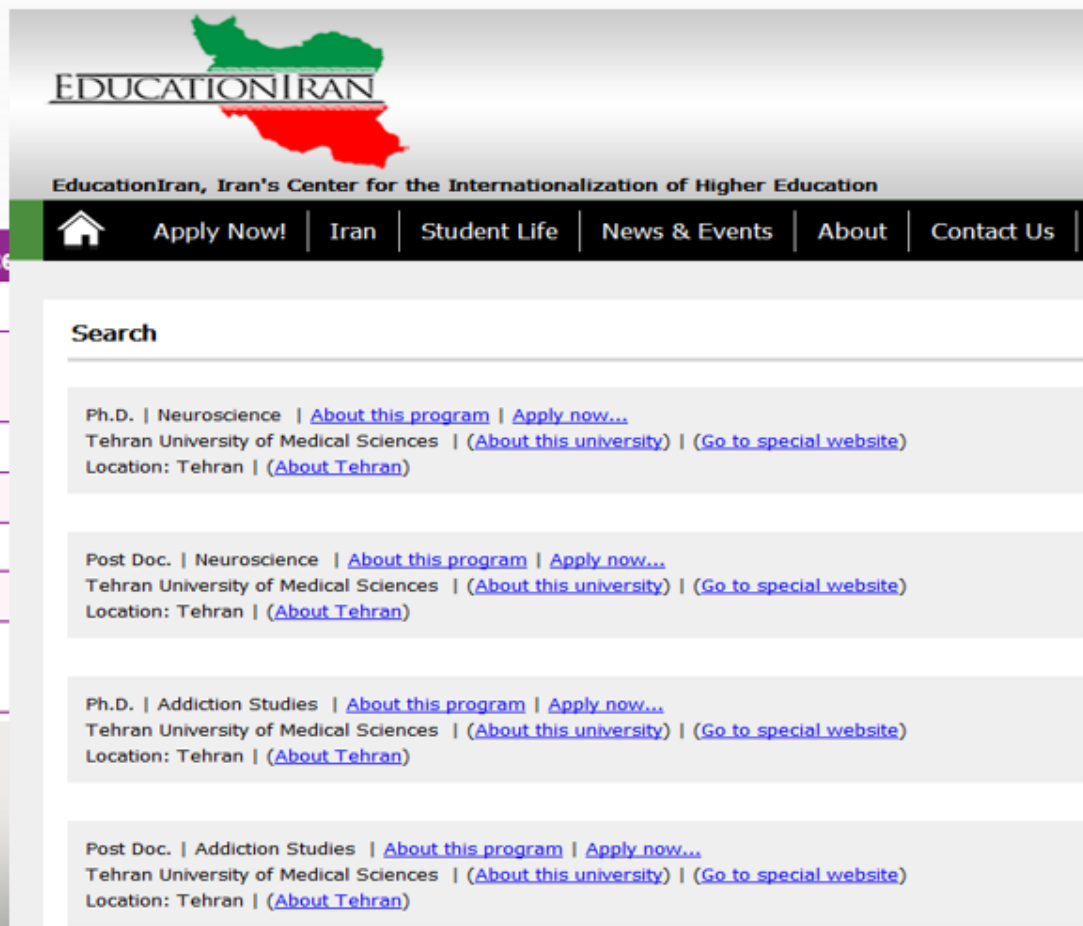
EducationIRAN, conceived as a project between the three ministries of 'Foreign Affairs', 'Health and Medical Education' and 'Science, Research and Technology', is a

Programs Spotlight



More than 600 programs are now being advertised in medical sciences universities

University	Number of Introduced Programs
Mashhad University of Medical Sciences	233
Shahid Beheshti University of Medical Sciences	153
Tehran University of Medical Sciences	137
Iran University of Medical Sciences	133
Kerman University of Medical Sciences	61
Zanjan University of Medical Sciences	21
Hamedan University of Medical Sciences	20



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 Location: Tehran | ([About Tehran](#))

Tracking Internationalization by Deputy of Education MoHME

- MOHME, and specifically the Office of **Deputy Minister for Education**, has also been pursuing **internationalization efforts** in two other stream.

First

- ❑ The **accreditation of universities** has been vigorously sought, and, through signing contracts and MoUs with the relevant organizations,

Tracking Internationalization by Deputy of Education MoHME

- A workgroup has been tasked with **translating academic curricula** and preparing them for advertisement. So far, a brief description for **205 curricula has been prepared**, categorized as below:

Second

- **85** specialty, sub-specialty and **fellowship** programs;
- **96 basic sciences** programs;
- **12 dentistry** programs;
- **12 pharmacy** programs.

Developing International Interactions in Medical Education

Correspondence in order to hold the **IELTS** , **GMAC** ,
international skills-based courses





Developing International Interactions in Medical Education

- Identification of **MOHME** as a valid organization to hold and provide **international teaching courses and examinations** by the **USA, Australia, UK, India, and Malaysia**





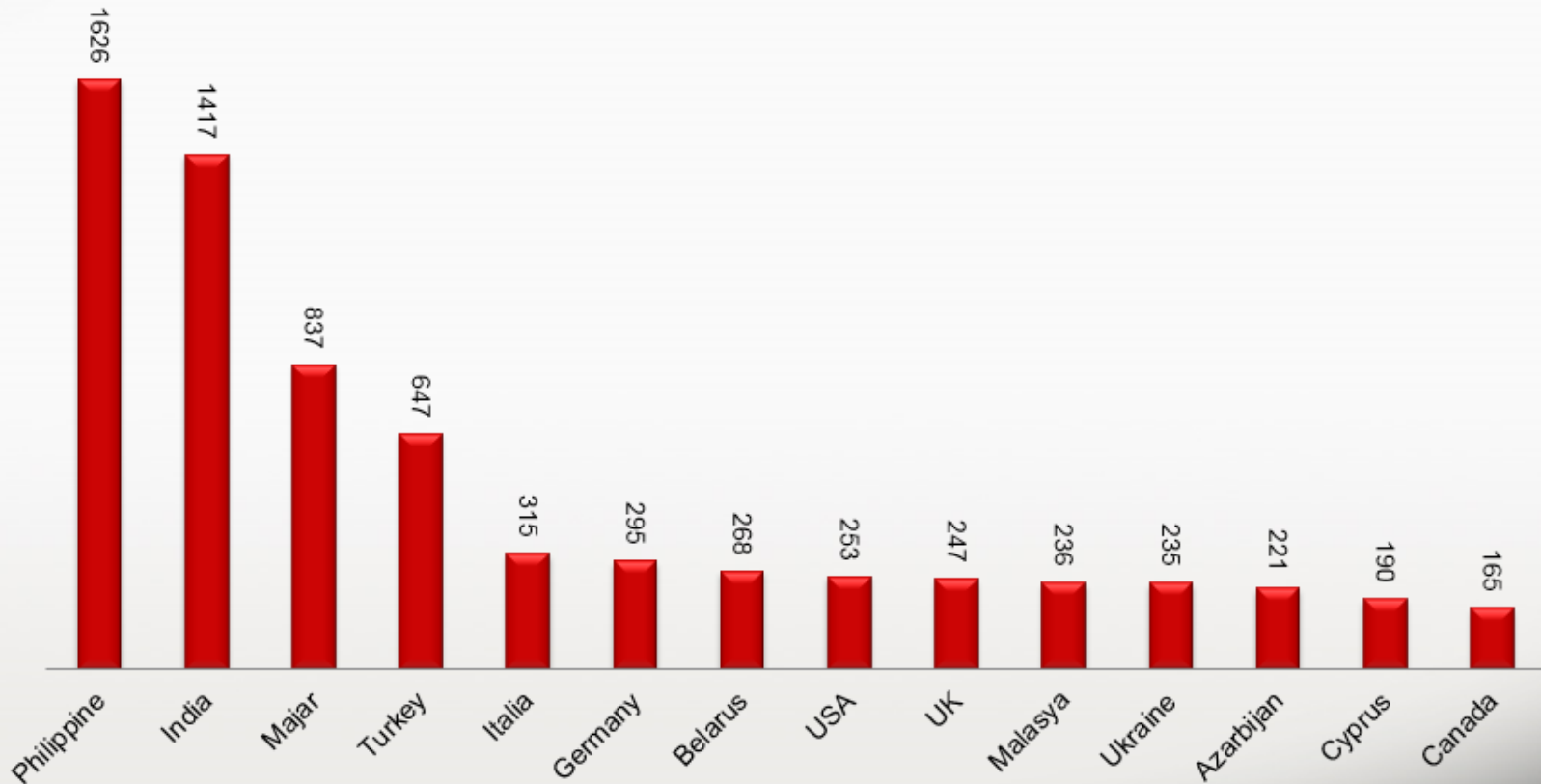
Ministry of Health and
Medical Education (Iran)

Deputy Ministry of
Medical Education

Medical Sciences Students Exchange



Iranian Medical Sciences Students in 15 Countries (Since 2011)



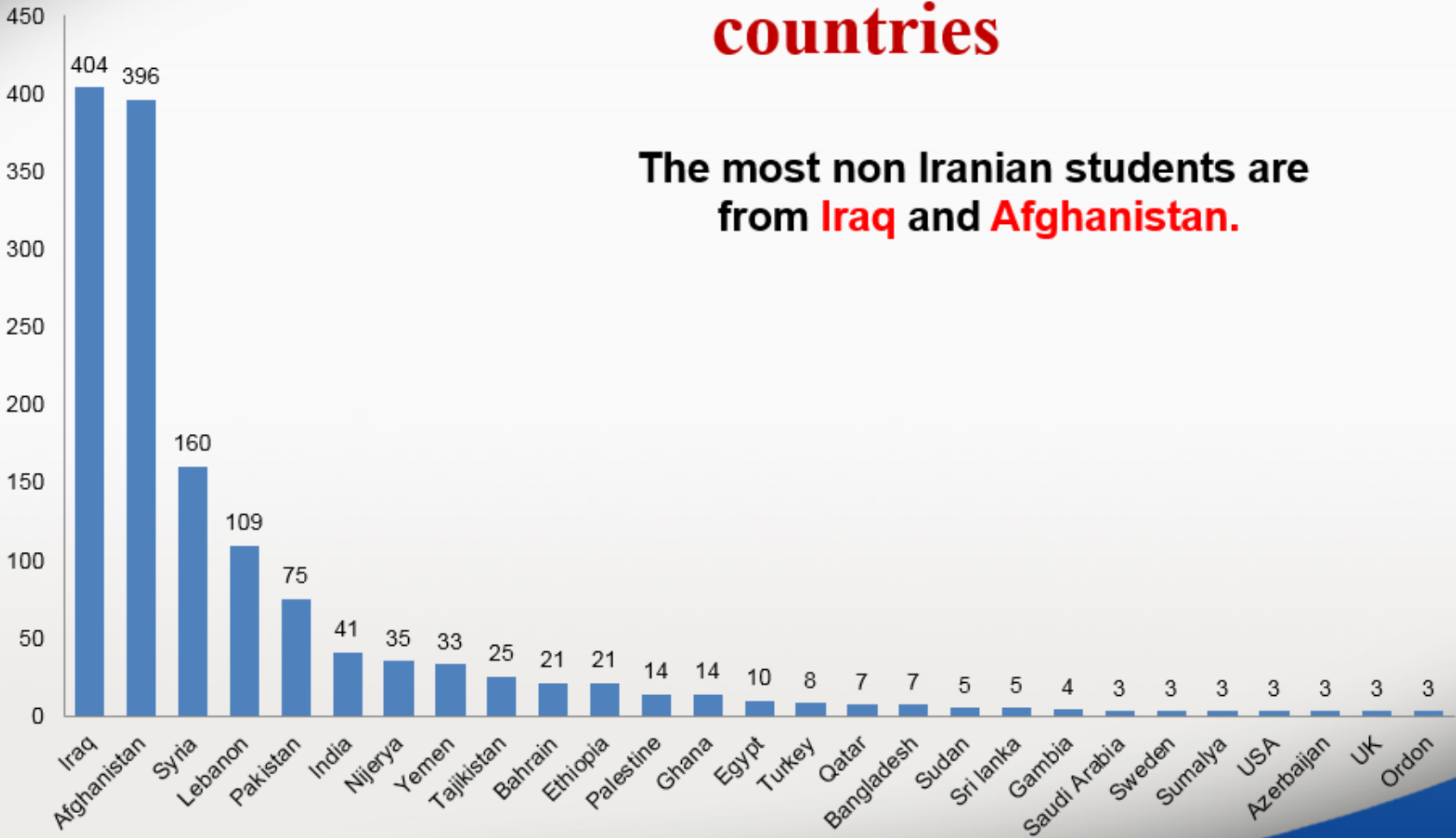
The most Iranian students study in **Philippine** and **India**.

Non Iranian Medical Science Students in Iran since 2011

- Now, **more than 1400** Non Iranian Medical Science **Students** educate in Iran.
- About **60%** of mentioned students educate in **post graduate** degrees.
- They are from **41 nationality**.
- They trained in **34 medical science universities** in Iran.

The number of Non Iranian Medical Science Students in Iran from different countries

The most non Iranian students are
from **Iraq** and **Afghanistan**.





Deputy Ministry of
Medical Education

Innovation and Promotion in Medical Education

Focusing on National Innovation System in the National Comprehensive Scientific Map



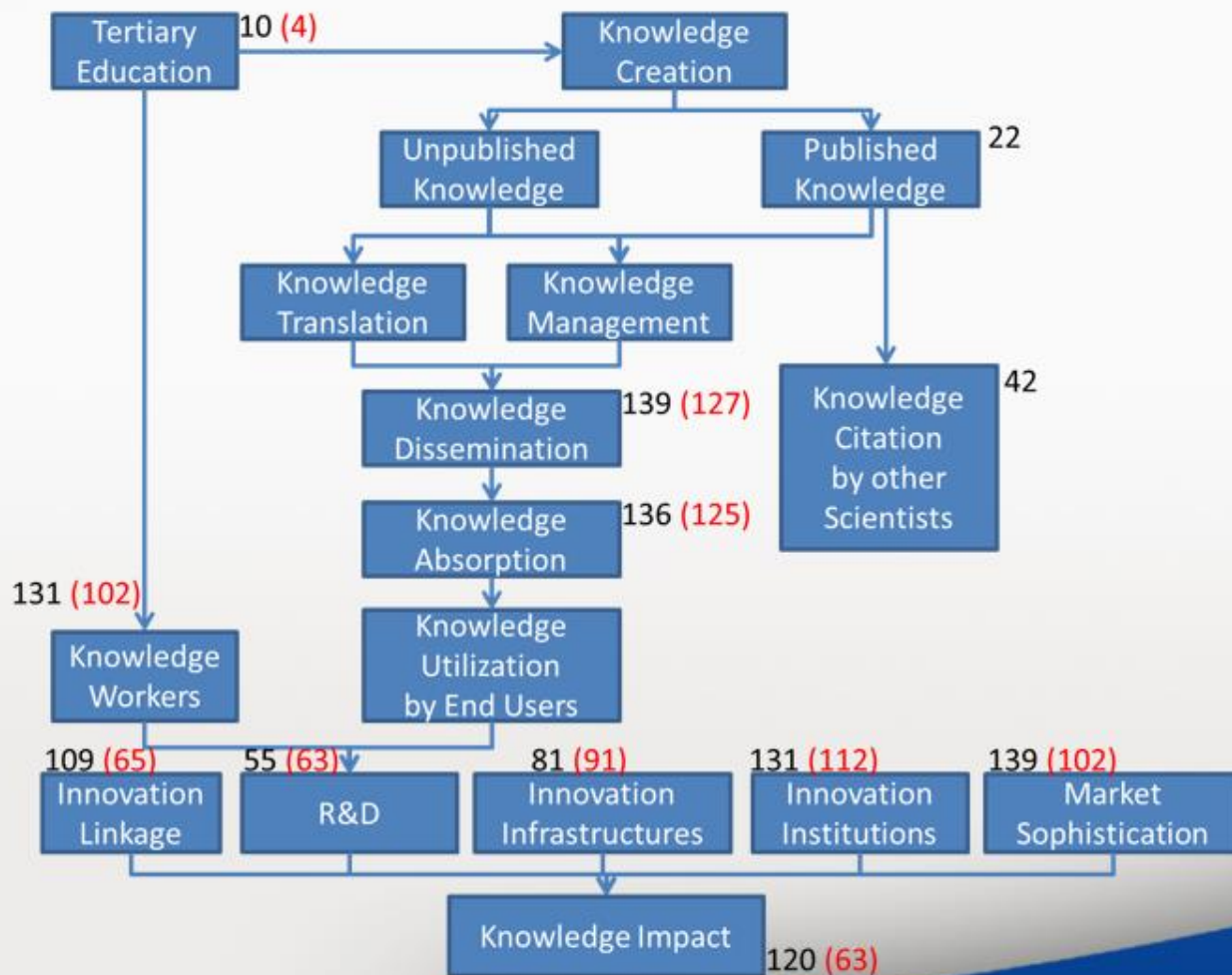
The National Comprehensive Scientific Map was a national document was prepared upon **National Innovation System**;

The document attempted to focus on innovation cycle in all targets and strategies as its general policy;

The methodology of the change in health care system was also based on the **National Innovation System**

Iran Rank 76th in the world for Global Innovation Index in 2015

(28 rank improvement compare with previous year)





Deputy Ministry of
Medical Education

Reform and Innovation Packages in Medical Education

Road Map in Changes and Innovation in Medical Education

Based on the National Documents;

- Covering the **12-item policies** in line with the development of medical education in the country
- Utilizing **practical strategies** for developing each of the policies and standards for accomplishing them were used;
- **The translation of each policy** in the program for changes in health care system were paid attention to.



Field and Strategic Preparation for Developing Medical Education

- Basic strategies for developing **medical education based on local capacities**, and utilizing grounds and facilities at regional and provincial levels;
- Making the universities of medical sciences **the focus of attention**;
- **Decentralizing** the activities from headquarters towards preparatory locations



The Packages for Reform and Innovation in Medical Education; the Translation of the Programs and Upstream Documents in Practice



In line with the 12-item policies of the Comprehensive Program of Health Care Education;

Including **11 change-packages + 1 monitoring and assessing program** through an innovative outlook in medical education



Main Visions of Reform and Innovation in Medical Education in Iran

- **Decentralization** (Geographic Plan)
- Promotion of **Virtualization**
- **Internationalization** in Medicine
- Promotion of **Professionalism** in Medicine
- **Accreditation** of National and International Educational Centers
- **Reforming** and **Updating** Medical Curriculums
- Expansion of **Accountability** in Medical Education
- **Foresighting** Medical Education



Conclusion

- Development of every country depends on the **development of its human resources.**
- Islamic Republic of Iran , has gained valuable experiences in providing services by **Integration of medical education and health in the Ministry of Health and Medical Education.**
- The health higher education sector by the implementation of **innovation and reform plan in health higher education** plan will provide the necessary field to run this way.

Conclusion (cont.)

- **Internationalization** in Medical education is one of the main goals which will be achieved by some collaborations such as **joint degree programs, expert & student exchange programs, networking** etc.
- We **interest** in collaboration with other countries in **developing and implementing joint programs** regarding **academic health education** promotion.
- **Internationalization** is an important opportunity for Iran to **eliminate gaps toward more effective medical education, innovation and technology.**