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Report on European Baccalaureate 2020

Approved by the Board of Governors of the European Schools

On its meeting of 1st, 2nd and 3rd December 2020 – Online

INDEX

1 Abbreviations

SUBJECTS			
ART:	Artistic Education	ar4 - Art (4 hours)	WR
BIO:	Biology	bi2 - Biology (2 hours option)	OR
		bi4 - Biology (4 hours option)	WR or OR
CHI:	Chemistry	chi - Chemistry	WR or OR
ECO:	Economics	eco - Economics	WR
GEO:	Geography	ge2 - Geography (2 hours option)	OR
		ge4 - Geography (4 hours option)	WR or OR
GRE ANC.:	Ancient Greek	gre - Ancient Greek	WR
HI:	History	hi2 - History (2 hours option)	OR
		hi4 - History (4 hours option)	WR or OR
L (1):	Language Basic course	L1 - Language I	WR and OR
		L2 - Language II	WR and/or OR
		L3 - Language III	WR or OR
		L4 - Language IV	WR or OR
(L 1) A:	Language Advanced course	L1a - Language I Advanced	WR and OR
		L2a - Language II Advanced	WR and/or OR
LAT:	Latin	lat - Latin	WR
MATH:	Mathematics	ma3 - Math (3 hour option)	WR
		ma5 - Math (5 hour option)	WR
		maa - Math Advance	OR
MUS:	Musical Education	mu4 - Music (4 hour option)	WR
ONL:	Other National Language	onl - Other National Language	WR or OR
PH:	Philosophy	ph2 - Philosophy (2 hour option)	OR
		ph4 - Philosophy (4 hour option)	WR or OR
PHY:	Physics	phy - Physics	WR or OR

LANGUAGES		
1	BG	Bulgarian
2	CS	Czech
3	DE	German
4	DA	Danish
5	EL	Greek
6	EN	English
7	ES	Spanish
8	ET	Estonian
9	FI	Finnish
10	FR	French
11	GA	Gaelic
12	HR	Croatian
13	HU	Hungarian
14	IT	Italian
15	LT	Lithuanian
16	LV	Latvian
17	MT	Maltese
18	NL	Dutch
19	PL	Polish
20	PT	Portuguese
21	RO	Romanian
22	SK	Slovak
23	SL	Slovene
24	SV	Swedish

SCHOOLS			
Accredited European Schools		**European Schools**	
*BRI	Liceo scientifico “Fermi Monticelli” Brindisi	ALI	Alicante
*CUL	Europa School UK	BER	Bergen
*DHG	Europese School Den Haag	BR 1 / UCC	Bruxelles 1
*HEL	European Schooling Helsinki	BR 2 / WOL	Bruxelles 2
*HER	School of European Education Heraklion	BR 3 / IXL	Bruxelles 3
*MAN	École internationale de Manosque	BR 4 / LAE	Bruxelles 4
*PAR	Scuola per l'Europa di Parma	FRF	Frankfurt
*RHM	Europäische Schule RheinMain	KAR	Karlsruhe
*STR	École européenne de Strasbourg	LUX 1 / LUX	Luxembourg 1
*TAL	Tallinna Euroopa Kool	LUX 2 / MAM	Luxembourg 2
		MOL	Mol
		MUN	Munich
		VAR	Varese

OTHER	
EB	European Baccalaureate

2 Introduction to the European Baccalaureate 2020

The 61st session of the European Baccalaureate was chaired by Prof. Enrique Guerrero Salom, European Baccalaureate President, from Spain.

2272 candidates, from 13 European Schools and 10 Accredited Schools, registered for the European Baccalaureate 2020 session.

European Baccalaureate 2020 (marks in June)	
Registered	2272
Abandoned	7
Participated	**2265**
Passed	2238
Failed	27
Success rate	**98.81%**
Fail rate	**1.19%**
Overall Average for the Preliminary Mark	**81.28**
Overall Average for the Final Mark	**79.99**

As previous years, the European Baccalaureate Report offers an additional opportunity to discover more results about the EB 2020 session. The EB Unit is now able to disclose more details on the 2020 European Baccalaureate, with a Business Intelligence tool.

To reach the on-line report, please follow the link below or scan the QR code. The report can also be downloaded on PDF, and visualized on any computer or mobile device.

http://schola-europaea.eu/bacc/report/2020

This 2019-2020 school year, and consequently the 2020 European Baccalaureate session, has been strongly affected by the COVID-19 pandemic. Therefore, special measures have had to be taken.

At its meeting of 15-17 April 2020 the Board of Governors decided, among others, with respect to the European Baccalaureate session 2020 the following:

1. The written and oral examinations will not take place. As a consequence, no written or oral mark will be taken into consideration for the calculation of the Final European Baccalaureate mark.
2. The Final European Baccalaureate mark will be awarded based on A and B marks only. The Final Mark will be calculated using the part of the Baccalaureate mark formula which does not make use of the marks to the oral and written exams.
3. Moderation will intervene whenever the difference in the distribution of final marks in comparison to previous years is statistically relevant.

The decisions of the Board of Governors can be found published on the website of the Office of the Secretary-General of the European Schools: https://www.eursc.eu/en/Office/official-texts/decisions.

The modalities of the session are therefore included in the document 2020-04-D-20 - Derogation to the General Rules and to the Arrangements for Implementing the Regulations for the European Baccalaureate (Applicable for the Year 2020 European Baccalaureate session) – Linked to COVID-19 circumstances,

Concerning the moderation process, the Office of the Secretary General has requested an external expert to analyze the data, quantify the difference in the distribution of final marks and eventually propose moderation methods to be applied on the results of the 2020 session, if necessary ("whenever the difference in the distribution of final marks in comparison to previous years is statistically relevant").

This expertise was based on the European Baccalaureate results of the last five European Baccalaureate sessions (2015-2019).

An extraordinary meeting of the Board of Inspectors (Secondary) was organized on 29 May 2020, where the expert illustrated the situation with simulated 2020 marks, since the real A2 marks were not yet known.

The Statistics Department of the Spanish Ministry of Education was also consulted (Spain having the Chairmanship of the 2020 EB session) on this approach and the Ministry entirely supported the proposed method.

Following a positive opinion expressed by the Board of Inspectors Secondary, the President of the 2020 EB session gave also a favorable opinion on the presented methodology of moderation.

On 5 June 2020 all the marks were put into the system and the following preliminary results could be observed:

- Average final mark: 81.28 (while the average final marks in 2015=2019 were between 78.01 and 78.84)
- Number of failing pupils: 27 (while in years 2015-2019 the number varied from 38 to 51)
- Number of with a result over 95: 76 (while the number varied between 18 and 23 in the past 5 years)
- Highest result: 98.2 (the highest result from 2015 to 2019 varied between 93.17 and 98.96, and only twice in the last 10 years the highest result was over 98).

During the meeting of the Board of Inspectors Secondary Cycle on 15 June 2020, members of BIS considered this result as a statistical relevant deviation from previous years which would require – in line with the decision of the Board of Governors of April 2020 – moderation.

Following the discussions, it was proposed that the moderation applied would have a limit. After discussion it has been agreed that this limit would be set to 1.5 (below the pupil's preliminary mark). This value is in line with what happens during a typical EB session where a difference of 1,5 between the preliminary mark and the final mark in the Baccalaureate (average of final marks 1,50 lower than the average of preliminary marks) is regularly registered.

The members of the Board of Inspectors agreed with the expert that it was not advisable to apply a uniform reduction of mark for all the pupils for the following reasons:

1. Statistical reasons: the distribution of final marks would result distorted, so that one of the main objectives of the moderation would not be achieved.
2. Students at the bottom of the scale: 44 pupils would fail instead of 27, or 17 pupils would be artificially given the minimum passing mark, so that the moderation would not any longer be uniform anyway.
3. Best students: only 28 would remain in the 95-100 range.

Consequently, the members of the Board agreed that gradual moderation at the extremes of the distribution should be preferred, as formerly agreed.

This approach, staying within the frame set by the Board of Governors at its meeting on 15 – 17 April 2020, was supported by all members of the Board of Inspectors Secondary Cycle and approved by the Chairman of the 2020 European Baccalaureate session and can be summarized as follows:

Gradual moderation applied, through a formula, to all students (except the top scoring one and those having less than 60), with a maximum drop of 1,5.

It is worth underlining that even with the applied moderation, the average mark remains higher than in previous years, and so is the number of pupils with the highest marks.

As a consequence, on 22 June 2020 pupils received their marks which were calculated according the Bac mark formula and the Decision of the Board of Governors from 15-17 April 2020 (20% A1, 20% A2, 30% B1, 30% B2 which is a replication of B1). The detailed formula used for moderation is presented in Annex I.

This results in a situation that the overall final mark is not simply an average of the final subject marks, but also taking into consideration the necessary moderation which was agreed at the possibly lowest level, at the same time not threatening the reputation of the European Schools and the European Baccalaureate and thus, most important, not affecting the credibility of the diploma delivered to the EB candidates.

The whole process was explained in more details in Annex 1 of this document: *FINAL REPORT ON THE MODERATION METHOD FOR THE EUROPEAN BACCALAUREATE MARKS IN 2020 (Ref.: 2020-07-D-2-en-1)*

The decision of the Board of Governors has allowed all EB candidates to request to sit the full EB session in autumn (or alternatively to repeat the year), shall they be unsatisfied with the obtained result (due to moderation or any other reason).

More details regarding the extraordinary session in September can be found later in this report in a separate chapter focus on that.

3 The European Baccalaureate 2020

3.1. Calculation of the European Baccalaureate 2020 mark before moderation

As was mentioned in the previous point, the European Baccalaureate had to be adapted this year due to the COVID-19 linked circumstances according to the derogation of the General Rules and to the AIREB approved by the Board of Governors.

ARTICLE 6 — DETAILED RULES FOR CALCULATION OF THE EUROPEAN BACCALAUREATE MARK AND THE ORGANISATION OF EXAMINATIONS

The final overall European Baccalaureate mark is expressed out of one hundred (100) and is accurate to two decimal places. The following 2 factors are taken into consideration for the calculation of the European Baccalaureate final mark:

- The average of the class A-marks expressed out of 100 (A1 + A2)
- The average of the B-marks expressed out of 100 (B1 or B1+B2)

The proportion of the final total mark for the examination allotted to the various parts will be as follows:

- 20 percent for the average A-mark (A1 + A2) multiplied by 2
- 30 percent for the average B-mark (B1 + B1 replicated as B2) multiplied by 2

Final result = 0.40 A + 0.60 B

The moderation could intervene whenever the difference in the distribution of this final result in comparison to previous years is statistically relevant.

3.2. Correction of the European Baccalaureate Examinations: the On-line Correction System

The Viatique platform was for the fourth time the chosen platform in order to correct on-line the scripts of the European Baccalaureate 2020 session. Due to the extraordinary circumstances, was not possible to use it for the June session because nor written nor oral examinations did not take place.

However, the tool was used for those candidates that decided to sit in total his/her written examinations. For these candidates the normal AIREB applies and therefore the usual practices consequently:

Scanning of the examination scripts

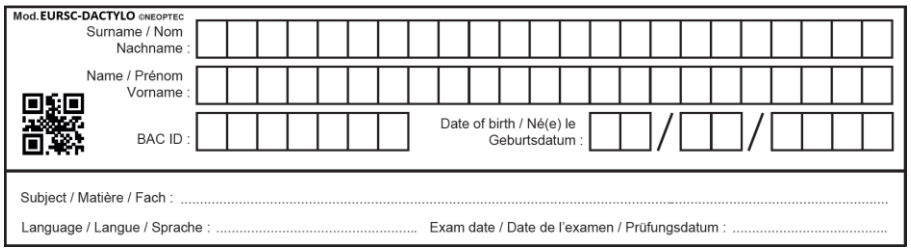
The scanning of the scripts was made in each examination center. The scripts were compacted and uploaded automatically to a secure server with an encrypted connection.

The scanning of the examination scripts allowed scripts to be available earlier for second correctors, with the advantage of extending the correction period for second correction.

Due to the few scripts in the 2020 European Baccalaureate extraordinary session, scripts went extremely well and fast. The scripts were scanned right after the examination according to the schedule foreseen, and there was no delay in their distribution to the correctors.

Anonymity

Anonymity of the scripts resulted in the unbiased assessment of candidates. This was automated during the scanning process.



All examinations subjects' scripts were anonymized, with the exception of Art and Music. The written part of these examinations also went on the official examination paper, which was scanned. The rest of the parts, preparation and final art work was provided to the correctors in original form. So that the written part could be related to the rest of the parts. However, the marks for all parts and the final commentary was introduced in the on-line correction platform.

Criteria referenced

All used examinations were accompanied by a marking scheme and grid, correction criteria and guidelines and/or suggested answers. These were known to the correctors and served as a benchmark to assess the examinations and award marks, through the forum in the Viatique software.

Multiple correction and marking: Internal / External

The on-line tools allowed the same script to be corrected by more than one corrector. In our system, every script is corrected twice. A third corrector can be involved if there is a mark disagreement of over 2 points between the two correctors.

The on-line platform also made it possible to make sure that each corrected regularly added a final general mandatory commentary as established in the regulations. To validate the correction of a single script the corrector only needed to have entered the marks for every question and the final commentary, otherwise the "Validate" button would not be active.

Random allocation of the scripts
On-line correction tool allowed distributing evenly scripts from different schools to different correctors. Before, so as to simplify the logistics, it was normally one corrector who corrected all the scripts from the same class/school.

Blind correction
On-line correction tools allowed scripts to have marking signs, symbols and comments without them being accessible to the second corrector, so that the second correction remained unbiased.

Blended model
The first correction was still carried out internally by the teacher of the candidate in the European Schools and the Accredited Schools.

The second correction was carried out by a corrector external to the European School system. This year there were no correction centers and all the correspondence was mad online (with the Inspectors or EB Unit).

Retrieving evidence and accessibility to corrected scripts
Corrected scripts were easily accessible since they are stored in a secured server accessible anytime from anywhere. This also eliminates the difficulty of retrieving documents in case of appeals and especially during periods where many members of the staff in the schools are on holiday.

Correctors training
The on-line correction tools are easy to use. There is an on-line tutorial and a help-line. The electronic tools be web-based so that no software needs to be installed in the correctors' own computers. Still, assistance for correctors and short refresher trainings were provided in the correction centers.

Corrector's assessment
The on-line tools were able to inform on correctors' performance. Analysis of standard deviation on the corrected items or papers was possible.

Possibility of moderation
The on-line tools allow automated recalculation of values either for the whole examination or for individual questions as a result of the modification of values in the different questions of an examination or due to the cancellation of one or several questions.

Monitoring of the correction process
On-line correction tools allow monitoring and validation of the correction process. They provide immediate access to statistics on performance.

Pilot project for the prebaccalaureate session

This year Viatique was used by the 13 European Schools for the first time as a pilot project in order to correct the prebacclaureate examinations of the 2019-2020 session.

The perception was very positive.

Only the long prebaccalaureate examinations were corrected online. The schools decided to digitalize all their examinations to be corrected online (scientific and literary subjects).

Operational phase

The basic structure in the platform was handled by Exatech (the provider of the platform) along with the EB Unit. Meaning all subjects/class, candidates and teachers were imported in advance into the platform.

The Administrative supervisors / scanning operators from each school had the following essential tasks:

- Assign teachers to their classes;
- Activate the scanning and activate the correction;
- Scan the scripts;
- Import the marking grids.

Correction phase

All the corrections went very well. Most teachers were already accustomed to the platform from previous European Baccalaureate sessions and picked up the correction easily. For some new teachers this was a little bit more challenging but they were smoothly guided by their schools and the European Baccalaureate Unit and they did it perfectly and no problems arose.

Import phase

After the correction phase in each school, the students' marks were imported by the BAC Unit from Viatique into SMS and there were no issues during and after the process of importing the marks into SMS.

Archive phase

Shortly after the import phase, the access to the Archive was given to Administrative supervisors so that they can have the access to all the scripts whenever they are required opportunely.

Some overall figures:

- Over 1880 candidates participated.
- 761 teachers involved in the corrections.
- Average number of teachers involved is around 60 by school.
- Over 770 exam subjects from all schools imported into Viatique (reserve examinations included).
- Over 11 000 scripts were corrected.

4 Assurance Quality of the 2020 European Baccalaureate session

4.1. The European Baccalaureate Subjects

Although the June exams were not held, all examinations (main papers, reserve papers, suggested answers, marking grids, …) were prepared according to the general rules.

The European Baccalaureate examinations are elaborated under the responsibility of the secondary cycle inspectors listed below, assisted by teams of external experts. For the 2020 EB session, 168 experts participated in the elaboration of 301 examination papers (146 main papers and 155 reserve papers). Each examination paper was accompanied by suggested answers, assessment criteria, marking instructions and marking grid.

The Board of Inspectors (Secondary) may decide to submit written European Baccalaureate examinations to external auditing in order to add a further layer of quality assurance.

The external auditing of the examination papers is performed by independent experts with experience in the field of assessment. These experts are proposed by the Chairman of the European Baccalaureate Examining Board.

For the European Baccalaureate session of 2020, the examination papers of L1 Spanish, Biology, Chemistry, Geography, Mathematics 3P, Mathematics 5P and Physics were audited externally and were found fit for purpose.

4.2. Inspectors responsible for the different subjects

Subject	Language	Inspector
ANCIENT GREEK		Ms Margarita KALOGRIDOU
ART		Ms Varvara NIKA
BIOLOGY		Mr Max WOLFF
CHEMISTRY		Mr Alex COENEN
ECONOMICS		Ms Maria José BUGIA & Mr Helder GUERREIRO
GEOGRAPHY		Ms Soledad IGLESIAS JIMENEZ
HISTORY		Ms Renata JURANOVA
LANGUAGE I	BG	Ms Veselina GANEVA
	CS	Ms Renata JURANOVA
	DA	Mr Lars DAMKJAER
	DE	Mr Thilo BUCHMAIER
	EL	Ms Margarita KALOGRIDOU
	EN	Mr Paul METCALF
	ES	Mr Javier GARRALÓN BARBA
	ET	Ms Ulla KAMP
	FI	Ms Tuulamarja HUISMAN
	FR	Mr Jean-Pierre GROSSET-BOURBANGE & Ms Anne DEPUIS
	HR	Mr Darko TOT

	HU	Ms Rita KERTESZ
	IT	Ms Diana SACCARDO
	LT	Ms Violeta VALIUŠKEVIČIENÉ
	LV	Ms Olita ARKLE
	MT	Ms Maria Dolores COLEIRO
	NL	Ms Edith NEUTEL & Ms Els VERMEIRE
	PL	Ms Urszula ŁĄCZYŃSKA
	PT	Ms Maria José BUGIA
	RO	Ms Anca-Denisa PETRACHE
	SK	Ms Jana HANDZELOVÁ
	SL	Ms Miriam STANONIK
	SV	Mr Alper YILMAZ
LANGUAGE II, III, IV	DE	Ms Karin STEPPAN
	EL	Ms Margarita KALOGRIDOU & Ms Irena RODOSTHENOUS
	EN	Mr Paul METCALF & Ms Lynda O' TOOLE
	ES	Mr Javier GARRALÓN BARBA
	FI	Ms Tuulamarja HUISMAN
	FR	Mr Jean-Pierre GROSSET-BOURBANGE & Ms Anne DEPUIS
	GA	Ms Lynda O'TOOLE
	IT	Ms Diana SACCARDO
	MT	Ms Maria Dolores COLEIRO
	NL	Ms Edith NEUTEL & Ms Els VERMEIRE
	PT	Ms Maria José BUGIA
	SV	Mr Alper YILMAZ
LATIN		Mr Jean-Pierre GROSSET-BOURBANGE
MATHEMATICS 3P & 5P		Mr Alper YILMAZ & Ms Urszula ŁĄCZYŃSKA
MUSIC		Ms Miriam STANONIK
OTHER NATIONAL LANGUAGE	FI	Ms Tuulamarja HUISMAN
	GA	Ms Lynda O'TOOLE
	MT	Ms Maria Dolores COLEIRO
	SV	Ms Tuulamarja HUISMAN
PHILOSOPHY		Ms Els VERMEIRE
PHYSICS		Ms Urszula ŁĄCZYŃSKA & Mr Alper YILMAZ

5 The European Baccalaureate Candidates

5.1. Number of candidates in the 2020 European Baccalaureate session

European School of (ES)

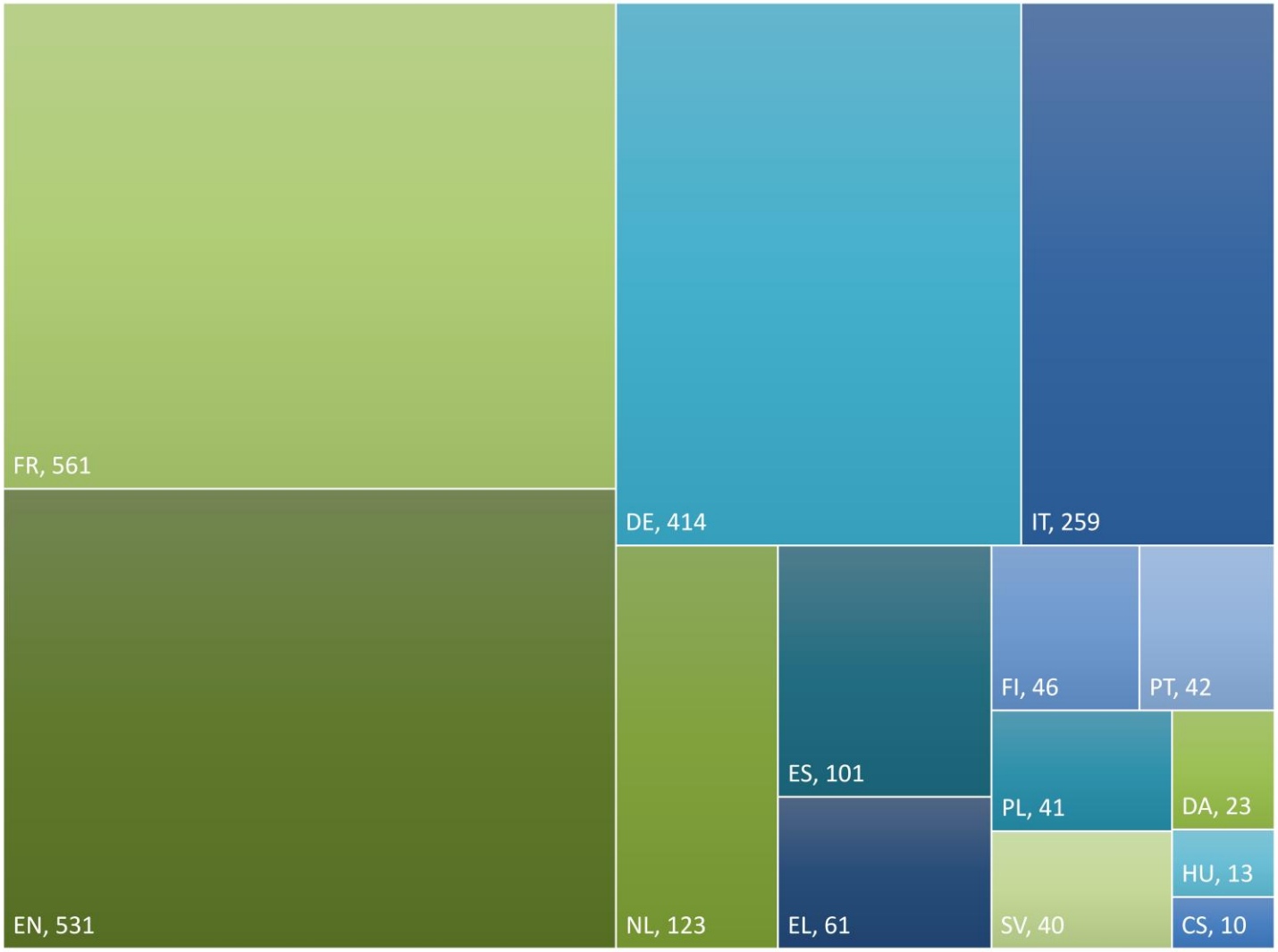
1.	Alicante	(ALI)	81 candidates
2.	Bergen	(BER)	46 candidates
3.	Bruxelles 1 – Uccle	(Br 1 - UCC)	239 candidates
4.	Bruxelles 2 – Woluwé	(Br 2 - WOL)	216 candidates
5.	Bruxelles 3 – Ixelles	(Br 3 - IXL)	213 candidates
6.	Bruxelles 4 – Laeken	(Br 4 - LAE)	199 candidates
7.	Frankfurt	(FRF)	100 candidates
8.	Karlsruhe	(KAR)	55 candidates
9.	Luxembourg I	(LUX)	208 candidates
10.	Luxembourg II	(MAM)	176 candidates
11.	Mol	(MOL)	49 candidates
12.	Munich	(MUN)	184 candidates
13.	Varese	(VAR)	108 candidates
			1874 candidates

European Accredited Schools (EAS)

1.	Liceo Scientifico "Fermi-Monticelli" – European High School Brindisi	(*BRI)	32 candidates
2.	Europa School UK	(*CUL)	45 candidates
3.	Europese School Den Haag	(*DHG)	35 candidates
4.	European Schooling Helsinki	(*HEL)	14 candidates
5.	The School of European Education of Heraklion	(*HER)	9 candidates
6.	École internationale de Manosque	(*MAN)	16 candidates
7.	Scuola per l'Europa di Parma	(*PAR)	49 candidates
8.	The European School RheinMain	(*RHM)	112 candidates
9.	École européenne de Strasbourg	(*STR)	68 candidates
10.	Tallinna Euroopa Kool	(*TAL)	11 candidates
			391 candidates

TOTAL NUMBER OF CANDIDATES EB Session 2020	**2.265 candidates**

Number of candidates per Linguistic Section - BACC 2020



The following numbers represent the choices done by the candidates for their written and oral examinations.

	Cands.	Written Exams	Total Written Exams	Additional Exams	Grand Total Written Exams	Oral Exams	Total Oral Exams	TOTAL EXAMS
ES	1.874	5 per cand.	**9.370**	**25**	**9.395**	3 per cand.	**5.622**	**15.017**
AES	391	5 per cand.	**1.955**	**1**	**1.956**	3 per cand.	**1.173**	**3.129**
TOTAL	**2.265**		**11.325**	**26**	**11.351**		**6.795**	**18.146**

The following tables show the numbers of the choices done by the candidates of the European Baccalaureate 2020 session, by school and by subject:

WRITTEN EXAMINATIONS

Subjects	*BRI	*CUL	*DHG	*HEL	*HER	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	FRF	IXL	KAR	LAE	LUX	MAM	MOL	MUN	UCC	VAR	WOL	Total
AR4	7	17	1	3	2	5	2	29	11	5	16	10	16	14	9	38	21	17	11	22	26	11	35	328
BI4	2	3	9	3		3	8	4	9	2	23	16	26	66	6	45	41	43	6	39	55	18	64	491
CHI	11	10	15	4		7	8	5	10	4	23	14	32	75	10	46	52	32	20	49	70	21	61	579
ECO	2	15	12	3			12	60	15		16	12	28	38	10	46	47	50	8	20	27	30	30	481
GE4		11	2			1	8	30	10				23	14	20	42	30	15	5	32	18	20	25	306
GRO																				5				5
HI4	7	12	7	8	2	2	9	16	14	4	10	5	11	28	3	28	35	29	6	34	46	17	27	360
L1-	32	38	35	14	9	12	49	109	56	11	81	46	99	208	51	186	202	169	49	179	226	108	198	2167
L1A		7				4		3	12				1	5	4	13	6	7		5	13		18	98
L2-	32	45	35	14	9	16	38	103	63	11	76	42	97	212	55	185	188	163	44	173	231	101	209	2142
L2A							11	9	5		5	4	3	1		14	20	13	5	11	8	7	7	123
L3-	17	5	4	2	4	7	15	16	28	2	29	5	25	59	22	58	67	66	13	71	112	34	66	727
L4-	5	4	1				17	20	12		9		15	36	9	21	21	26	3	20	34	21	28	302
LAT							1							3										4
MA3	23	37	14	9	9	4	27	95	46	1	44	24	60	95	41	87	104	100	24	104	131	47	100	1226
MA5	9	8	21	5		12	22	17	22	10	37	22	40	118	14	112	104	76	25	80	108	61	116	1039
MU4		4			4			5		1						6	9	4		2			4	39
ONL													1				1				1	1		4
PH4	4	5	1	1	4			21	9		17	12	4	18	9	9	15	14	10	23	23	4	19	222
PHY	9	4	18	4	2	7	18	18	18	4	19	18	19	75	12	59	77	56	16	51	66	39	73	682
Total	160	225	175	70	45	80	245	560	340	55	405	230	500	1065	275	995	1040	880	245	920	1195	540	1080	**11325**

ORAL EXAMINATIONS

Subjects	*BRI	*CUL	*DHG	*HEL	*HER	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	UCC	WOL	IXL	LAE	FRA	KAR	LUX	MAM	MOL	MUN	VAR	Total
BI2	9	5	5	2	2		5	36	16	1	12	12	45	39	11	20	20	9	34	20	10	22	13	348
BI4	5	21	8	2	1	1	2	11	18		1	7	9	13	8	5	9	5	9	3	6	18	8	170
CHI			2				4		1		7		8	5	6	4	2	3	11	9		5	1	68
GE2	6	5	7	1	2	7	6	8	21	6	4	11	45	17	4	38	31	9	16	29	4	31	20	328
GE4	1	1	2				2	2					11	1	2		2		4			5	9	42
HI2	9	5	18		3	5	16	9	14	2	5	10	34	21	25	29	17	10	9	10	16	23	8	298
HI4		2	2			1	1		3		3		2	2	3	3	1		3	3	3	7	5	44
L1-	32	38	35	14	9	12	49	109	56	11	81	46	226	198	208	186	99	51	202	169	49	179	108	2167
L1A		7				4		3	12				13	18	5	13	1	4	6	7		5		98
L2-	16	32	6	13	4	3	16	85	25	3	65	24	142	168	178	119	48	36	156	123	22	109	59	1452
L2A							8	8	5		4	1	5	7	1	10	1		20	11	4	9	7	101
L3-	2		3	5		1	1	7	6		7		21	17	30	19	17	1	27	17	2	23	7	213
L4-		1	1		1		5	2			5		2	8	5	3		1	6	4	1	3	2	50
MAA			2			5	4	4			9	12	17	27	22	14			20	26	6	20	12	200
ONL														1										1
PH2	13	15	14	4	1	9	28	42	26	10	30	9	130	83	118	118	49	27	81	75	22	83	54	1041
PH4	3	3		1	4			10	1		6	6	7	14	11	15	1	9	17	17	2	10	7	144
PHY											4			9	2	1	2		3	5			4	30
Total	96	135	105	42	27	48	147	336	204	33	243	138	717	648	639	597	300	165	624	528	147	552	324	**6795**

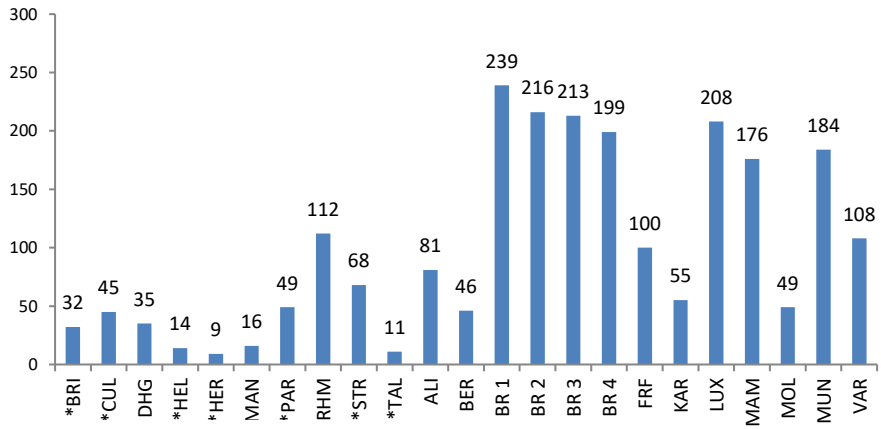
5.2. Participation in the European Baccalaureate 2020 session by school and by language section

Of the 2272 pupils registered initially for the European Baccalaureate at the beginning of the 2019-2020 school year, 2265 were ready to sit the examinations (even though finally these were cancelled), 7 pupils having given up their studies in mid-year.

The largest number of EB candidates per school came from the European School of Brussels 1 (239).

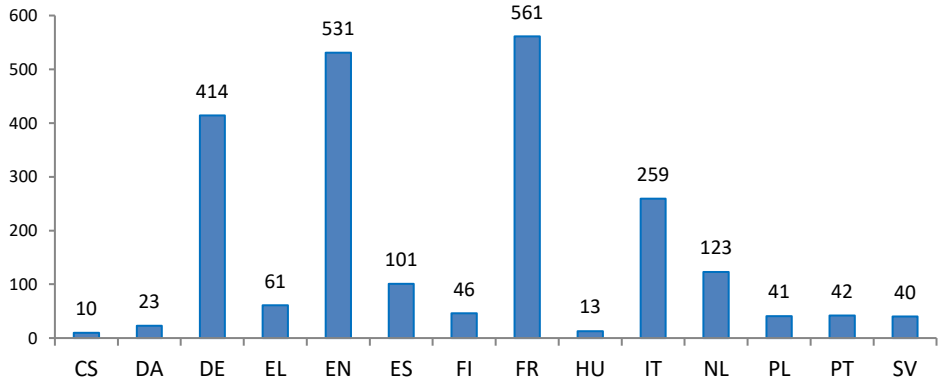
The lowest cohort, 9 pupils, belongs to an Accredited Schools of Heraklion (Greece).

Number of candidates per school - EB 2020



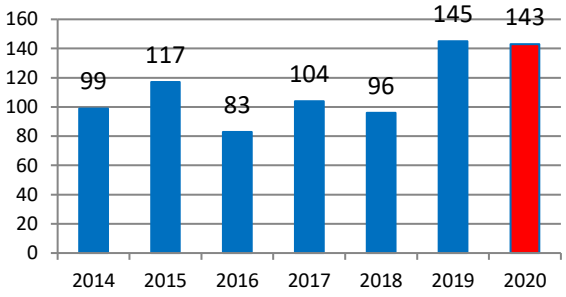
The largest number of EB candidates per language section can be found in the French language section, with 561 candidates, closely followed by candidates from the English section, 531, and the German section, 414.

Number of candidates per linguistic section - EB 2020



5.3. Candidates with Special Arrangements

Number of granted requests



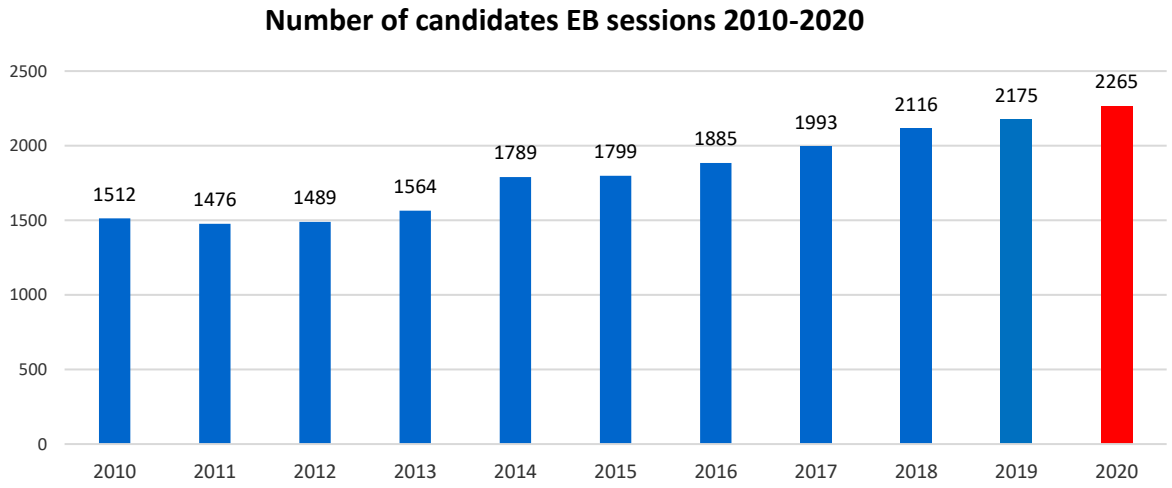
Article 15 and Annex IX of the Arrangements for implementing the Regulations for the European Baccalaureate permit candidates with special educational needs to apply for special arrangements for taking of their examinations.

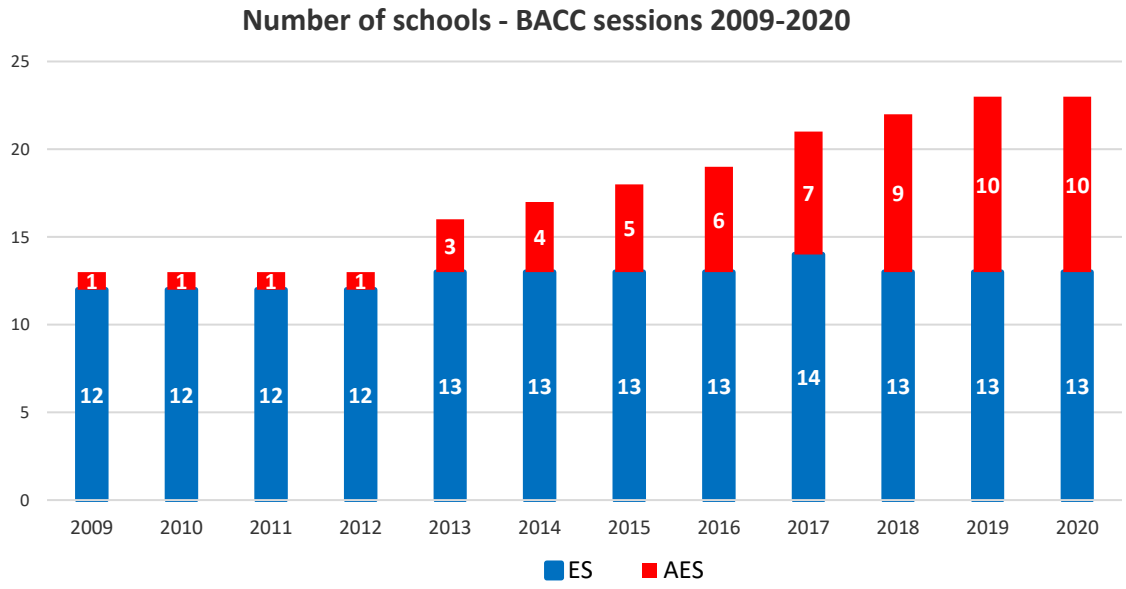
Appropriate arrangements were made for 143 candidates.

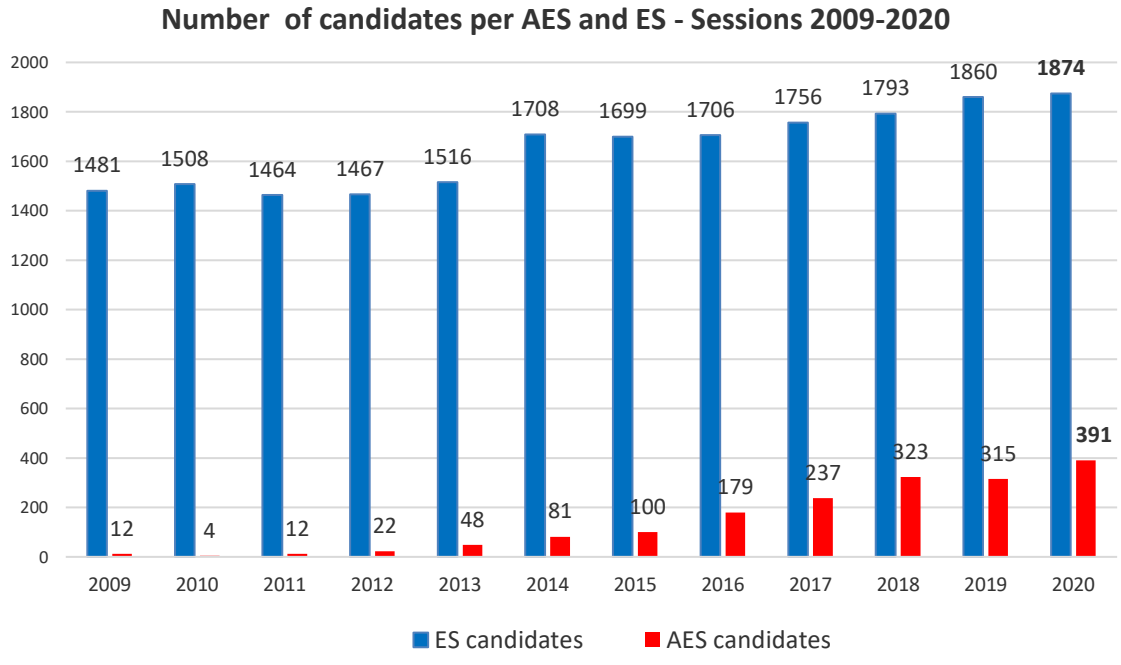
The most common special arrangements that were granted this year were:

- 10 minutes' extra time per examination hour
- 10 minutes' extra time for preparation of the oral examinations
- use of a computer with or without a spell checker
- use of a calculator
- reader.

5.4. Evolution of the number of schools and candidates over the years



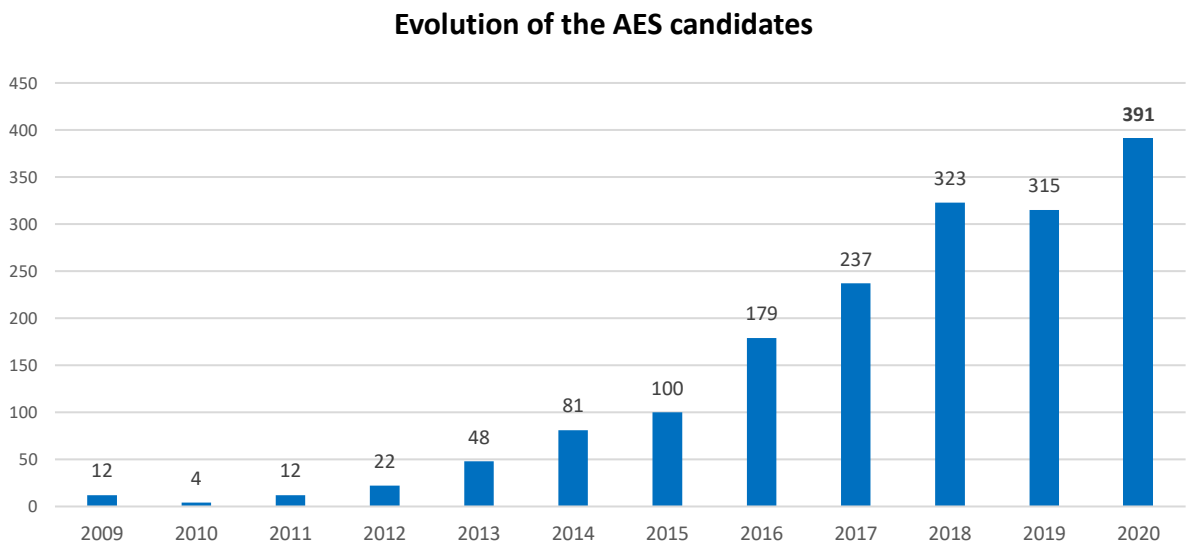




Evolution of the AES candidates (considering 2009 as the 1st year of AES in EB session)

Sessions	ES candidates	AES candidates	Total	Evolution AES (2009 as reference)
2009	1481	12	1493	1.00
2010	1508	4	1512	0.33
2011	1464	12	1476	1.00
2012	1467	22	1489	1.83
2013	1516	48	1564	4.00
2014	1708	81	1789	6.75
2015	1699	100	1799	8.33
2016	1706	179	1885	14.92
2017	1756	237	1993	19.75
2018	1793	323	2116	26.92
2019	1860	315	2175	26.25
2020	1874	391	2265	32.58
	19832	**1724**	**21556**	

In 12 session's time, the number of AES candidates was increased by roughly 32.5 times in comparison with the first session in 2009.



6 Extraordinary session in September

At its meeting of 15-17 April 2020 the Board of Governors decided with respect to the European Baccalaureate session 2020 the following:

- Candidates who request it will be allowed to sit the written and oral examinations in total in an extraordinary session. Once starting these exams session, the previously obtained final European Baccalaureate marks will not be any longer valid.
  Alternatively, the candidate may request to repeat the year 7.

After the publication of results by the schools in June, 28 students decided to sit in total the European Baccalaureate examinations of this extraordinary session in September. Out of these 28 students, 9 had succeeded in June but wanted to improve their obtained final mark. The other 19 students had failed and wanted to try it again.

During the summer some of these registered students decided to withdraw (most of the cases because found a place at the university wanted) or did not show up at the first examination on 1st September. As a consequence, only 19 out of 28 students started the extraordinary session. Two of these did not complete the whole session, so only 17 students finished in total the session (all the written and oral examinations).

Out of these 17 students, only two had succeeded in June and wanted to improve their marks. Only one of them achieved it. Out of the remaining 15 students who showed up and had not got their diploma in June, 4 students successfully obtained it.

Some features regarding the students that completed the extraordinary session:

Extraordinary session of the European Baccalaureate 2020 (September)	
Registered	28
Number of registered candidates who failed in June	19
Number of registered candidates who passed in June	9
Withdrawn	11
Participated and completed the session	17
Passed after the extraordinary session having failed in June	4
Passed again and improved the mark obtained in June	1
Passed again but not improved the mark obtained in June	1
Failed due to withdrawal during the session having passed in June	1
Failed again after the extraordinary session	11
Success rate	35.29%
Fail rate	64.71%
Overall Average for the Preliminary Mark	58.2
Overall Average for the Final Mark (in September)	59.34
Overall Average for the Final Mark (in June)	57.97

The average final grade of the students who sat the extraordinary session in September shows that this was only 1.37 points higher than in June.

For completing this session 85 written and 51 oral examinations were organized. The registered students belonged to 8 schools (UCC, WOL, LUX, MOL, MAM, MUN, *CUL and *BRI).

Four third corrections were need: ART, L1 FR and PH4.

To carry out this extra session, 74 teachers and 43 external examiners had to participate and it was needed to use the following 42 different written examinations:

Date of the examination	Subject	Used languages
1st September	L1	BG – DE – EN – ES – FR – HU – IT – PL
	L1 Advanced	EN
2nd September	L2	DE – EN – FR
	L2 Advanced	EN
4th September	Biology	DE – FR – PL
	Geography	EN – FR
	L4	ES – FR – PT
	Philosophy	EN – FR
7th September	Mathematics 3P	DE – EN – ES – FR – HU – IT – PL
	Mathematics 5P	FR
8th September	Art	EN – FR
9th September	Chemistry	EN – PL
10th September	Economy	EN
	History	EN – FR
	L3	EN – ES – IT – NL

During the following week the oral exams were carried out, with the presence of the external corrector remotely.

In comparison to a regular session with around 2200 candidates, this was a very reduced session, having its impact as well in the organisation. With regard to the written examinations everything went smoothly. The scanning of the examinations was very fast straight away after the examinations in order to be corrected via the online correction system. To finalize completely the process of the corrections took more time than usual. Teachers and external correctors were not used to correcting so few copies. Regarding the oral examinations, the main problem was the connection with the external examiners as well as how to place the camera so that both the student and the jury can be seen.

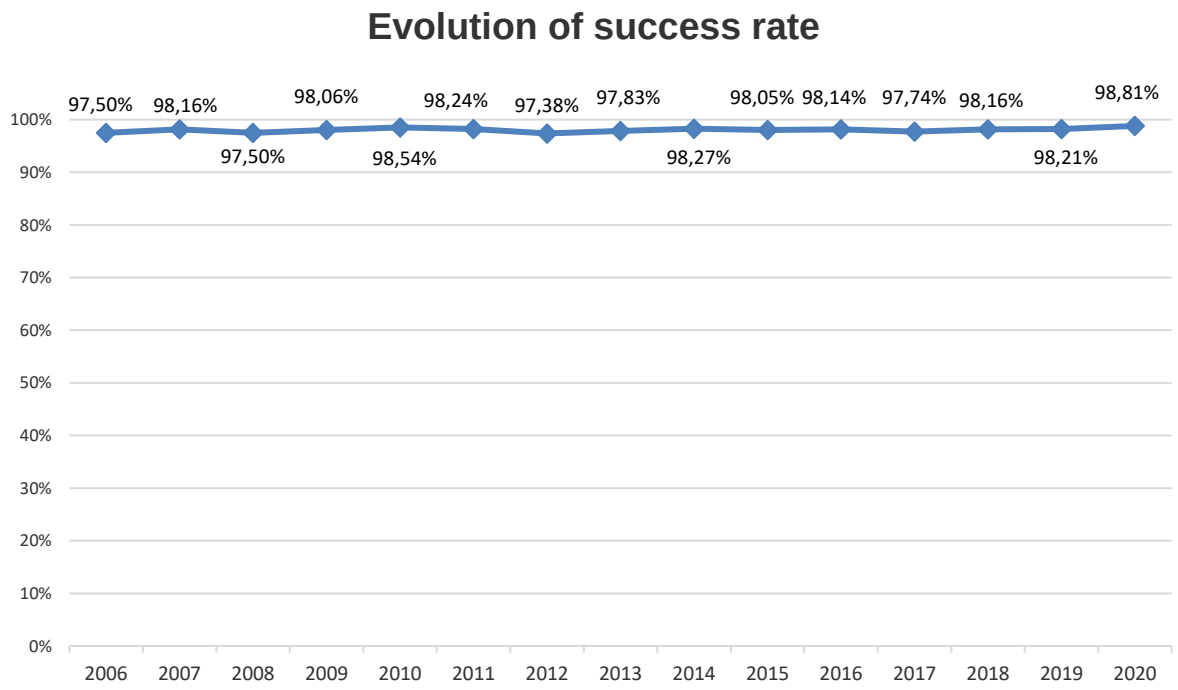
7 General Results of the European Baccalaureate 2020 session

These are the final features and results given in June.

EB session 2020 – participants	
Registered	2272
Abandoned	7
Participated	**2265**
Passed	2238
Failed	27
Success rate	**98.81%**
Fail rate	**1.19%**

European Baccalaureate 2020 – Averages	
Overall Average before moderation	**81.28**
Overall Average for the Final Mark	**79.99**

7.1. Success rate over the last 15 years



A comparison of success rates over the last 15 years shows that the European Baccalaureate situation stays stable.

As from session 2006, the variation in success rate never went over ± 0.7, with a general average over the 15 last sessions of 98.04%.

Success rate EB session 2020

Type	School	Number of pupils	Succeeded	Failed	Success rate
ES	Bergen	46	46	0	100.00%
ES	Frankfurt	100	100	0	100.00%
ES	Karlsruhe	55	55	0	100.00%
AES	Manosque	16	16	0	100.00%
AES	Parma	49	49	0	100.00%
AES	Strasbourg	68	68	0	100.00%
AES	Tallinn	11	11	0	100.00%
ES	Varese	108	108	0	100.00%
ES	Bruxelles III	213	213	0	100.00%
ES	Alicante	81	81	0	100.00%
AES	RheinMain	112	112	0	100.00%
AES	Heraklion	9	9	0	100.00%
ES	Bruxelles IV	199	198	1	99.50%
ES	Mamer	176	174	2	98.86%
ES	Bruxelles II	216	213	3	98.61%
ES	München	184	181	3	98.37%
AES	Culham	45	44	1	97.78%
ES	Luxembourg I	208	203	5	97.60%
ES	Bruxelles I	239	233	6	97.49%
AES	Den Haag	35	34	1	97.14%
AES	Brindisi	32	31	1	96.88%
ES	Mol	49	46	3	93.88%
AES	Helsinki	14	13	1	92.86%
		2265	**2238**	**27**	**98.81%**

Success rate per type of school:

Type	Number of candidates	%	Succeeded	Failed	Success rate
ES	1874	82.74%	1851	23	98.77%
AES	391	17.26%	387	4	98.98%
	2265	**100.00%**	**2238**	**27**	**98.81%**

Success rate by linguistic section

The following table shows the success rate in the different language sections. This year, the success rates by language section ranged between 96.61% and 100.00%.

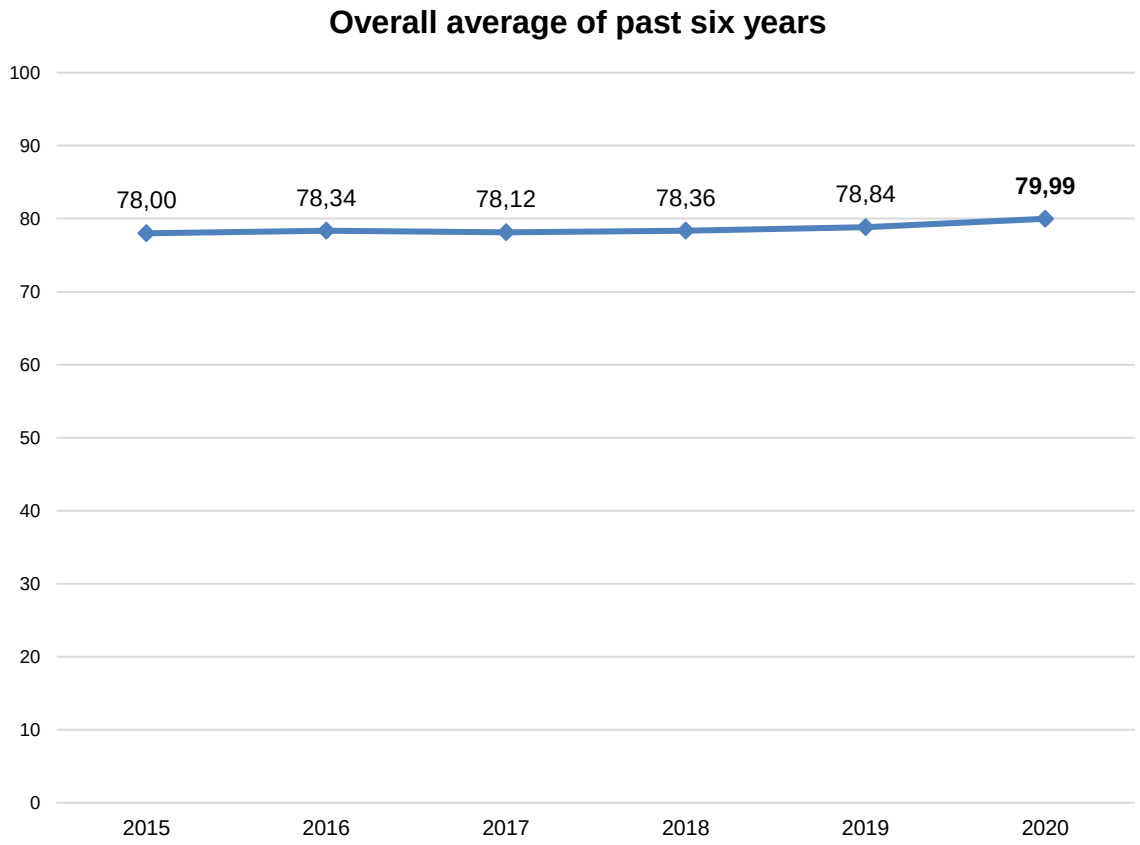
Due to small numbers of bachelors in some sections, the results are not always statistically comparable.

Ling. Section	Number of candidates	% candidates	Average of Final grade	Failed	Succeeded	Success rate	Schools involved
CS	10	0.44%	80.29	0	10	100.00%	1
DA	23	1.02%	85.17	0	23	100.00%	2
DE	414	18.28%	81.48	4	410	99.03%	15
EL	61	2.69%	82.32	1	60	98.36%	3
EN	531	23.44%	80.89	3	528	99.44%	23
ES	101	4.46%	79.43	3	98	97.03%	4
FI	46	2.03%	79.89	1	45	97.83%	3
FR	561	24.77%	77.29	11	550	98.04%	18
HU	13	0.57%	79.50	2	11	84.62%	1
IT	259	11.43%	80.69	1	258	99.61%	9
NL	123	5.43%	78.57	0	123	100.00%	9
PL	41	1.81%	80.24	0	41	100.00%	2
PT	42	1.85%	81.07	1	41	97.62%	2
SV	40	1.77%	83.77	0	40	100.00%	2
	2265	100.00%	**79.99**	27	2238	**98.81%**	

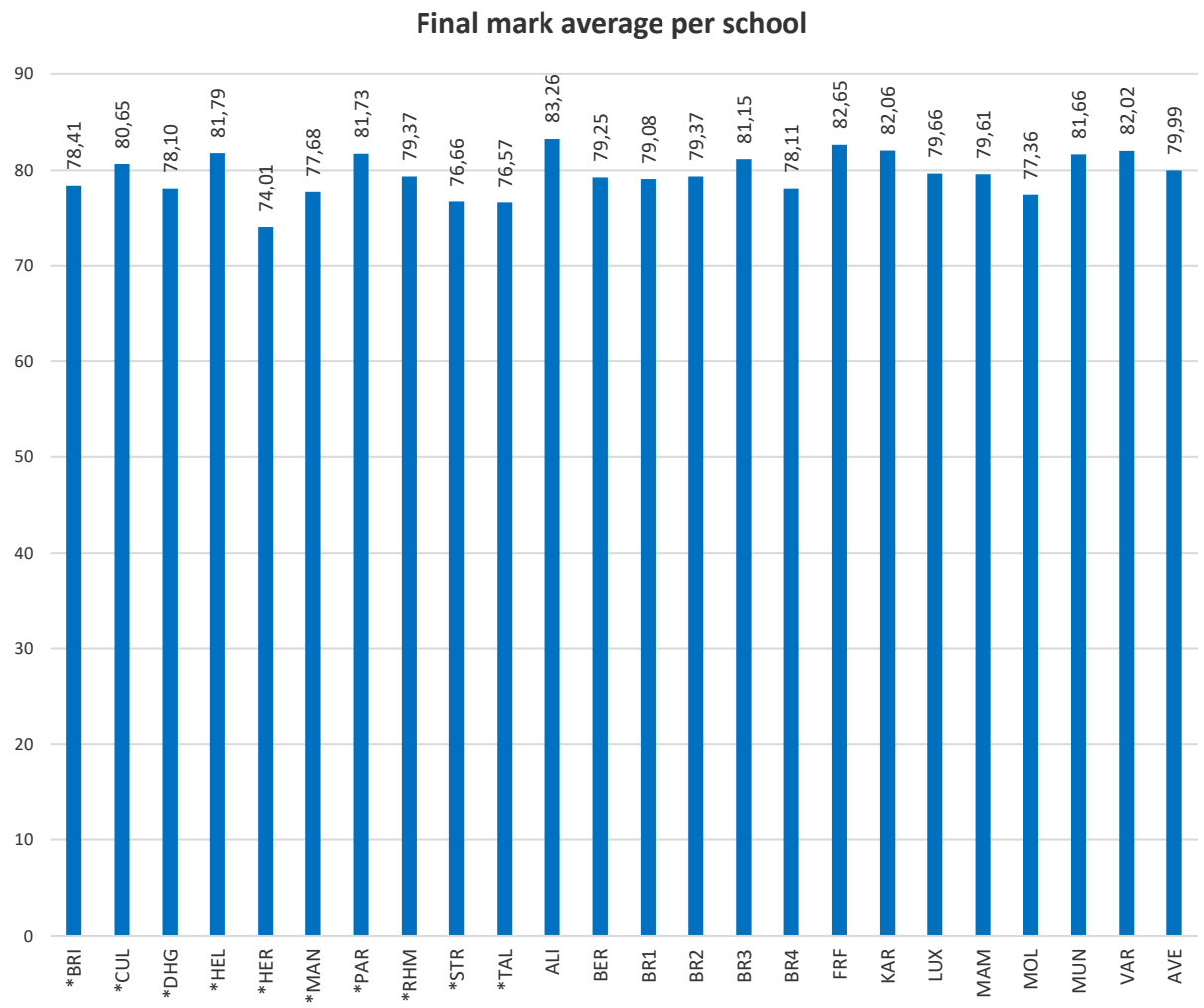
7.2. Final marks and averages

The final overall European Baccalaureate mark is expressed out of one hundred (100) points and is accurate to two decimal places.

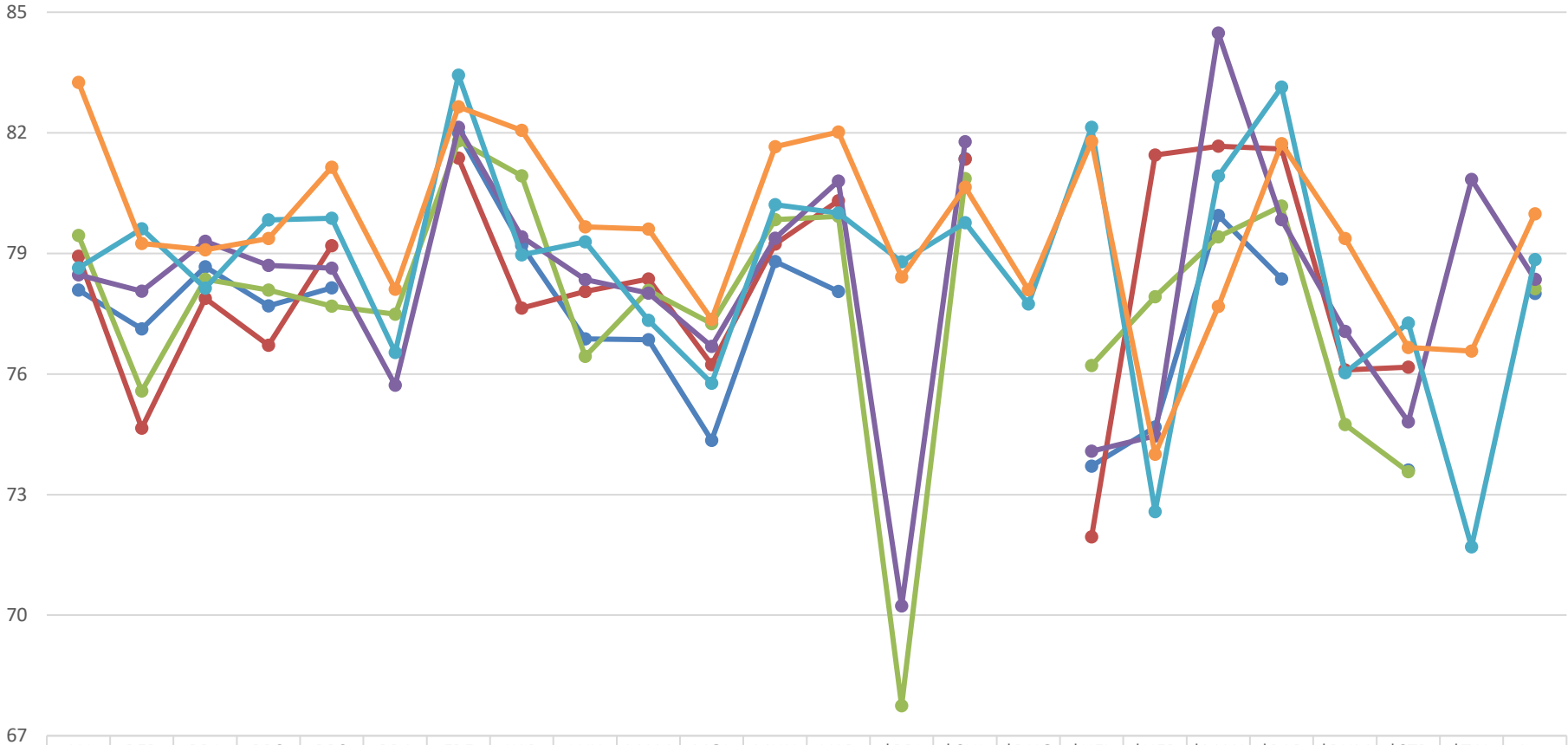
The average Final Mark for all the candidates who were registered for the 2020 session of the European Baccalaureate was amounted to 79.99, despite the moderation.



This year the average Final Mark ranged between 74.01 and 83.26 throughout schools:

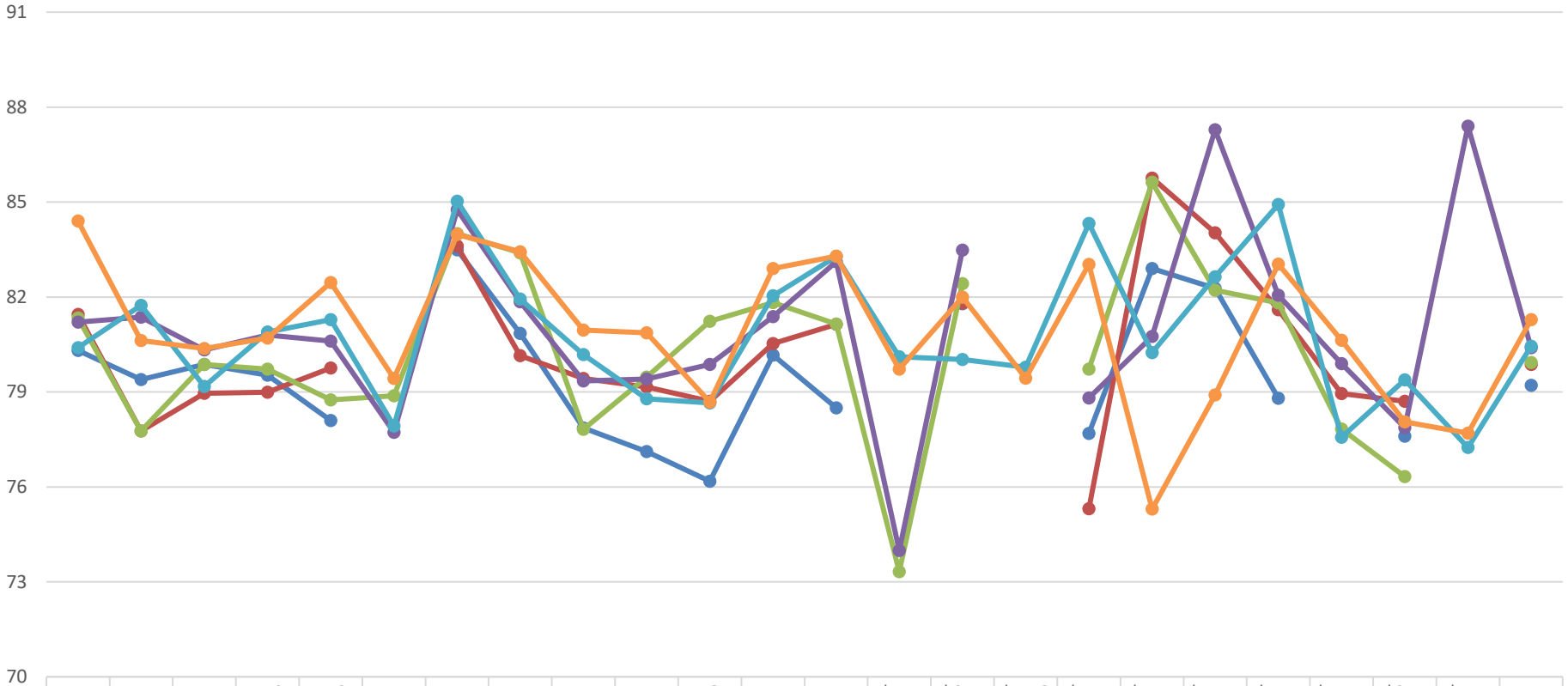

Final mark average per school
90
80
70
60
50
40
30
20
10
0
78,41
80,65
78,10
81,79
74,01
77,68
81,73
79,37
76,66
76,57
83,26
79,25
79,08
79,37
81,15
78,11
82,65
82,06
79,66
79,61
77,36
81,66
82,02
79,99
*BRI
*CUL
*DHG
*HEL
*HER
*MAN
*PAR
*RHM
*STR
*TAL
ALI
BER
BR1
BR2
BR3
BR4
FRF
KAR
LUX
MAM
MOL
MUN
VAR
AVE

Final Mark per School of the last six years



	ALI	BER	BR1	BR2	BR3	BR4	FRF	KAR	LUX	MAM	MOL	MUN	VAR	*BRI	*CUL	*DHG	*HEL	*HER	*MAN	*PAR	*RHM	*STR	*TAL	Ave.
2014/2015	78,09	77,12	78,67	77,70	78,14		82,00	79,20	76,87	76,85	74,35	78,80	78,05		81,36		73,71	74,68	79,95	78,37		73,61		78,00
2015/2016	78,93	74,66	77,88	76,71	79,19		81,37	77,64	78,05	78,37	76,23	79,23	80,31		81,34		71,95	81,45	81,67	81,60	76,10	76,17		78,34
2016/2017	79,45	75,58	78,36	78,09	77,69	77,49	81,80	80,93	76,44	78,08	77,25	79,84	79,92	67,75	80,86		76,21	77,92	79,41	80,18	74,74	73,57		78,12
2017/2018	78,47	78,06	79,30	78,70	78,63	75,72	82,14	79,41	78,35	78,01	76,69	79,38	80,80	70,23	81,78		74,08	74,46	84,48	79,84	77,06	74,81	80,84	78,36
2018/2019	78,64	79,61	78,14	79,83	79,87	76,54	83,43	78,96	79,29	77,34	75,77	80,21	80,00	78,79	79,76	77,74	82,14	72,58	80,93	83,14	76,03	77,27	71,70	78,84
2019/2020	83,26	79,25	79,08	79,37	81,15	78,11	82,65	82,06	79,66	79,61	77,36	81,66	82,02	78,41	80,65	78,10	81,79	74,01	77,68	81,73	79,37	76,66	76,57	79,99

Preliminary Mark per School of the last six years

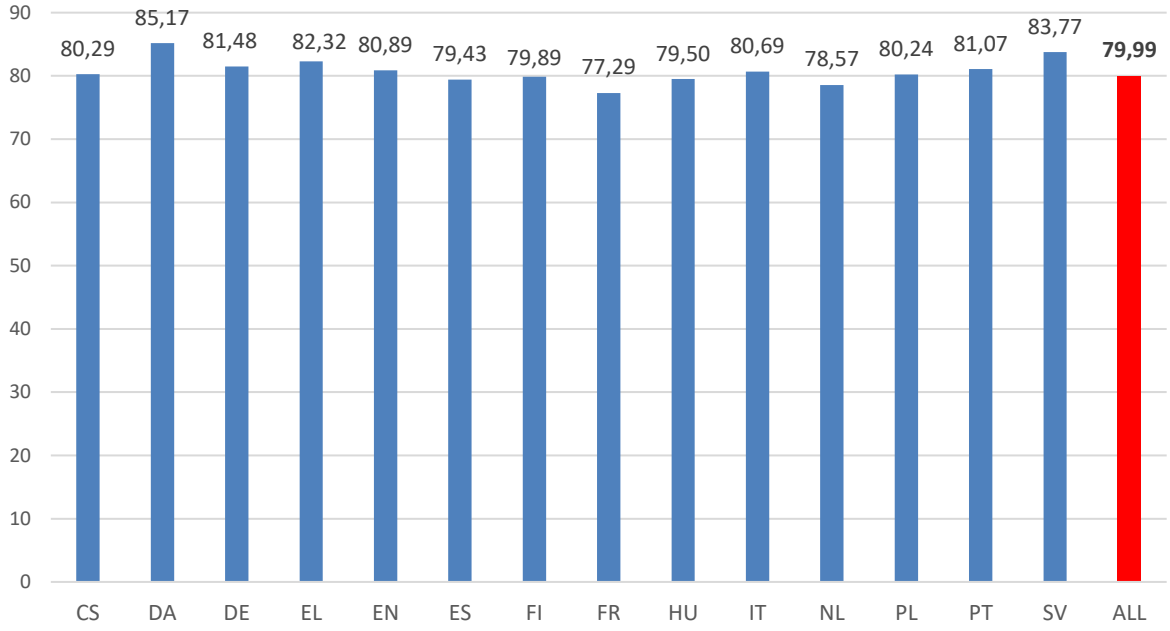


	ALI	BER	BR1	BR2	BR3	BR4	FRF	KAR	LUX	MAM	MOL	MUN	VAR	*BRI	*CUL	*DHG	*HEL	*HER	*MAN	*PAR	*RHM	*STR	*TAL	Ave.
2014/2015	80,31	79,40	79,87	79,53	78,10		83,49	80,85	77,86	77,11	76,18	80,16	78,50		81,79		77,69	82,90	82,28	78,80		77,60		79,21
2015/2016	81,45	77,77	78,96	78,99	79,75		83,61	80,14	79,43	79,16	78,70	80,53	81,14		81,80		75,31	85,76	84,03	81,60	78,95	78,71		79,87
2016/2017	81,34	77,77	79,87	79,73	78,75	78,88	84,00	83,39	77,82	79,47	81,23	81,82	81,15	73,33	82,43		79,72	85,62	82,22	81,81	77,83	76,33		79,93
2017/2018	81,21	81,36	80,33	80,80	80,61	77,72	84,76	81,85	79,35	79,41	79,87	81,38	83,12	73,99	83,48		78,81	80,76	87,29	82,06	79,89	77,88	87,40	80,40
2018/2019	80,40	81,74	79,17	80,89	81,28	77,93	85,03	81,94	80,18	78,78	78,66	82,04	83,28	80,11	80,03	79,79	84,32	80,24	82,64	84,92	77,57	79,38	77,24	80,44
2019/2020	84,40	80,63	80,37	80,70	82,46	79,43	83,97	83,43	80,95	80,87	78,68	82,90	83,29	79,72	82,00	79,44	83,03	75,30	78,91	83,04	80,63	78,05	77,70	81,28

Throughout the Language Sections the average Final Mark ranged between 77.29 and 85.17.

The small number of candidates in certain sections does not allow the average to be regarded as statistically significant.

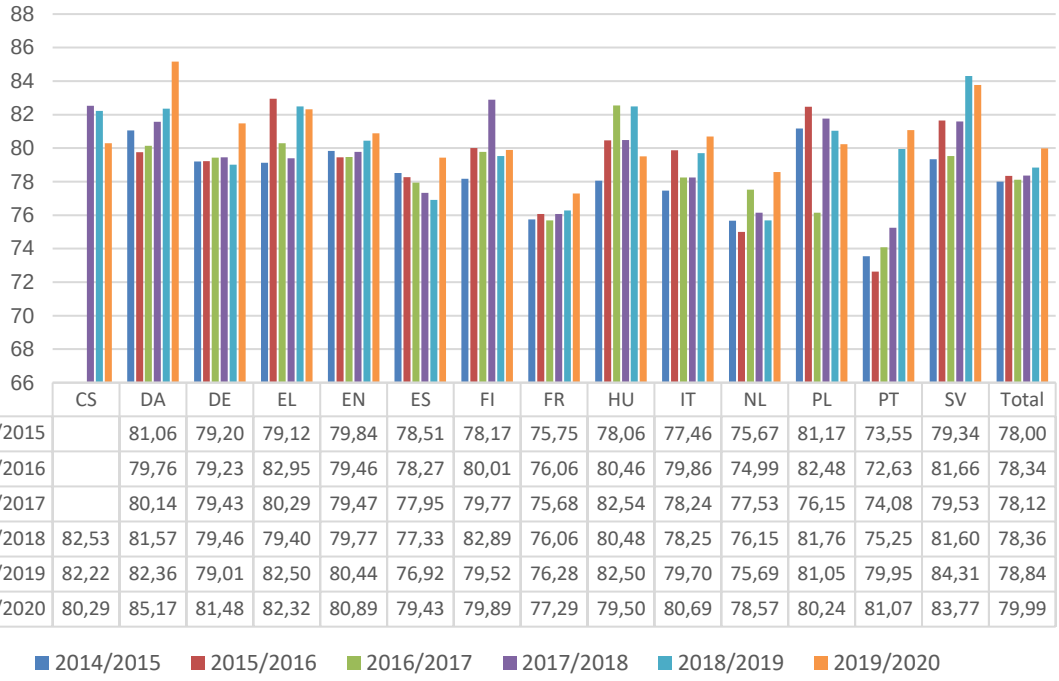
Average Final Mark per linguistic section



Number of candidates per linguistic section

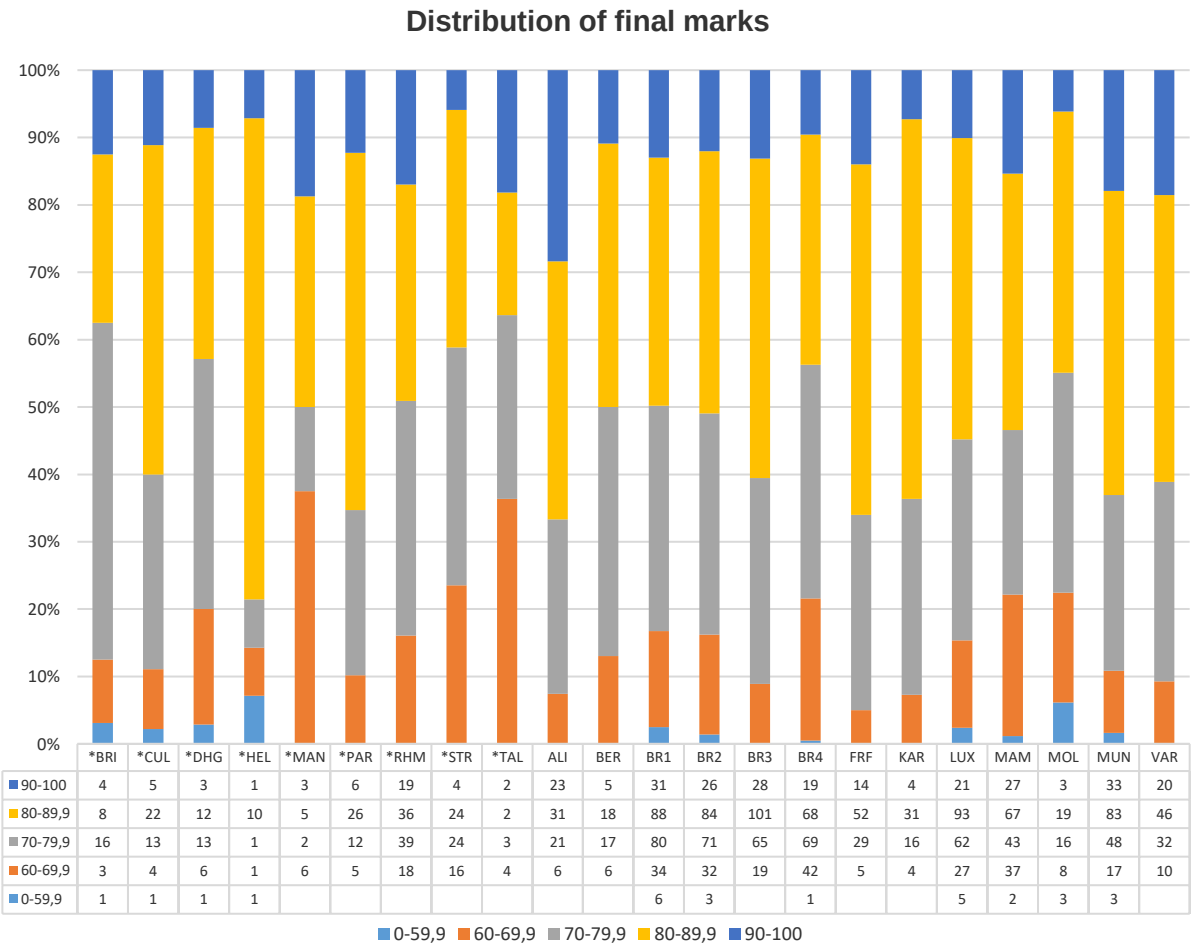
CS	DA	DE	EL	EN	ES	FI	FR	HU	IT	NL	PL	PT	SV	ALL
10	23	414	61	531	101	46	561	13	259	123	41	42	40	**2265**

Average of Final Mark per Language Section of the last six years



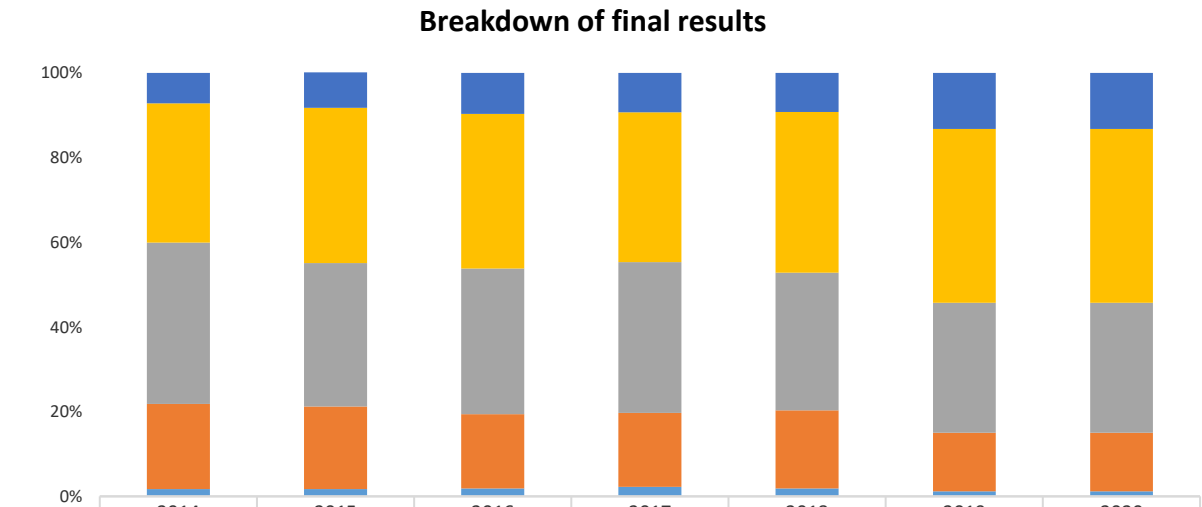
	CS	DA	DE	EL	EN	ES	FI	FR	HU	IT	NL	PL	PT	SV	Total
2014/2015		81,06	79,20	79,12	79,84	78,51	78,17	75,75	78,06	77,46	75,67	81,17	73,55	79,34	78,00
2015/2016		79,76	79,23	82,95	79,46	78,27	80,01	76,06	80,46	79,86	74,99	82,48	72,63	81,66	78,34
2016/2017		80,14	79,43	80,29	79,47	77,95	79,77	75,68	82,54	78,24	77,53	76,15	74,08	79,53	78,12
2017/2018	82,53	81,57	79,46	79,40	79,77	77,33	82,89	76,06	80,48	78,25	76,15	81,76	75,25	81,60	78,36
2018/2019	82,22	82,36	79,01	82,50	80,44	76,92	79,52	76,28	82,50	79,70	75,69	81,05	79,95	84,31	78,84
2019/2020	80,29	85,17	81,48	82,32	80,89	79,43	79,89	77,29	79,50	80,69	78,57	80,24	81,07	83,77	79,99

The following table shows the distribution of Final Marks, in %, in the different schools[1]:



	*BRI	*CUL	*DHG	*HEL	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	BR1	BR2	BR3	BR4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
90-100	4	5	3	1	3	6	19	4	2	23	5	31	26	28	19	14	4	21	27	3	33	20
80-89,9	8	22	12	10	5	26	36	24	2	31	18	88	84	101	68	52	31	93	67	19	83	46
70-79,9	16	13	13	1	2	12	39	24	3	21	17	80	71	65	69	29	16	62	43	16	48	32
60-69,9	3	4	6	1	6	5	18	16	4	6	6	34	32	19	42	5	4	27	37	8	17	10
0-59,9	1	1	1	1								6	3		1			5	2	3	3	

Breakdown of final results throughout the past seven years

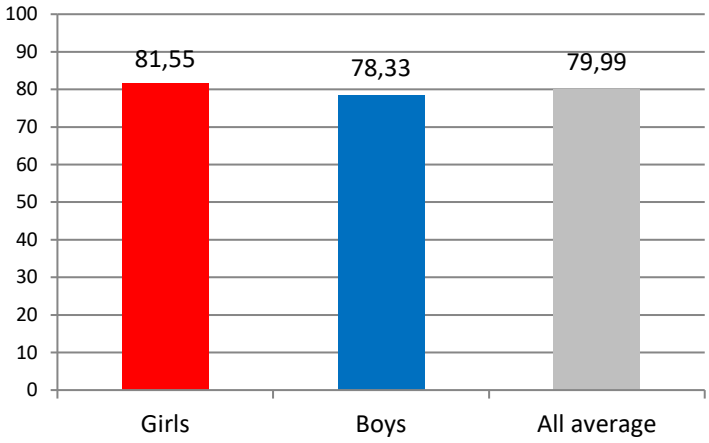


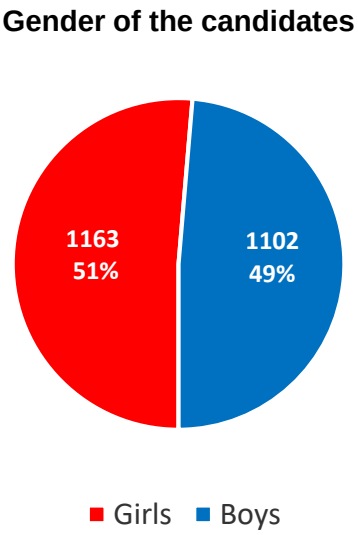
	2014	2015	2016	2017	2018	2019	2020
90-100	7,20%	8,40%	9,71%	9,34%	9,22%	13,29%	13,29%
80-89,9	32,90%	36,60%	36,50%	35,34%	38,00%	40,97%	40,97%
70-79,9	38,10%	33,90%	34,38%	35,64%	32,47%	30,73%	30,73%
60-69,9	20,10%	19,50%	17,56%	17,42%	18,48%	13,82%	13,82%
0-59,9	1,70%	1,70%	1,86%	2,26%	1,84%	1,19%	1,19%

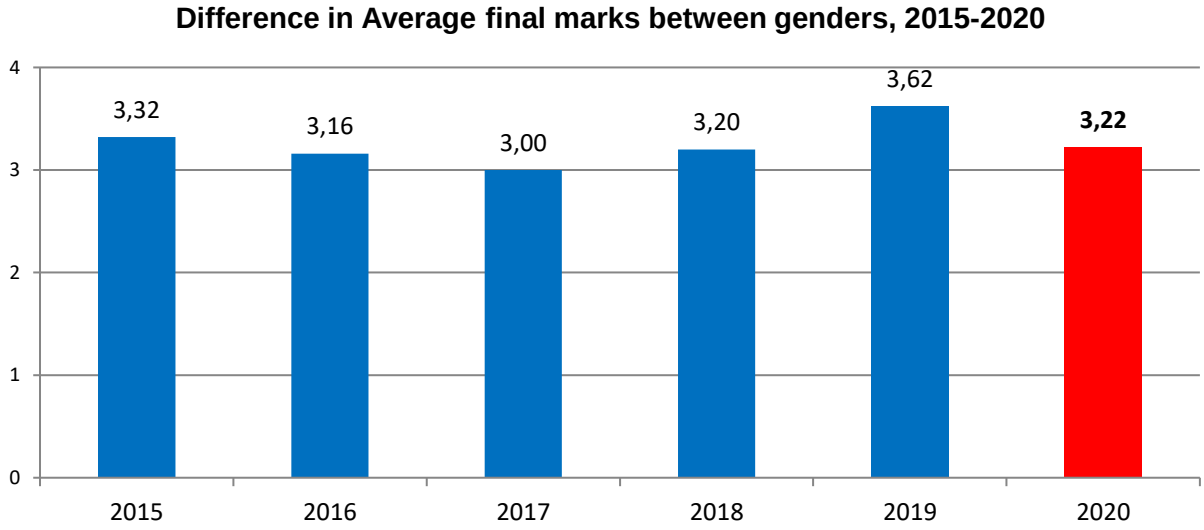
[1] Schools with less than 10 candidates are not shown in the graph because do not provide relevant statistical information.

7.3. Gender differences

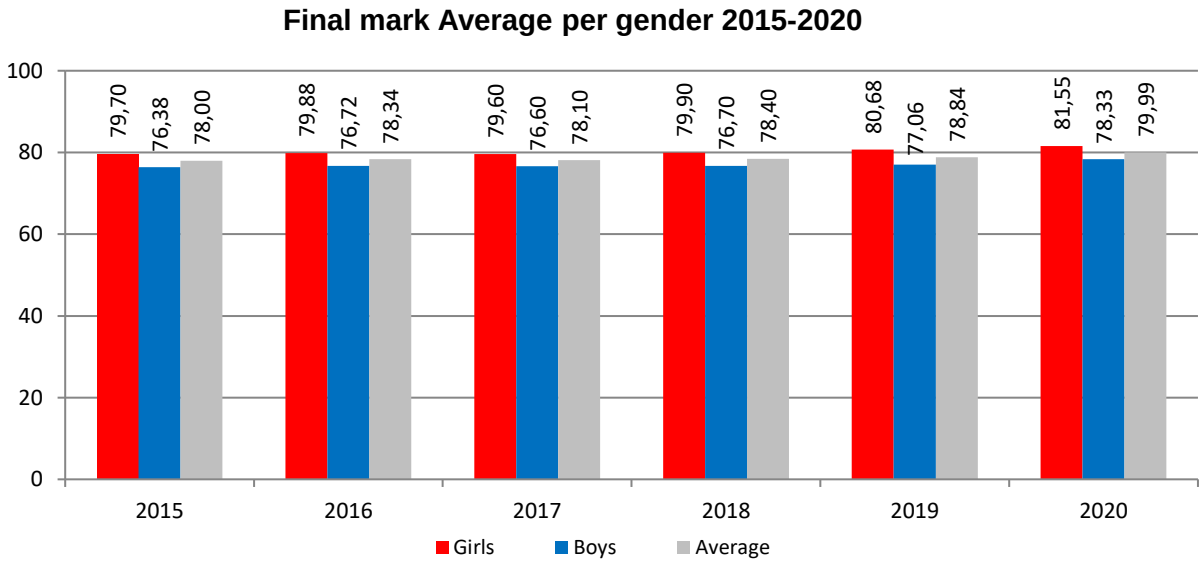
Female candidates score a higher final mark than the general average, as it can be observed in this graph.





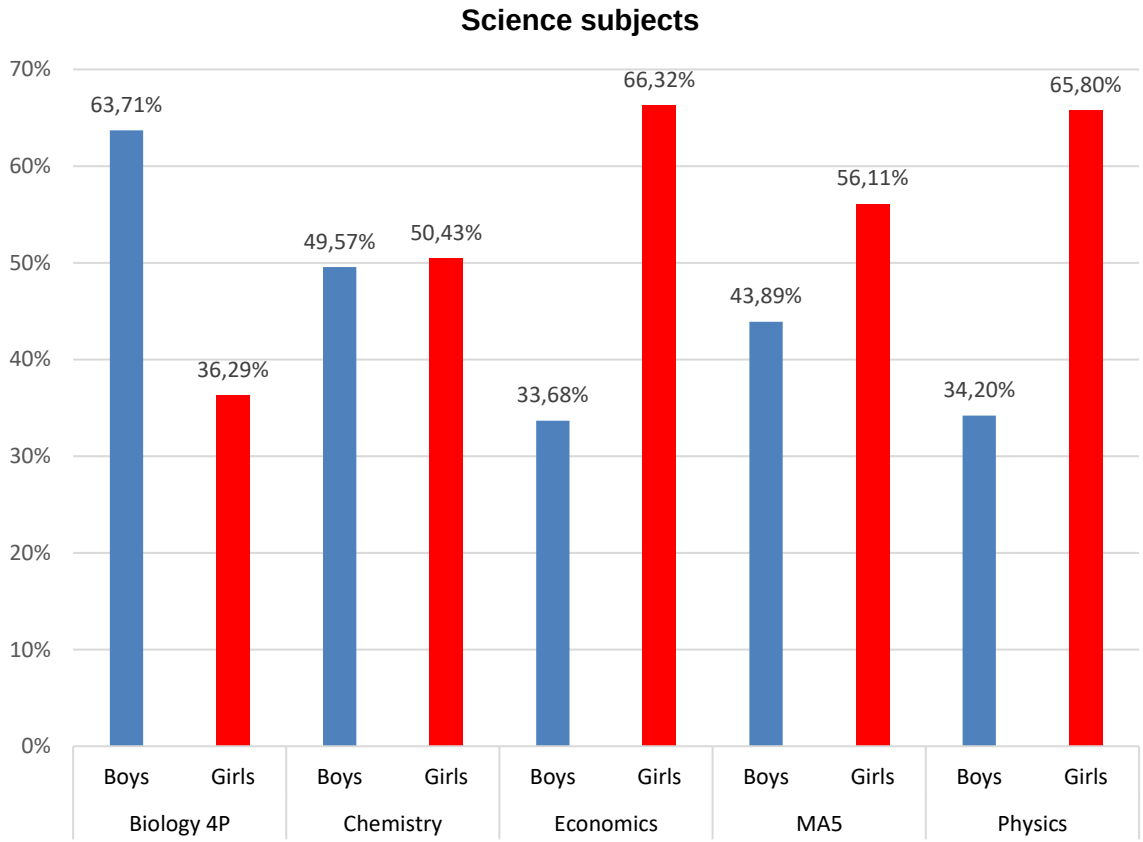


This is a general trend in the last 6 years:

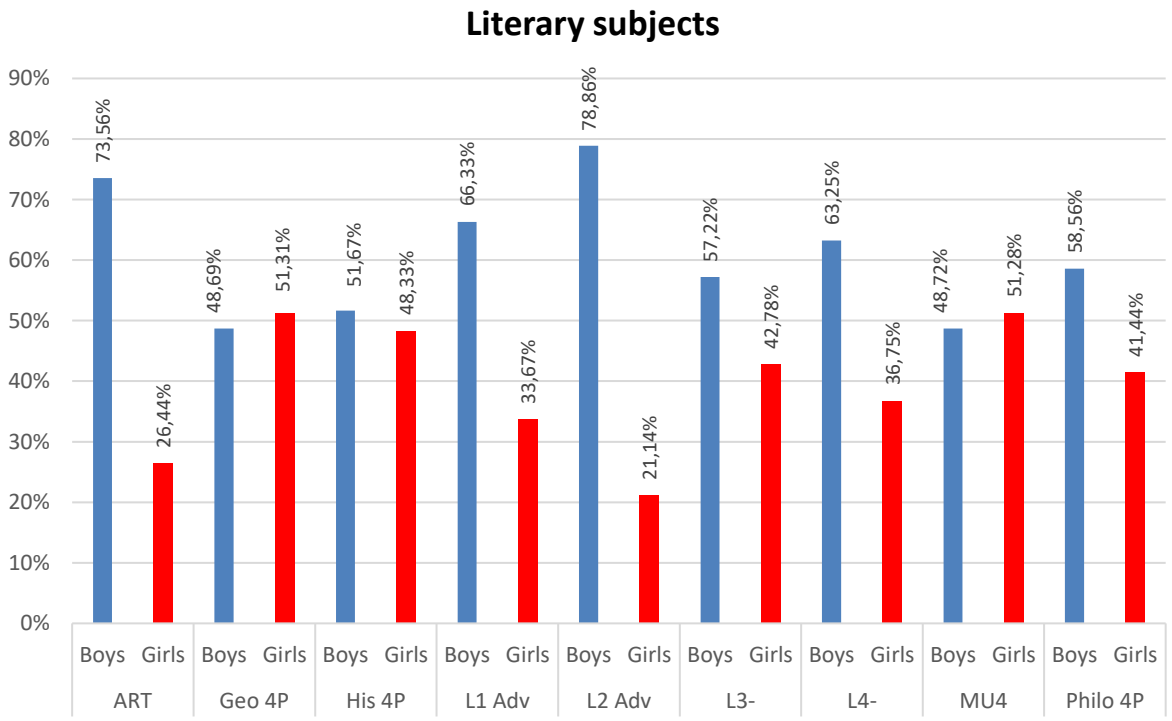


Here below, the choices of options and final average, per gender:

Science Subjects	Gender	Number of candidates	Final Average	Percentage
Biology 4P	Boys	316	8.13	63.71%
	Girls	180	7.77	36.29%
	Total	496	8.00	
Chemistry	Boys	290	8.01	49.57%
	Girls	295	7.82	50.43%
	Total	585	7.91	
Economics	Boys	162	8.49	33.68%
	Girls	319	8.02	66.32%
	Total	481	8.18	
MA5	Boys	456	8.02	43.89%
	Girls	583	7.86	56.11%
	Total	1039	7.93	
Physics	Boys	238	8.39	34.20%
	Girls	458	8.01	65.80%
	Total	696	8.14	

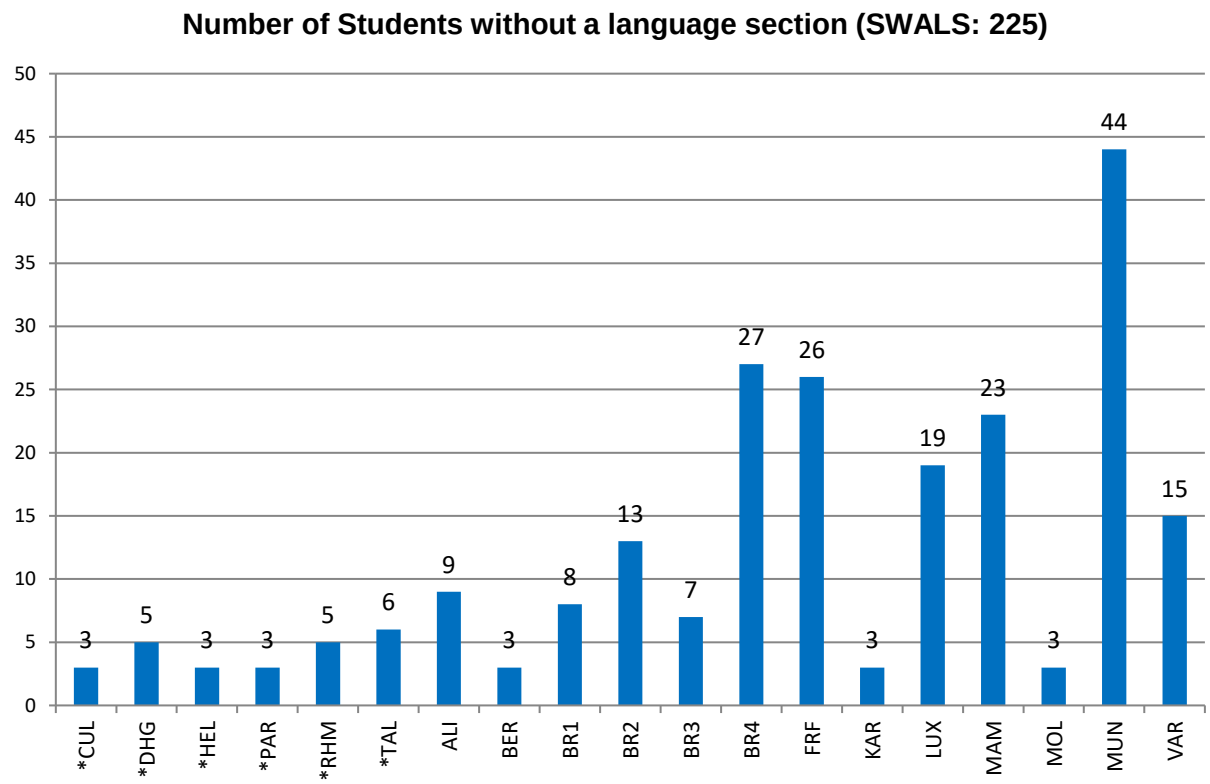


Literary Subjects	Gender	Number of candidates	Final Average	Percentage
ART	Boys	242	8.63	73.56%
	Girls	87	8.15	26.44%
	Total	329	8.51	
Geography 4P	Boys	149	8.31	48.69%
	Girls	157	7.76	51.31%
	Total	306	8.03	
History 4P	Boys	186	8.24	51.67%
	Girls	174	7.94	48.33%
	Total	360	8.10	
L1 Adv	Boys	65	8.60	66.33%
	Girls	33	8.19	33.67%
	Total	98	8.46	
L2 Adv	Boys	97	8.62	78.86%
	Girls	26	8.03	21.14%
	Total	123	8.49	
L3-	Boys	416	8.62	57.22%
	Girls	311	8.23	42.78%
	Total	727	8.45	
L4-	Boys	191	8.53	63.25%
	Girls	111	7.97	36.75%
	Total	302	8.33	
MU4	Boys	19	8.64	48.72%
	Girls	20	8.65	51.28%
	Total	39	8.65	
Philo 4P	Boys	130	8.58	58.56%
	Girls	92	8.22	41.44%
	Total	222	8.43	



7.5. Students Without A Language Section (SWALS)

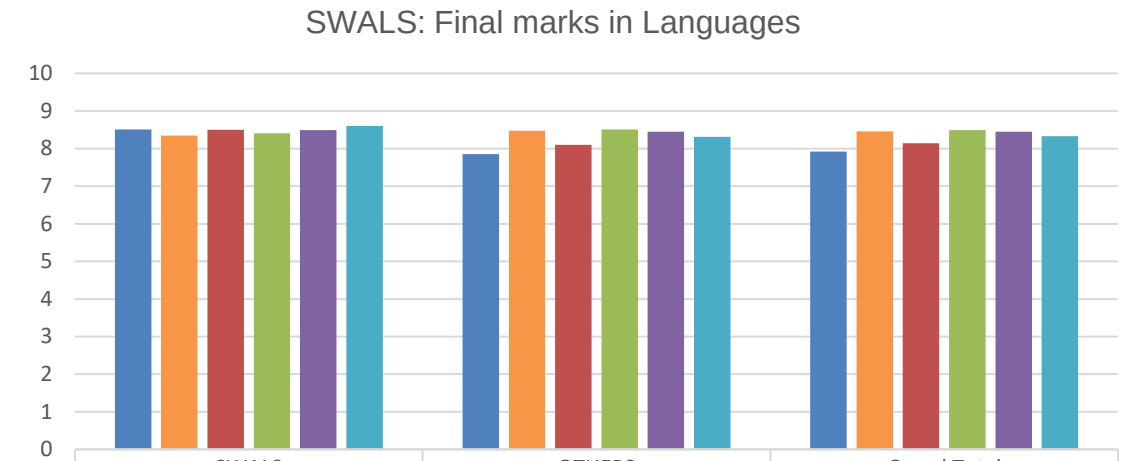
This year, 225 Students Without A Language Section registered for the European Baccalaureate session.



The average Final Mark achieved by SWALS candidates this year has been of 81.55.

1 SWALS candidate failed.

In the following graph are shown the final marks in Languages L1, L1 Advanced, L2, L2 Advanced, L3 and L4. It can be observed that their performance in L2, L3 and L4 is slightly higher than the average, and a little bit lower than the average in L2 Advanced.



	SWALS	OTHERS	Grand Total
L1-	8,51	7,85	7,92
L1A	8,35	8,47	8,46
L2-	8,50	8,10	8,14
L2A	8,41	8,51	8,49
L3-	8,49	8,45	8,45
L4-	8,60	8,31	8,33

Here are some results of the SWALS pupils in comparison with the other pupils and the general average. Results where SWALS averages are higher than NOT SWALS, are highlighted.

	AR4	GE4	GRE	HI4	LAT	MU4	PH4
SWALS	8,58	8,16	8,66	8,13		8,08	8,38
NOT SWALS	8,50	8,01		8,09	7,92	8,73	8,44
ALL	**8,51**	**8,03**	**8,66**	**8,10**	**7,92**	**8,65**	**8,43**

	BI4	CHI	ECO	MA3	MA5	PHY
SWALS	8,15	8,13	8,19	7,56	7,87	8,13
NOT SWALS	7,99	7,89	8,17	7,24	7,93	8,14
ALL	**8,00**	**7,91**	**8,18**	**7,27**	**7,93**	**8,14**

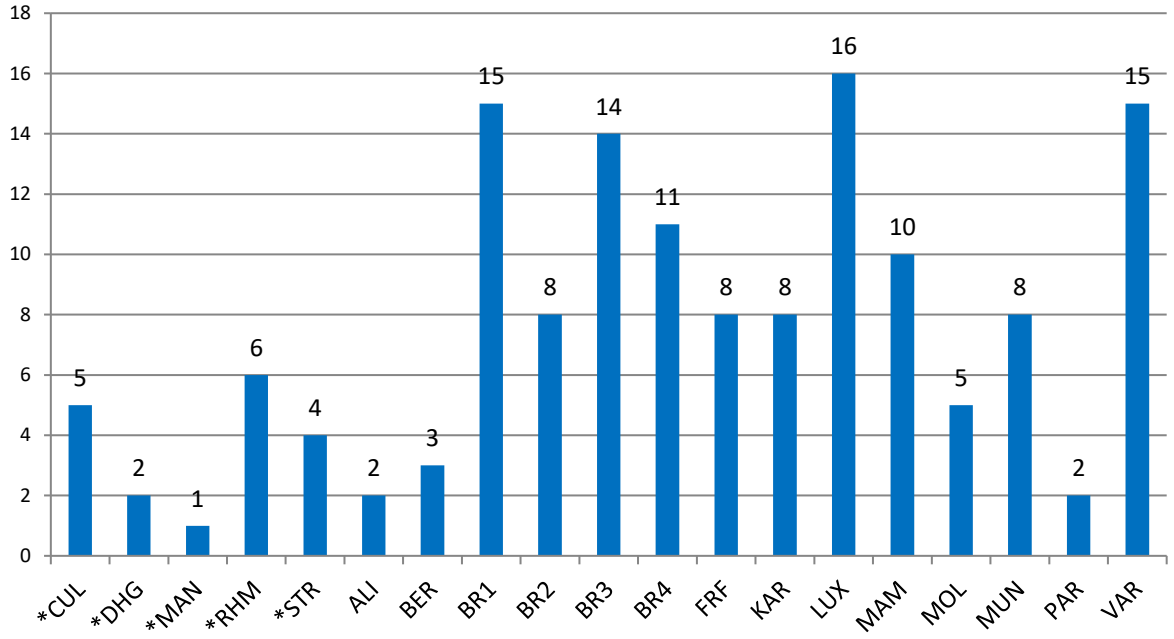
7.6. Final Results for Pupils with Special Arrangements

7.6.1. Candidates

This year, due to the decisions that were taken, these measures were only applied during the Pre-Baccalaureate examinations.

143 candidates were granted special measures to the written and/or oral examinations at the 2020 EB session. 11 of them were SWALS.

Number of pupils per school (143) with special arrangements

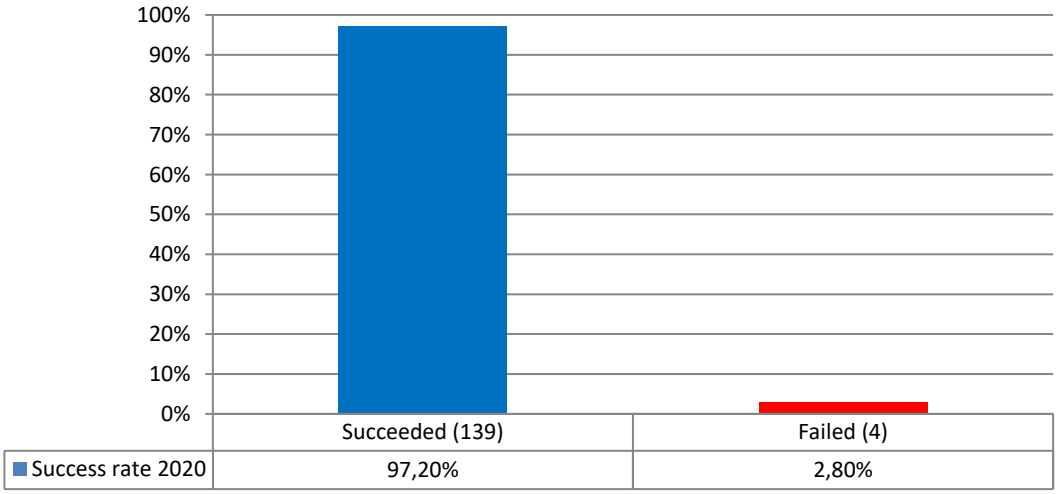


These measures mainly consisted in extra time, use of laptop (with or without spell checker), and use of calculator. Other more exceptional measures consisted in allowing a reader, a scribe, a separate room, having a break under surveillance, change of format of the examination subject paper, etc.

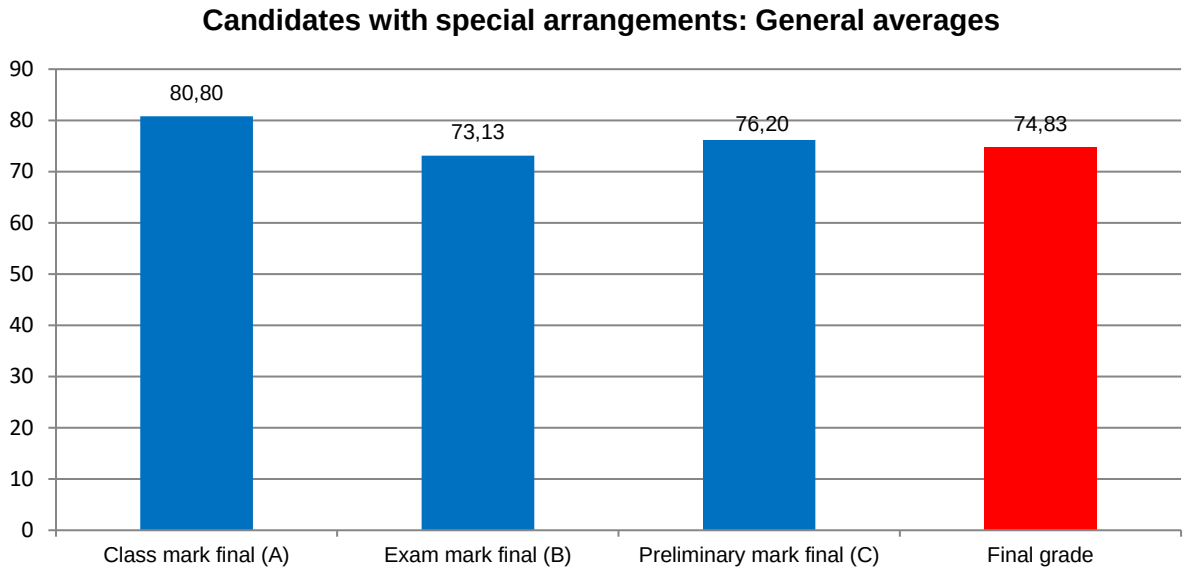
7.6.2. Success Rate

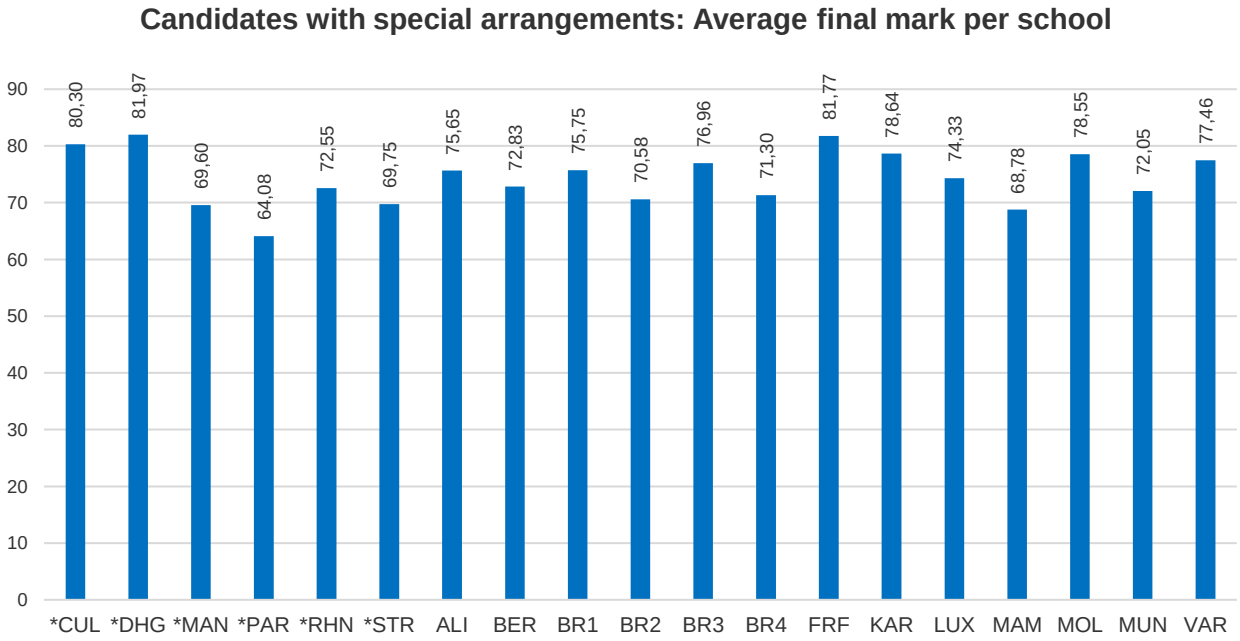
139 pupils out of 143 succeeded, all SWALS candidates included.

Success rate 2020



7.6.3. Overall final mark

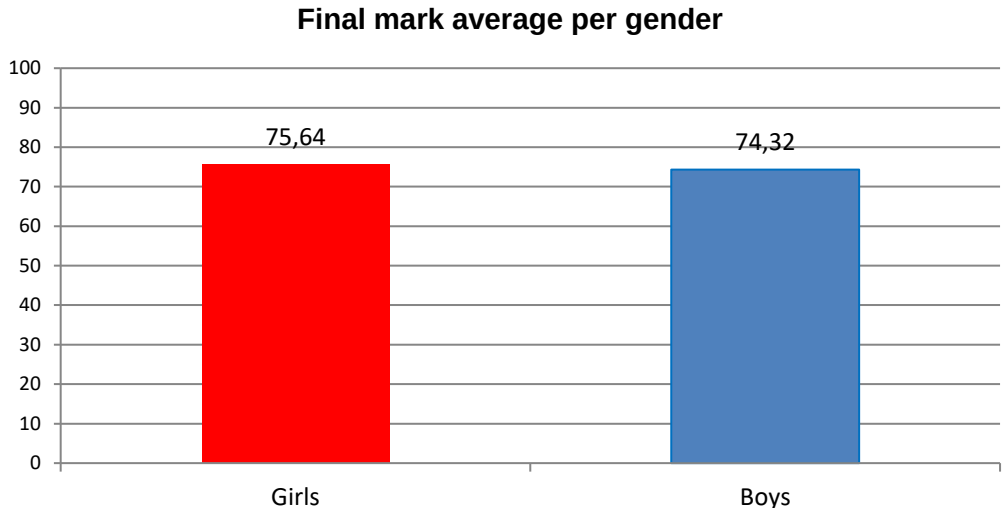


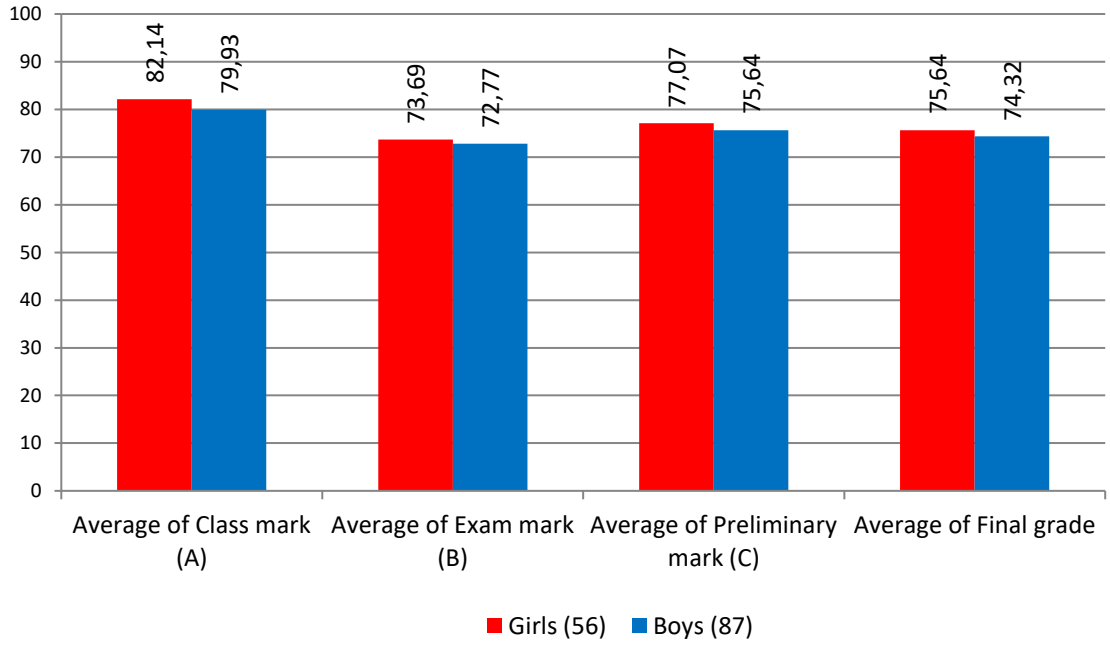


7.6.4. Results per gender and averages

Out of the 143 candidates with special arrangements, 87 were boys and 56 were girls.

4 candidates failed: 1 girl and 3 boys.





8 Results in the Sciences: Biology, Chemistry, Economic Sciences, Mathematics and Physics

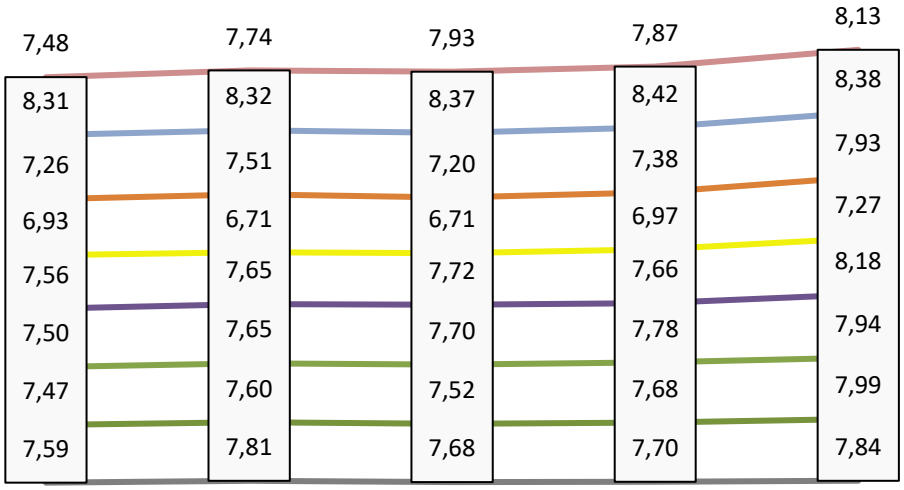
8.1. Final Marks for Science Classes

The evolution of the average final mark for the science classes shows substantial stability over the years.

It can be observed that the final marks of the scientific subjects this year are the best in the last 8 years.

Final mark for science subjects								
	BI2	**BI4**	**CHI**	**ECO**	**MA3**	**MA5**	**MAA**	**PHY**
2013	7.58	7.52	7.37		6.70	7.13	8.26	7.25
2014	7.57	7.59	7.41	7.43	6.68	7.32	8.34	7.53
2015	7.62	7.46	7.57		6.89	7.46	8.28	7.42
2016	7.59	7.47	7.50	7.56	6.93	7.26	8.31	7.48
2017	7.81	7.60	7.65	7.65	6.71	7.51	8.32	7.74
2018	7.68	7.52	7.70	7.72	6.71	7.20	8.37	7.93
2019	7.70	7.68	7.78	7.66	6.97	7.38	8.42	7.87
2020	7,84	7,99	7,94	8,18	7,27	7,93	8,38	8,13

Final mark for science classes



	2016	2017	2018	2019	2020
PHY	7,48	7,74	7,93	7,87	8,13
MAA	8,31	8,32	8,37	8,42	8,38
MA5	7,26	7,51	7,20	7,38	7,93
MA3	6,93	6,71	6,71	6,97	7,27
ECO	7,56	7,65	7,72	7,66	8,18
CHI	7,50	7,65	7,70	7,78	7,94
BI4	7,47	7,60	7,52	7,68	7,99
BI2	7,59	7,81	7,68	7,70	7,84

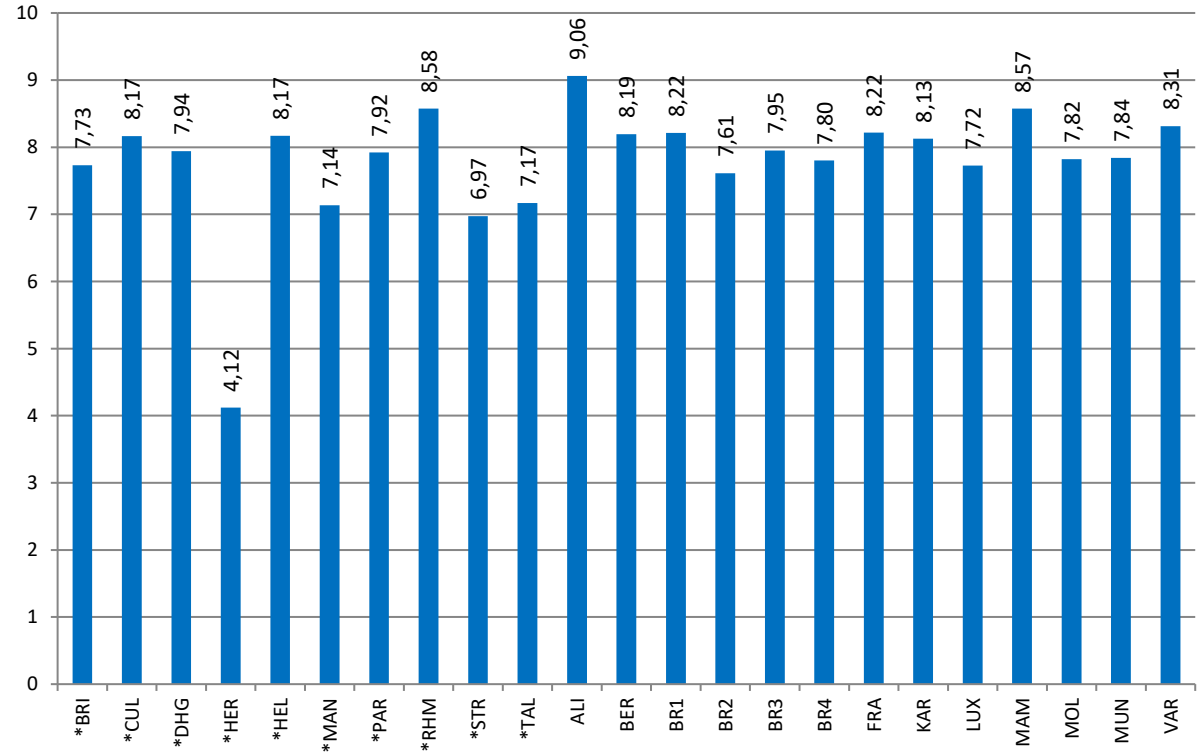
8.2. Comparison of Final Marks of Scientific Courses

The following graphs include only the final marks obtained in the scientific subjects of all those who chose those subjects as an option for the BACC (written or oral)

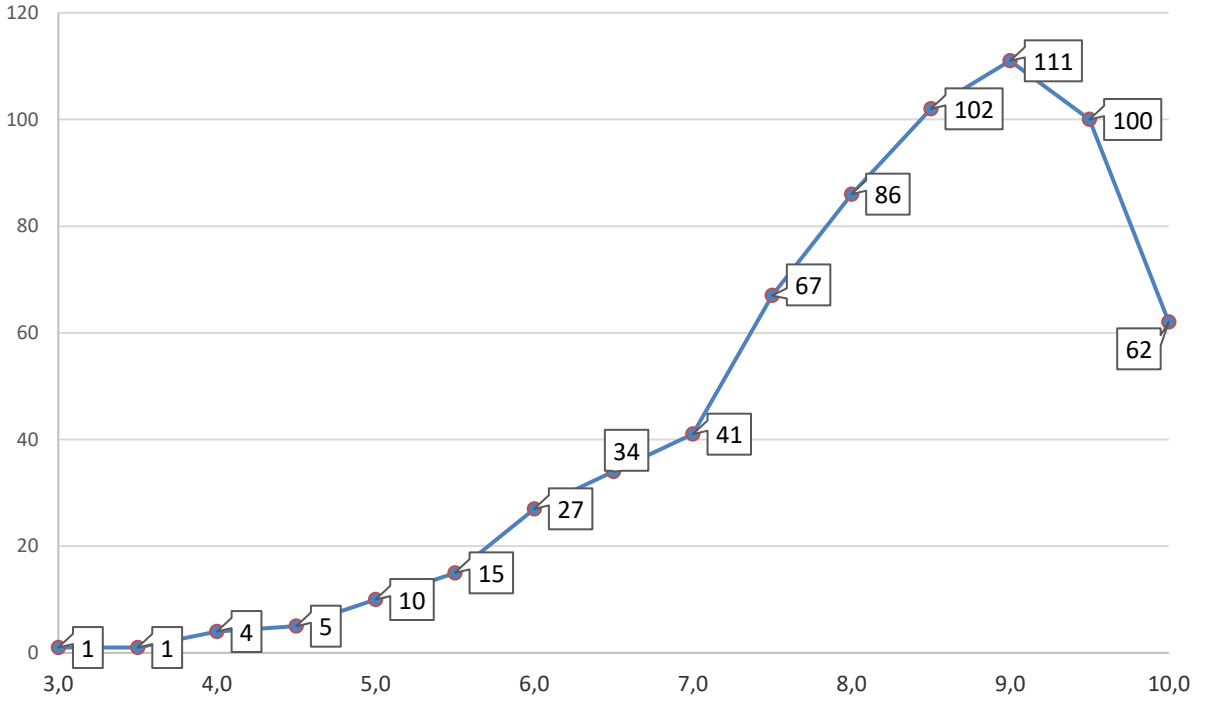
8.2.1. Biology Final Mark (gen average. 7.99)

Detailed results, per school:

Biology: average final mark

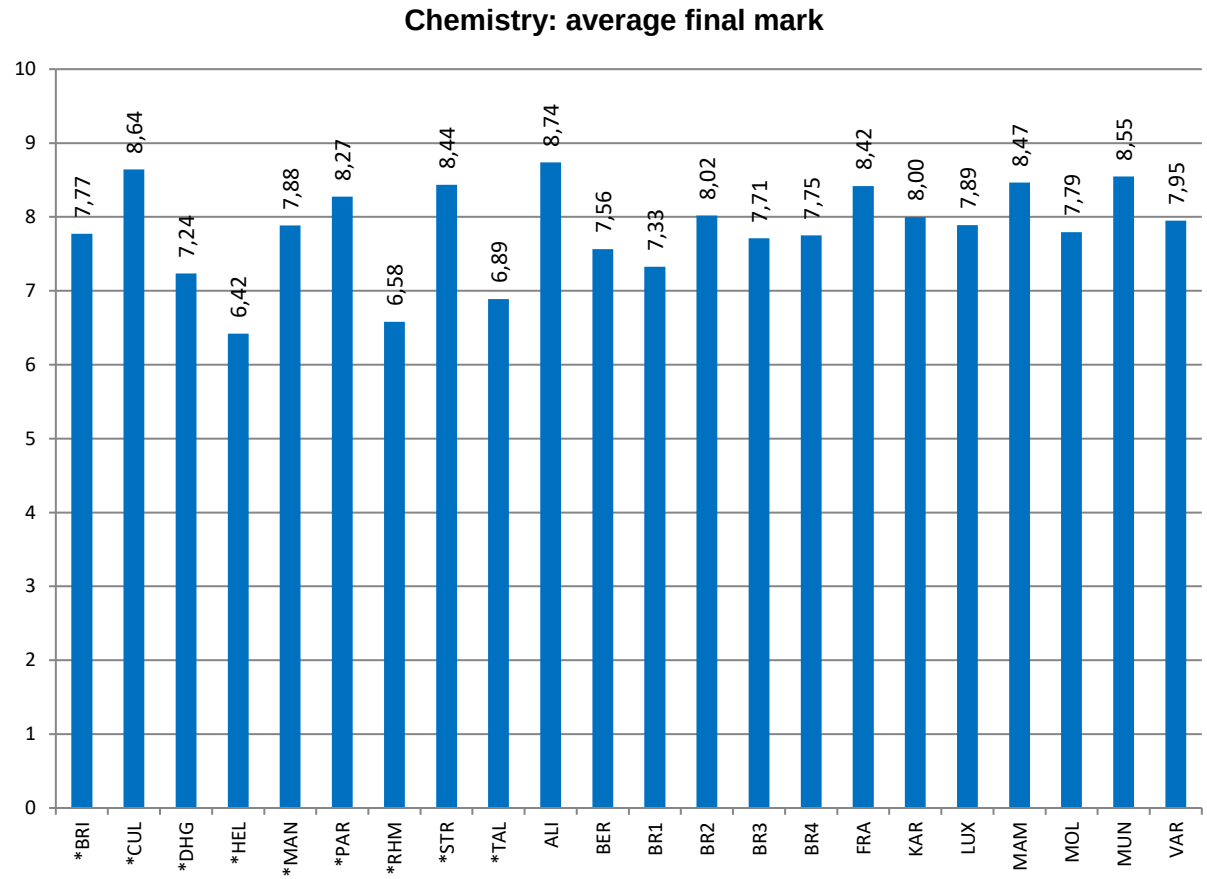


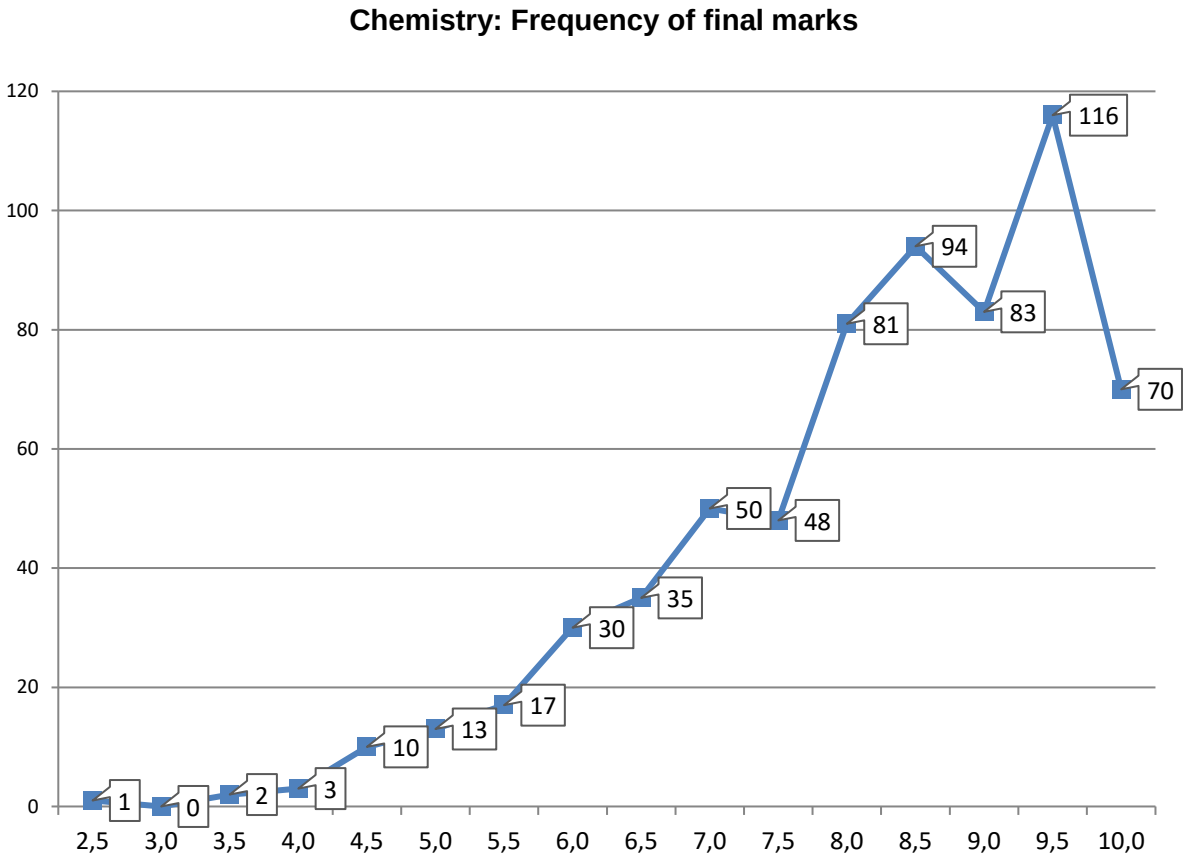
Biology: Frequency of final marks



8.2.2. Chemistry Final Mark (gen. average. 7.94)

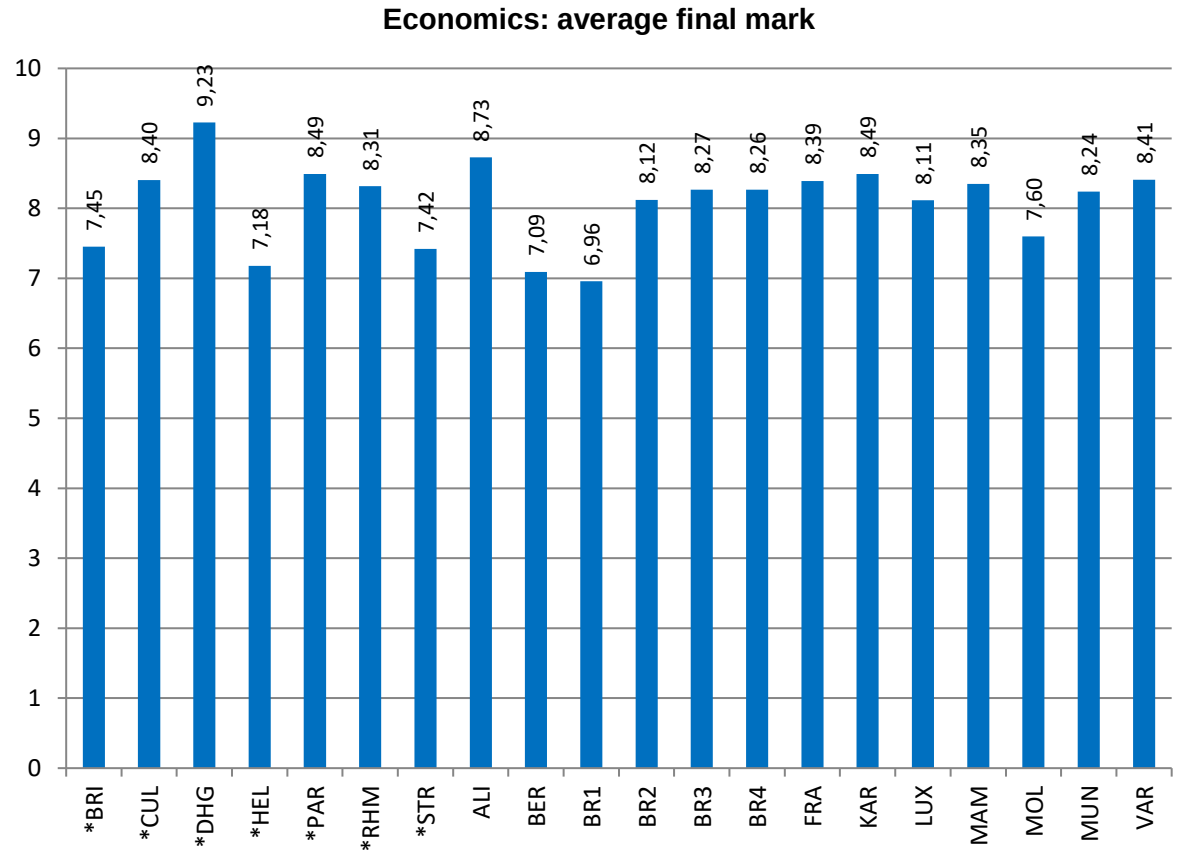
Detailed results, per school:

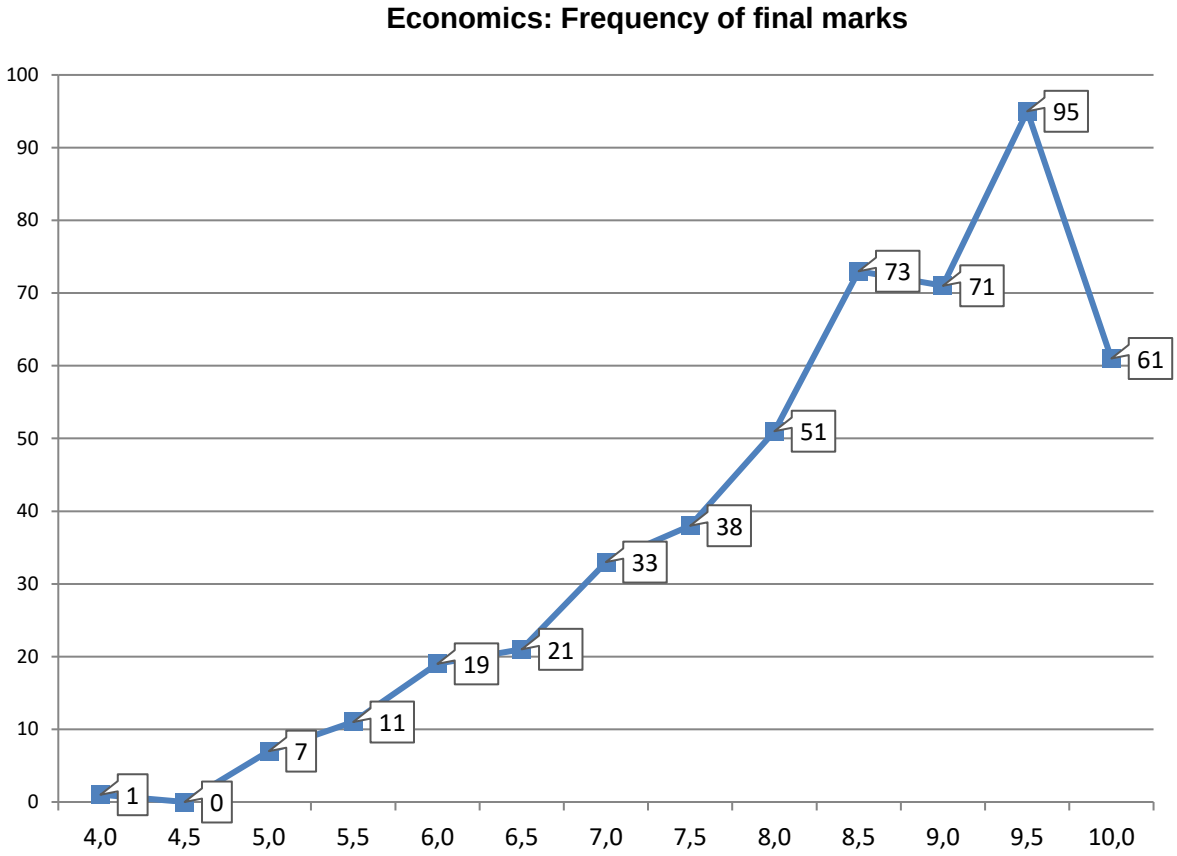




8.2.3. Economics Final Mark (gen. average 8.18)

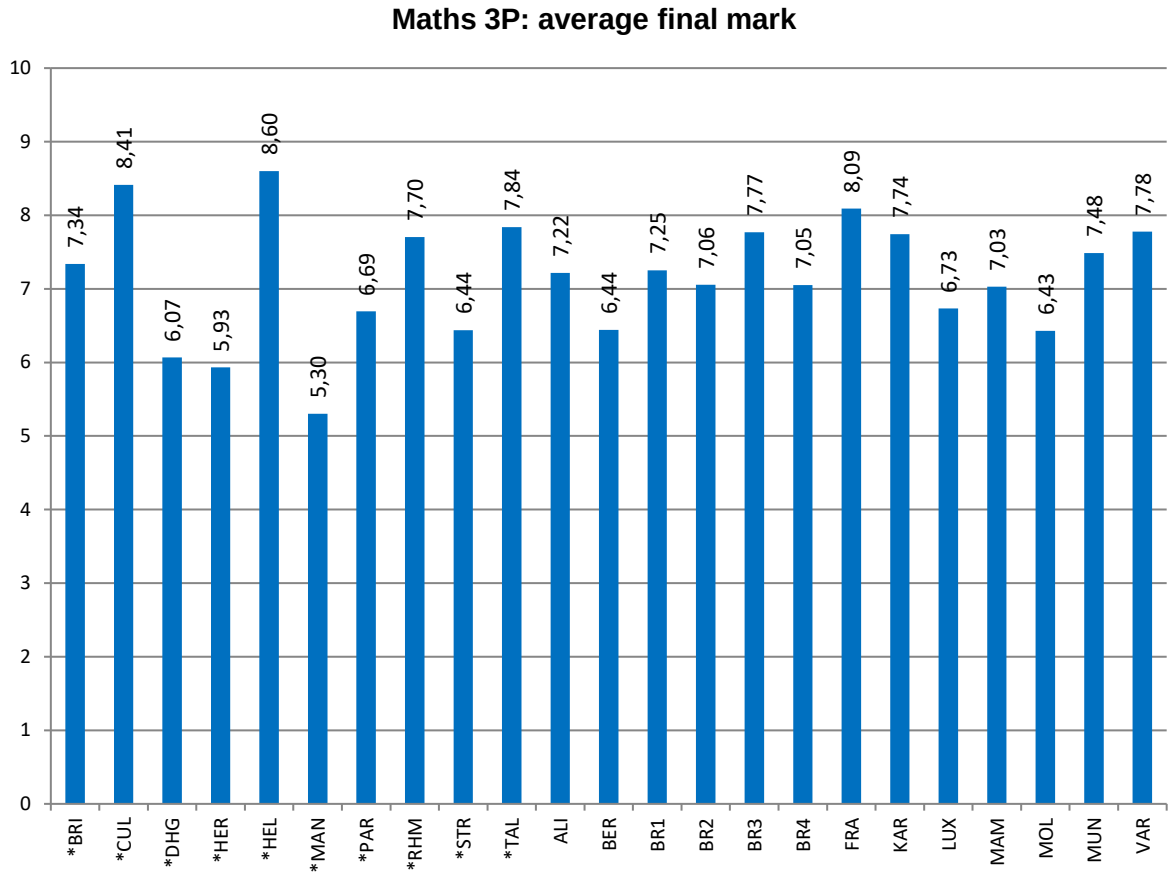
Detailed results, per school:

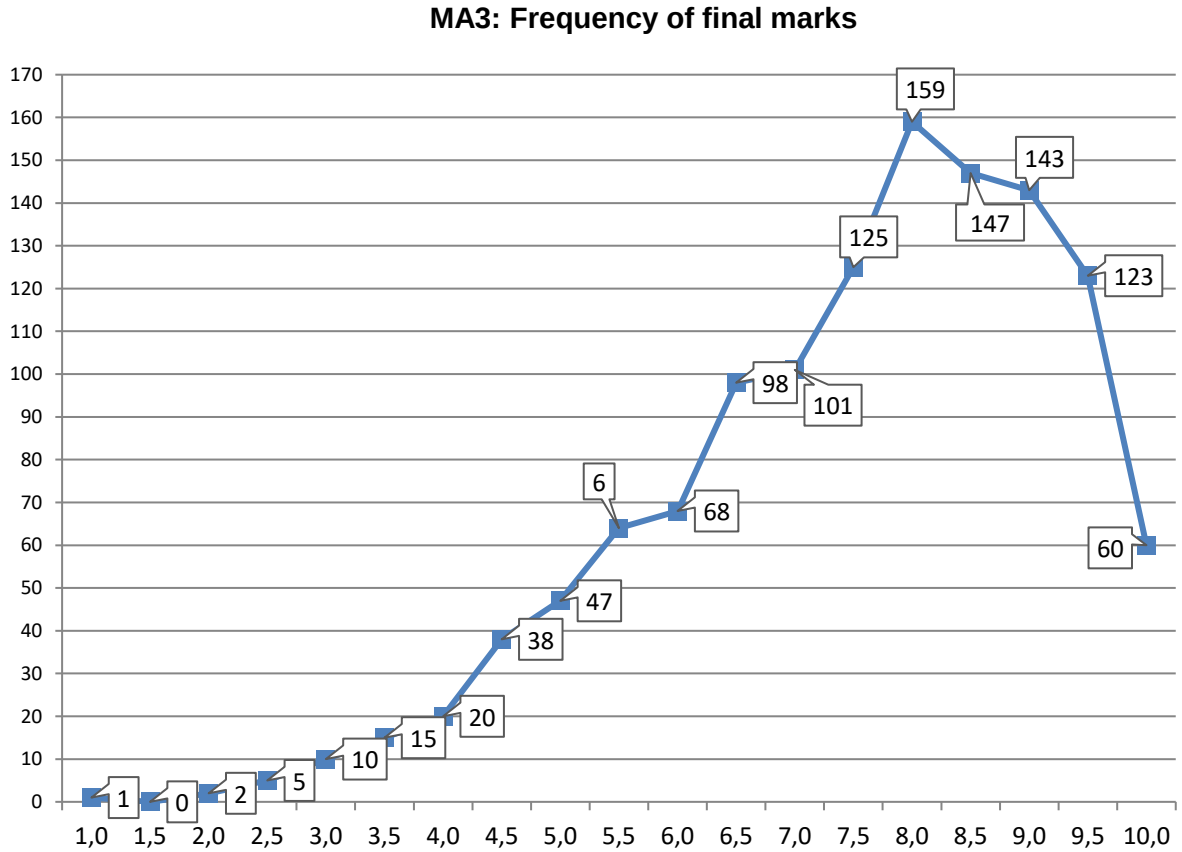




8.2.4. Maths 3P Final Mark (gen. average. 7.27)

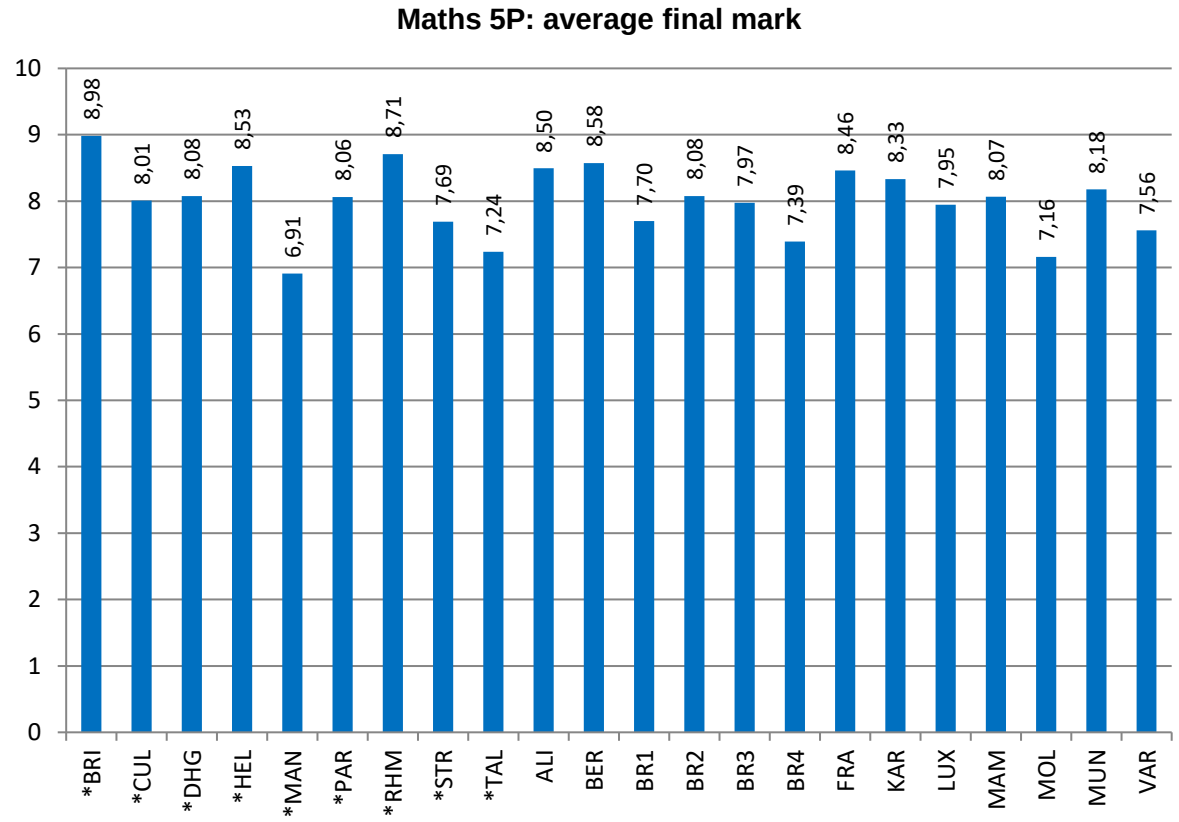
Detailed results, per school:

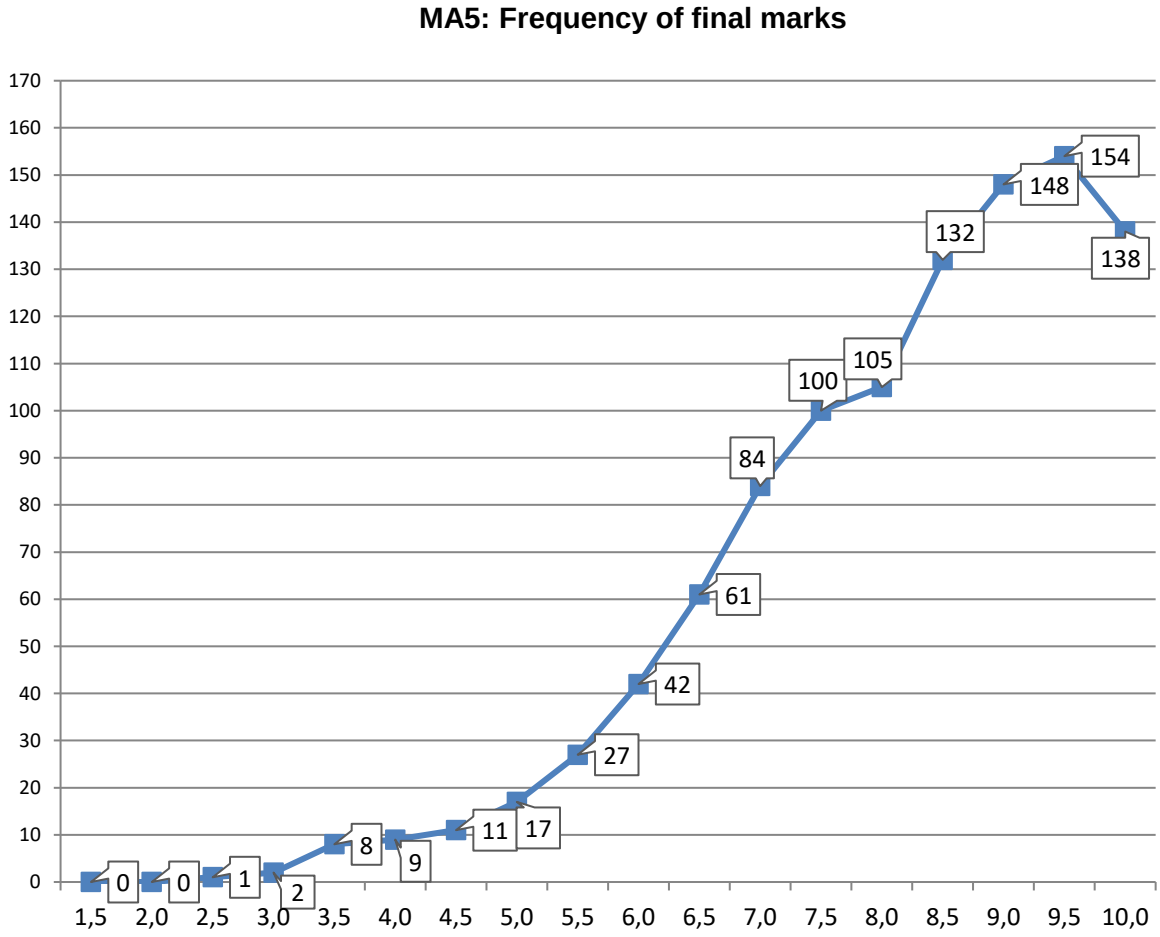




8.2.5. Maths 5P Final Mark (gen. average. 7.93)

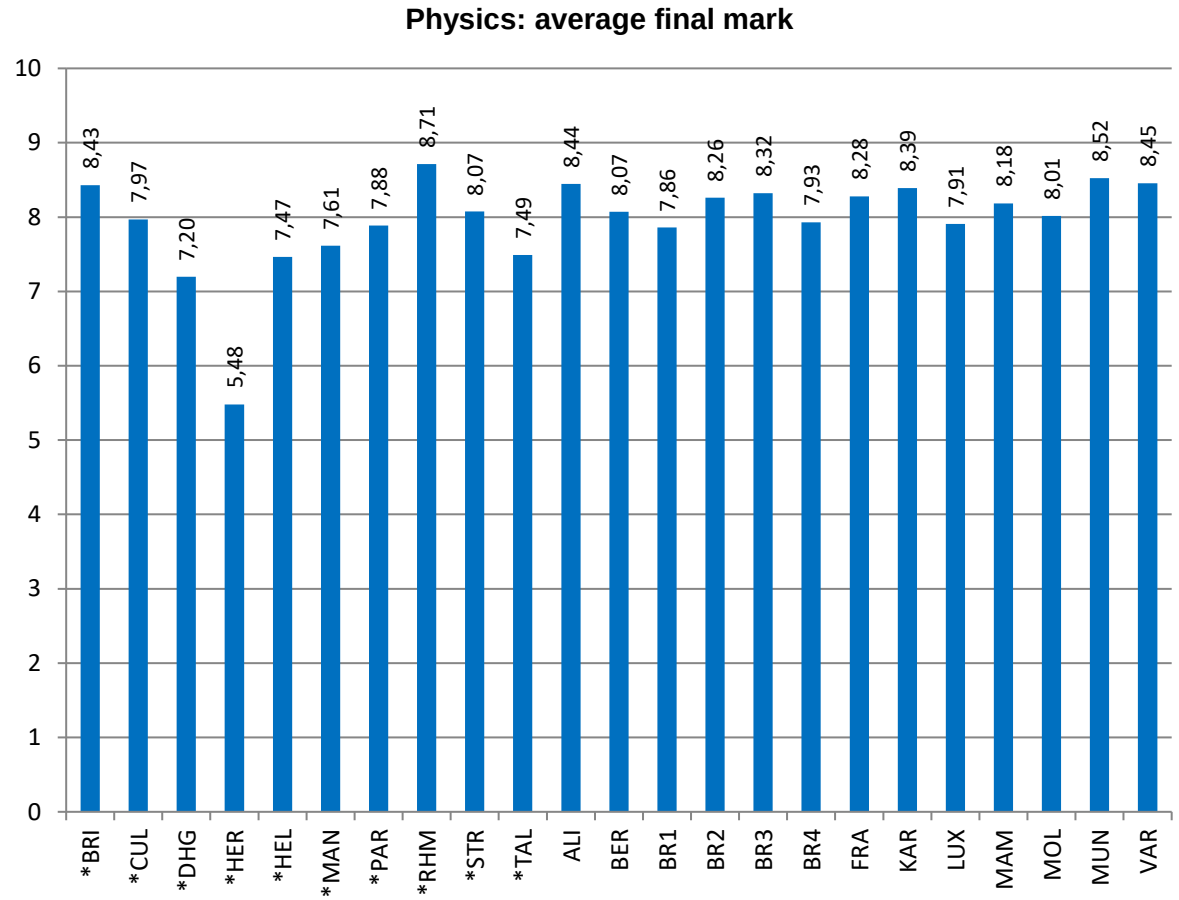
Detailed results, per school:

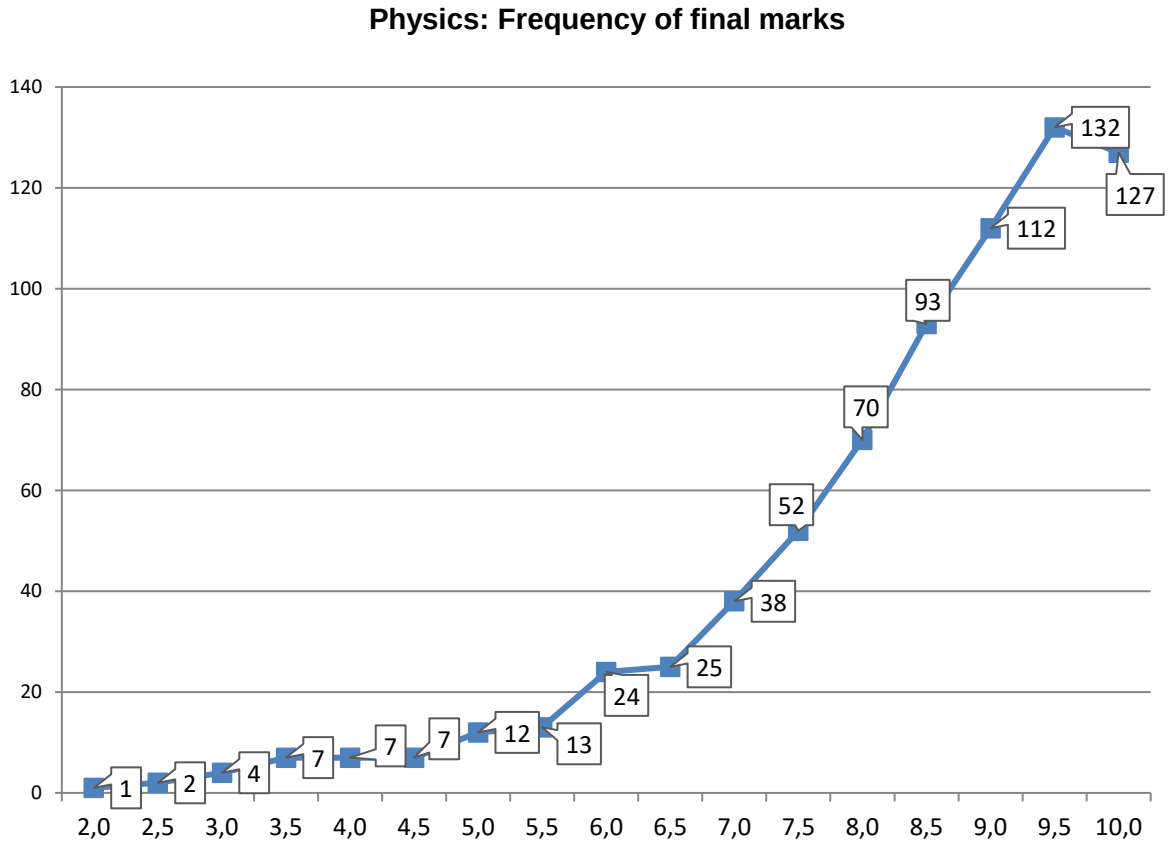




8.2.6. Physics Final Mark (gen. average. 8.13)

Detailed results, per school:

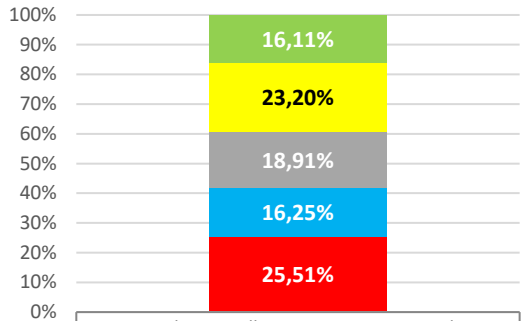




8.3. European Baccalaureate Sciences Final Marks Results

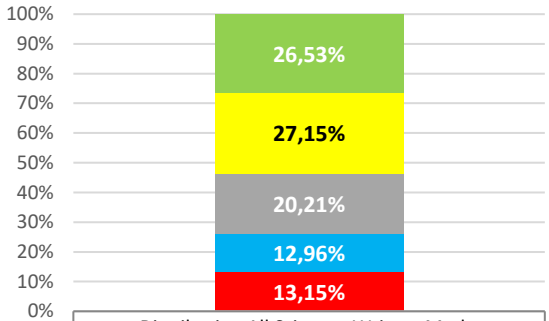
The distribution graph below indicates that for all sciences subject examinations considered, the 13.15% of the scripts did not obtain the pass mark. This is a 12.6% less of fails in comparison to previous year.

Distribution of all 2019 written sciences marks



	Distribution All Sciences Written Marks
90-100	16,11%
80-89,99	23,20%
70-79,99	18,91%
60-69,99	16,25%
0-59,99	25,51%

Distribution of all 2020 sciences final marks



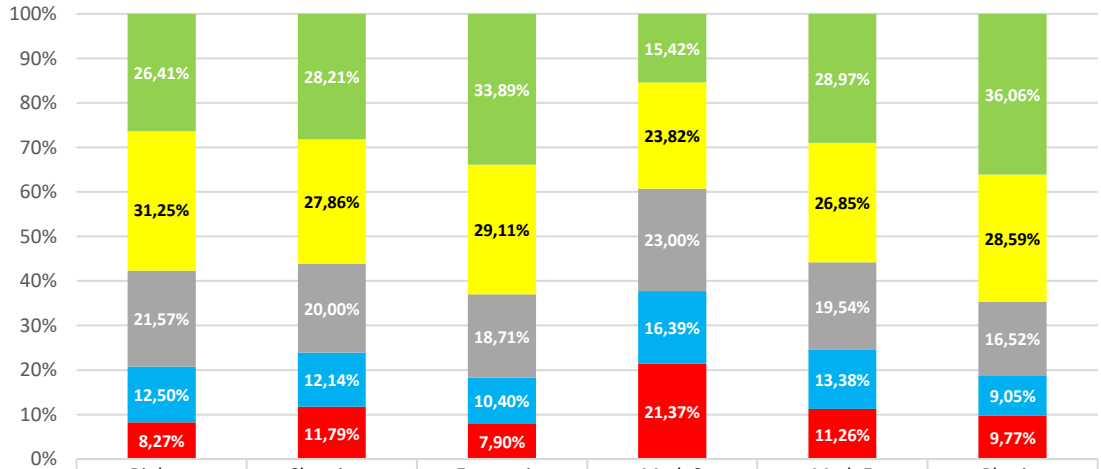
	Distribution All Sciences Written Marks
90-100	26,53%
80-89,99	27,15%
70-79,99	20,21%
60-69,99	12,96%
0-59,99	13,15%

The next distribution table per subject reflects the detail among the sciences subject distribution of those that chose the subject as written examination for the EB.

As previous year, MA3 is the subject with the highest failure rate with a percentage of 30.50 of pupils not reaching the pass mark of 6. However, this represents a clear drop of 9.13% in comparison to previous year.

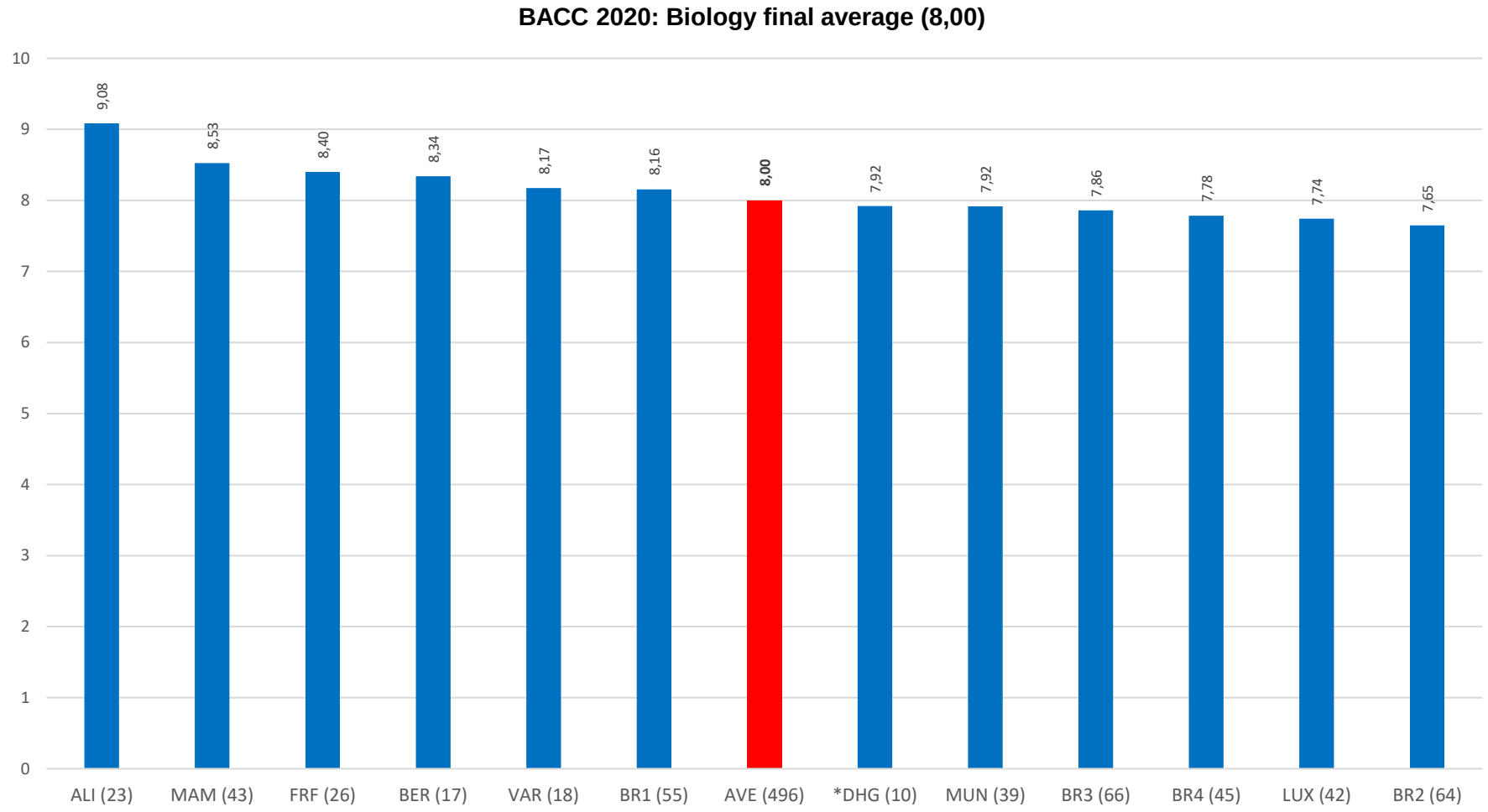
Physics repeats this year with the highest success rate with a percentage of 36.06%, of pupils reaching a final mark between 9 and 10, a 4.72% more than previous year.

Distribution of the final marks 2020
Biology - Chemistry - Economics - MA3 - MA5 - Physics



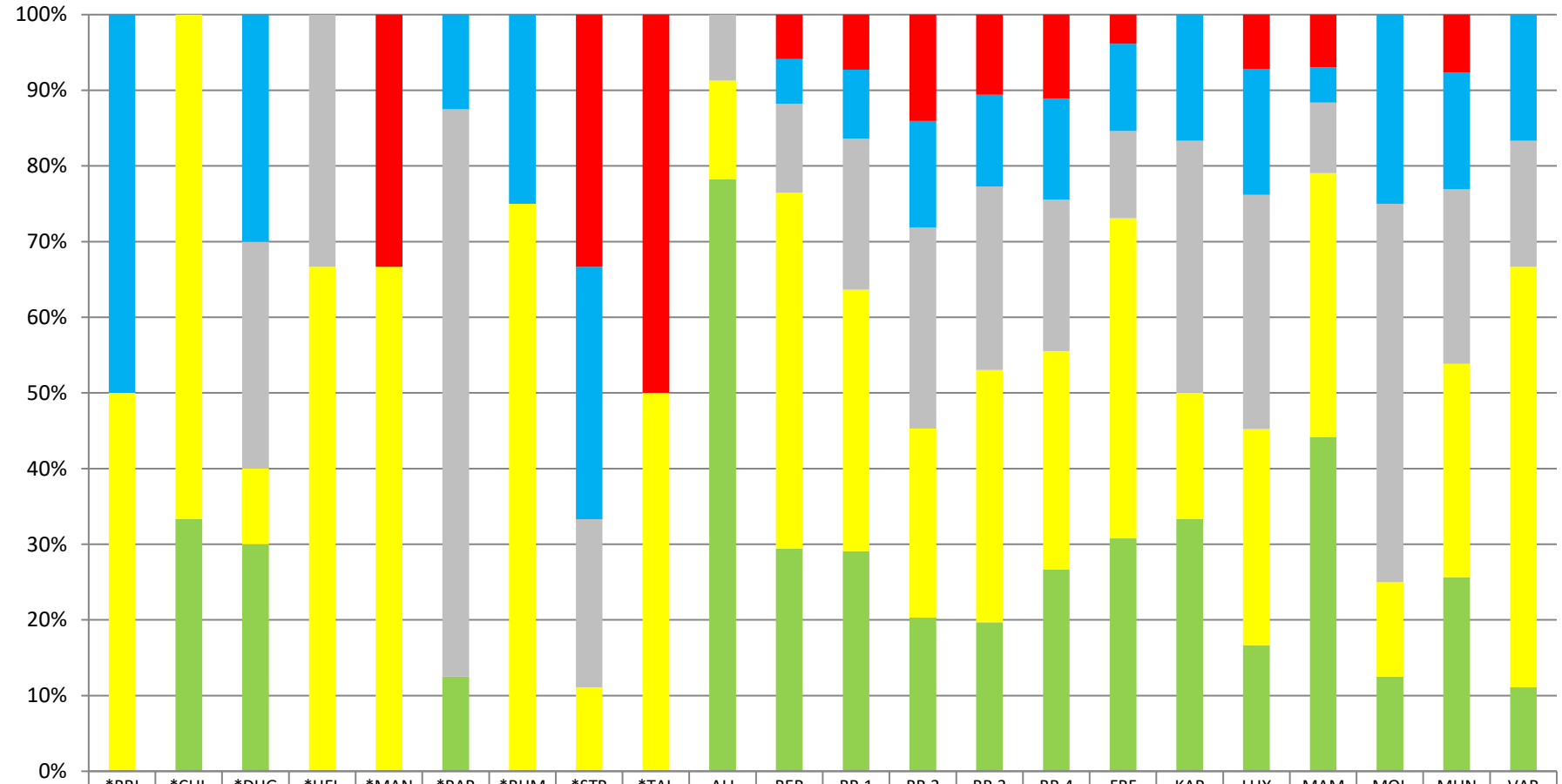
	Biology	Chemistry	Economics	Math 3	Math 5	Physics
90-100	26,41%	28,21%	33,89%	15,42%	28,97%	36,06%
80-89,99	31,25%	27,86%	29,11%	23,82%	26,85%	28,59%
70-79,99	21,57%	20,00%	18,71%	23,00%	19,54%	16,52%
60-69,99	12,50%	12,14%	10,40%	16,39%	13,38%	9,05%
0-59,99	8,27%	11,79%	7,90%	21,37%	11,26%	9,77%

8.3.1. Biology (Success rate: 90.99%) [2]



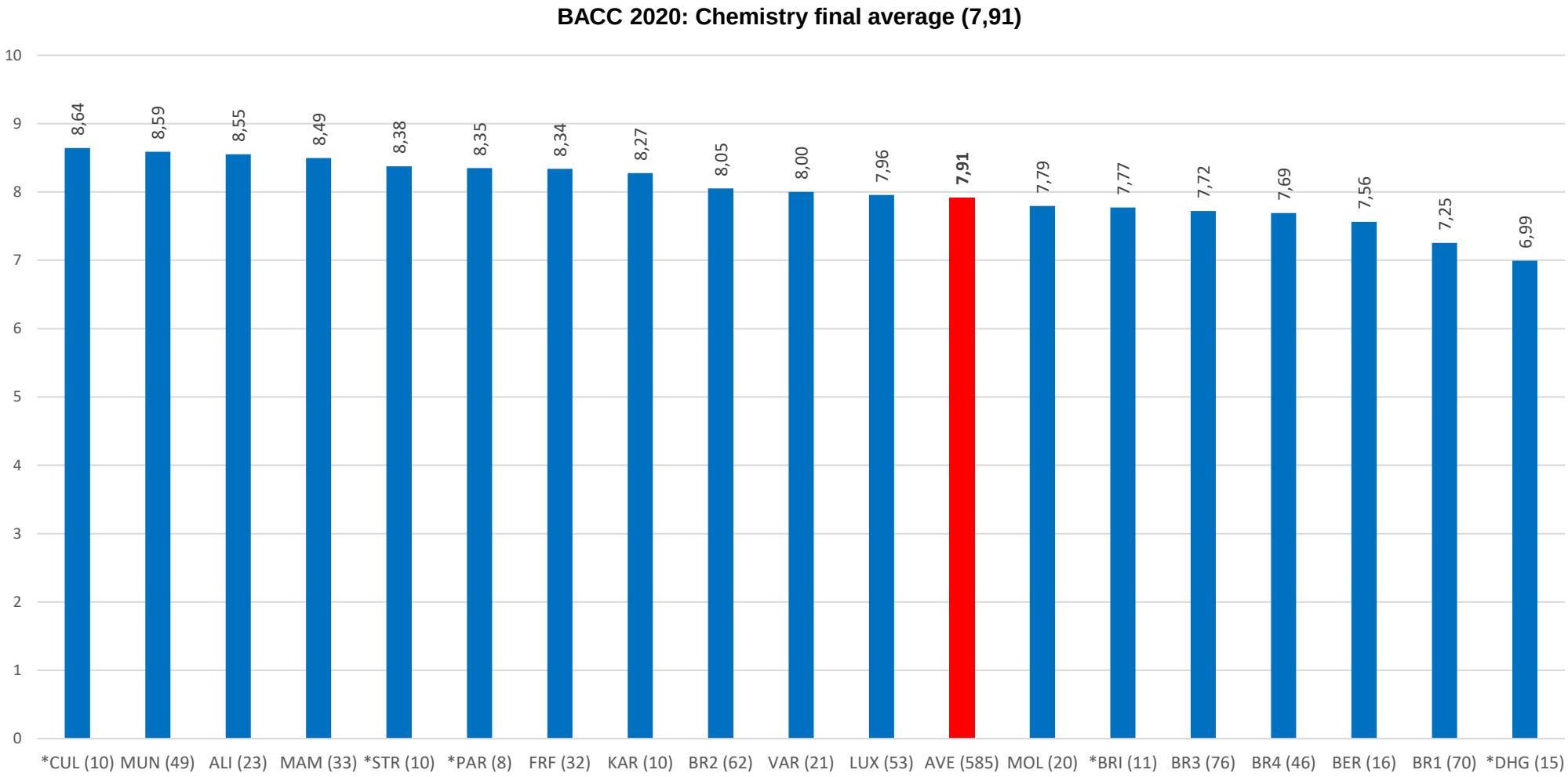
[2] Schools with less than 10 candidates will not be taken into consideration in some graphs from 7.9.1 to 7.9.6 because they are not statistically relevant.

Biology: distribution of final marks

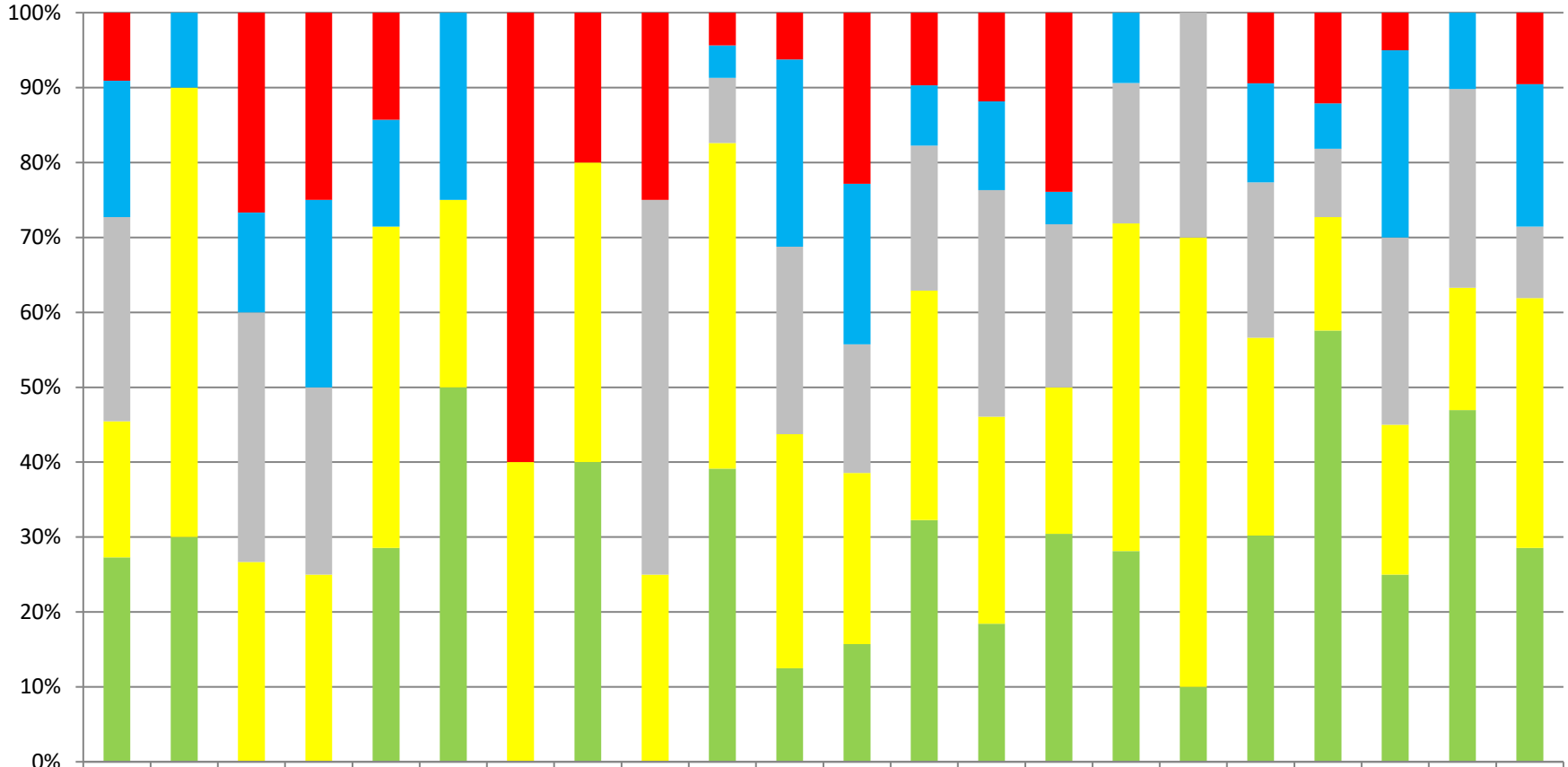


	*BRI	*CUL	*DHG	*HEL	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	BR 1	BR 2	BR 3	BR 4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
0-59,9					1			3	1		1	4	9	7	5	1		3	3		3	
60-69,9	1		3			1	1	3			1	5	9	8	6	3	1	7	2	2	6	3
70-79,9			3	1		6		2		2	2	11	17	16	9	3	2	13	4	4	9	3
80-89,9	1	2	1	2	2		3	1	1	3	8	19	16	22	13	11	1	12	15	1	11	10
90-100		1	3			1				18	5	16	13	13	12	8	2	7	19	1	10	2

8.3.2. Chemistry (Success rate: 88.67%)

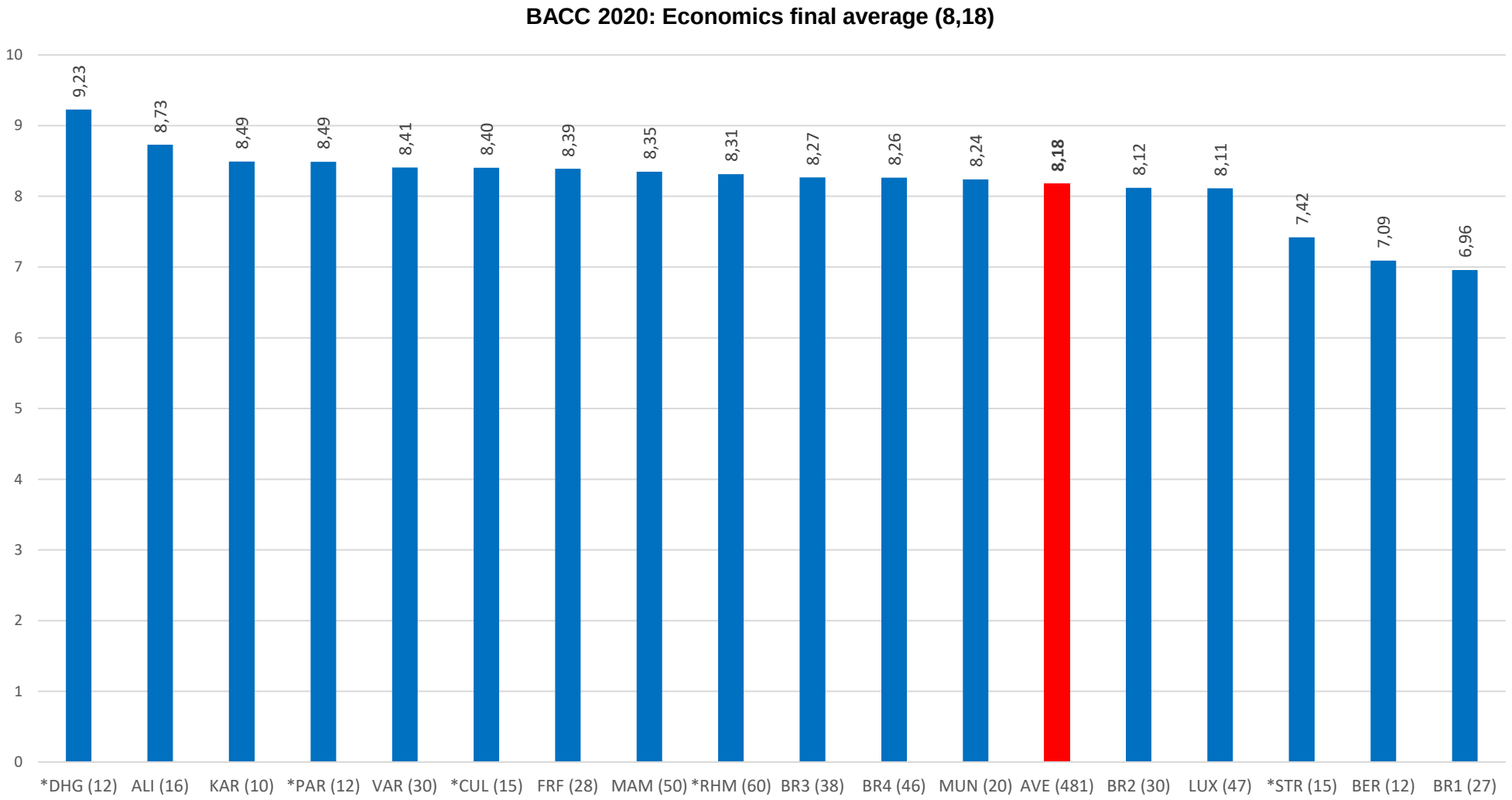


Chemistry: distribution of final marks

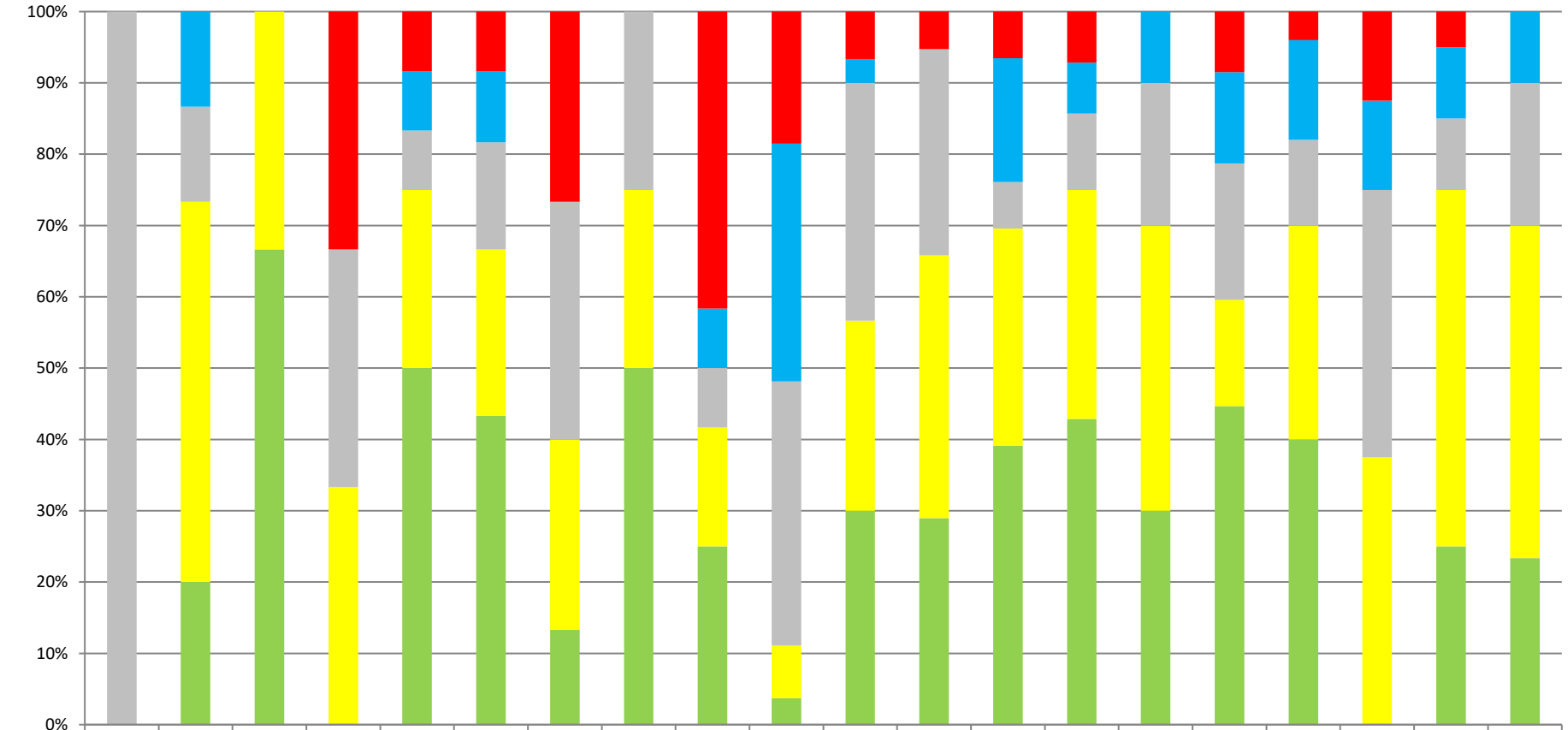


	*BRI	*CUL	*DHG	*HEL	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	BR 1	BR 2	BR 3	BR 4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
0-59,9	1		4	1	1		3	2	1	1	1	16	6	9	11			5	4	1		2
60-69,9	2	1	2	1	1	2				1	4	15	5	9	2	3		7	2	5	5	4
70-79,9	3		5	1					2	2	4	12	12	23	10	6	3	11	3	5	13	2
80-89,9	2	6	4	1	3	2	2	4	1	10	5	16	19	21	9	14	6	14	5	4	8	7
90-100	3	3			2	4		4		9	2	11	20	14	14	9	1	16	19	5	23	6

8.3.3. Economics (Success rate: 92.10%)

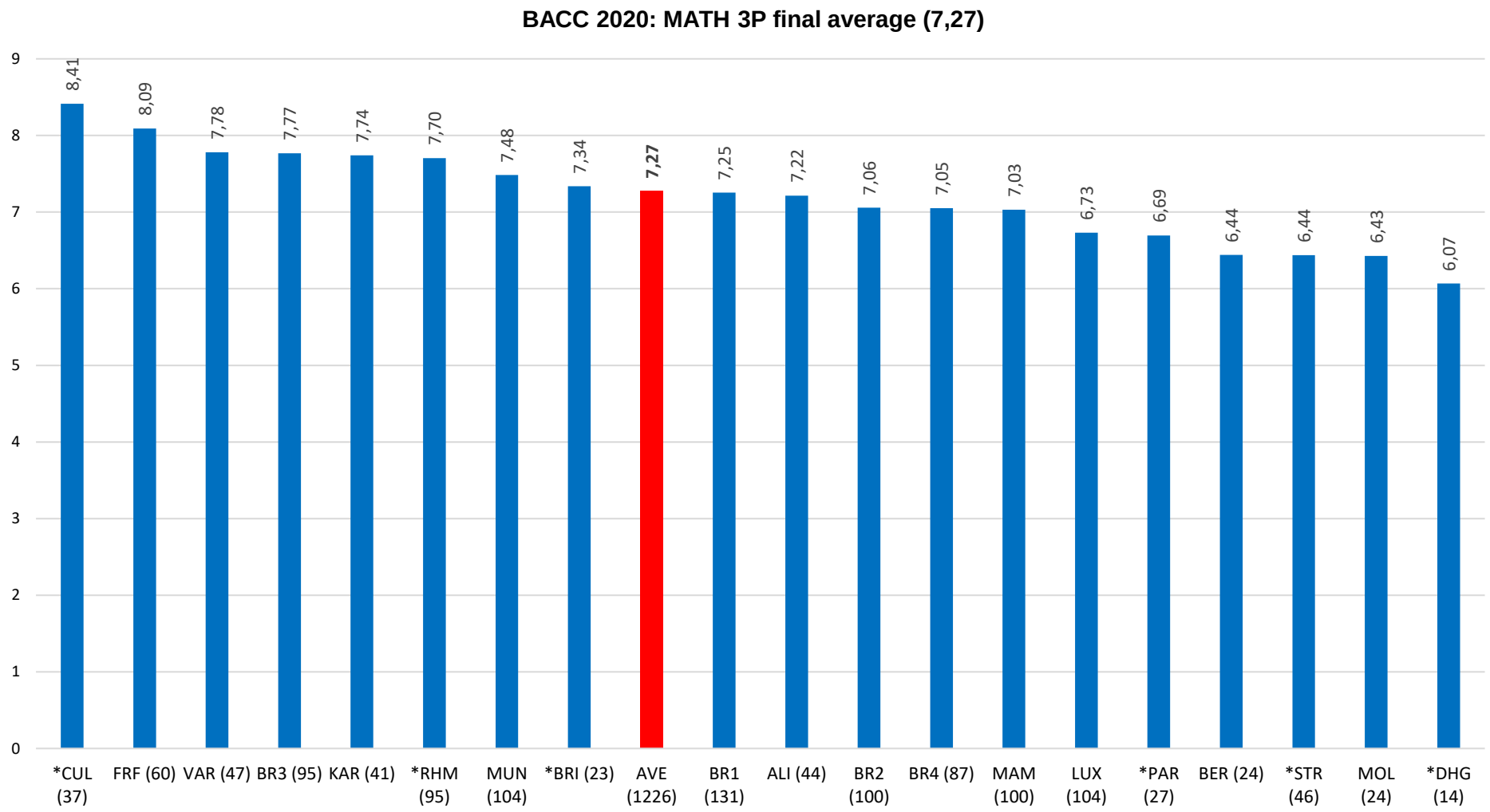


Economics: distribution of final marks

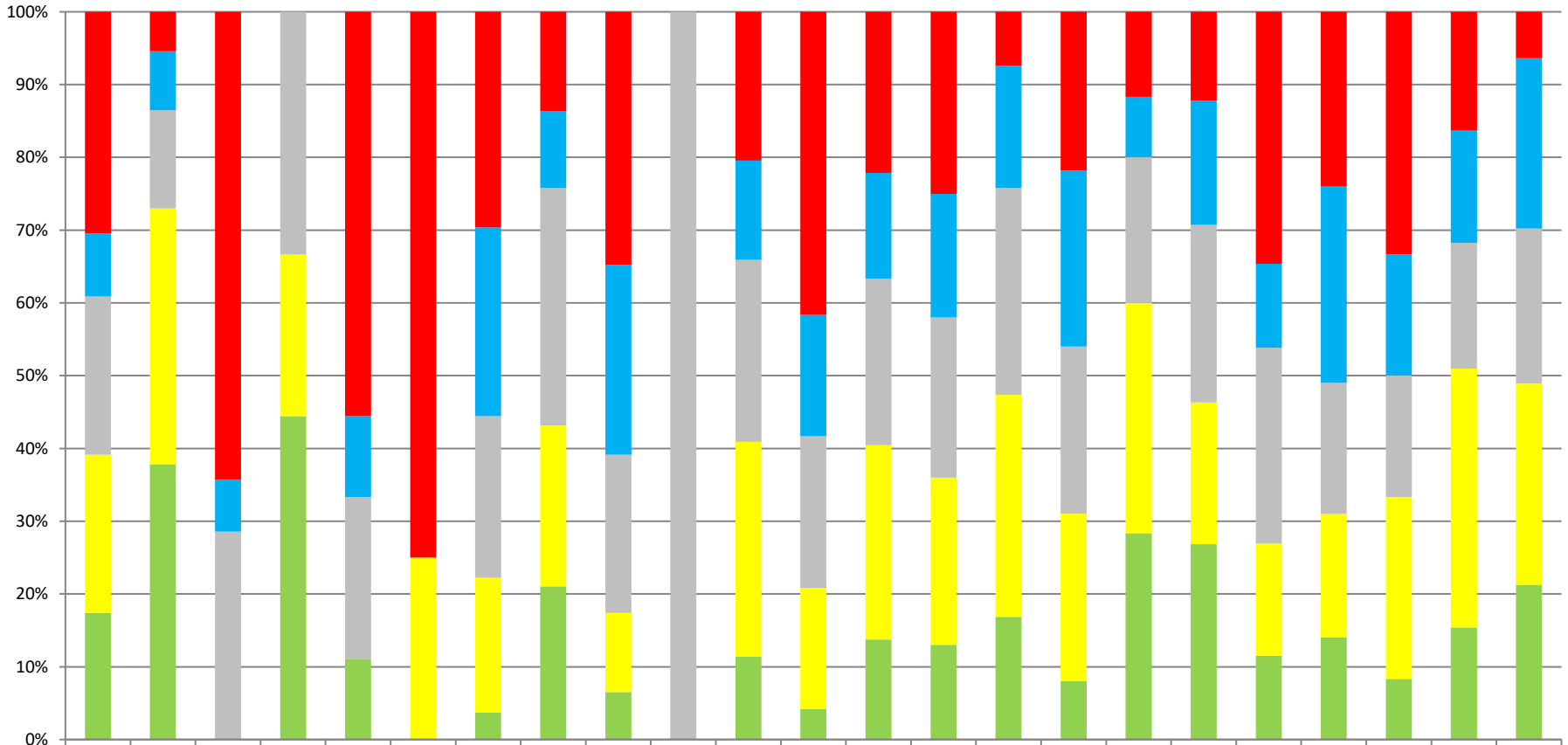


	*BRI	*CUL	*DHG	*HEL	*PAR	*RHM	*STR	ALI	BER	BR 1	BR 2	BR 3	BR 4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
0-59,9				1	1	5	4		5	5	2	2	3	2		4	2	1	1	
60-69,9		2			1	6			1	9	1		8	2	1	6	7	1	2	3
70-79,9	2	2		1	1	9	5	4	1	10	10	11	3	3	2	9	6	3	2	6
80-89,9		8	4	1	3	14	4	4	2	2	8	14	14	9	4	7	15	3	10	14
90-100		3	8		6	26	2	8	3	1	9	11	18	12	3	21	20		5	7

8.3.4. Mathematics 3P (Success rate: 78.63%)

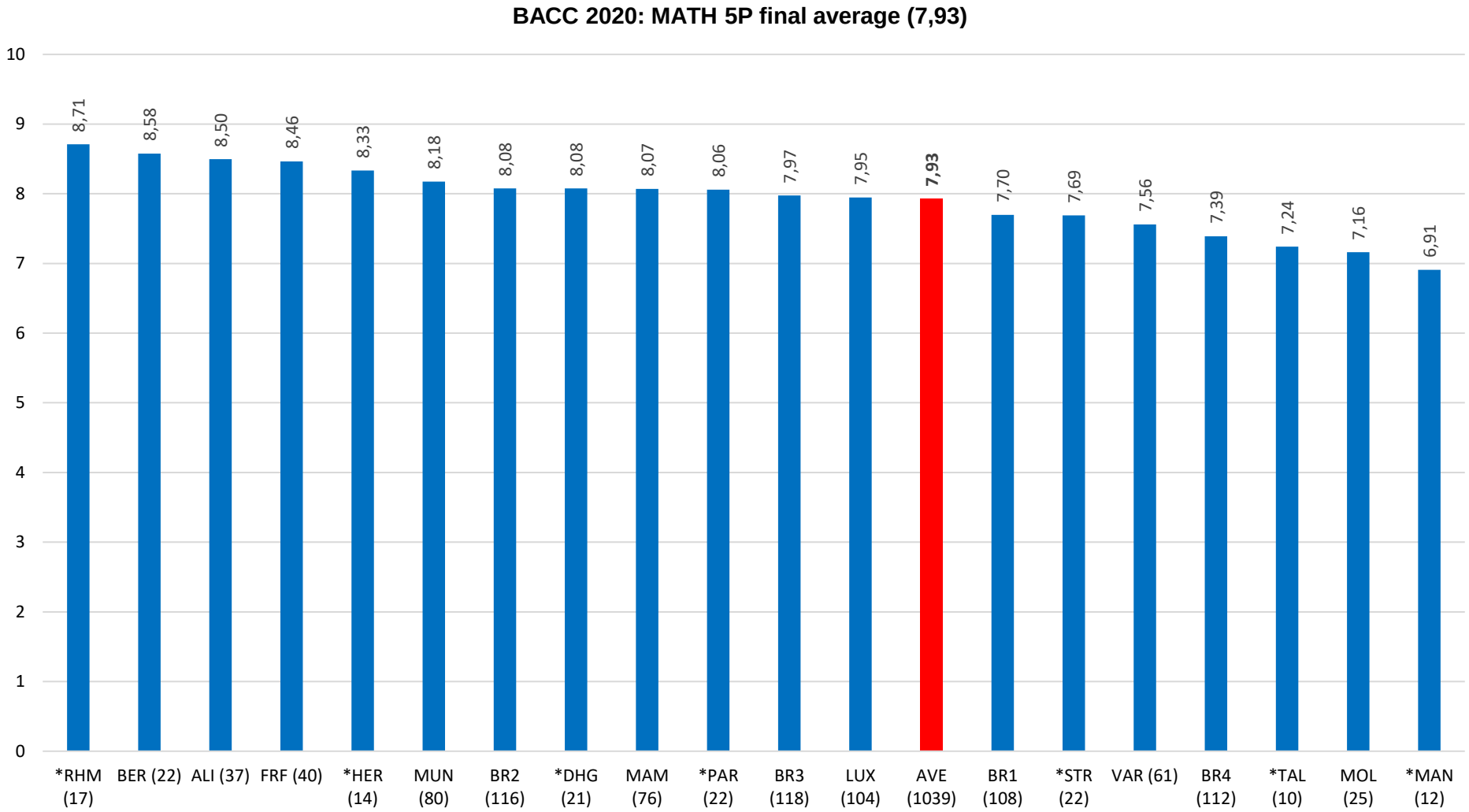


MATH 3P: distribution of final marks

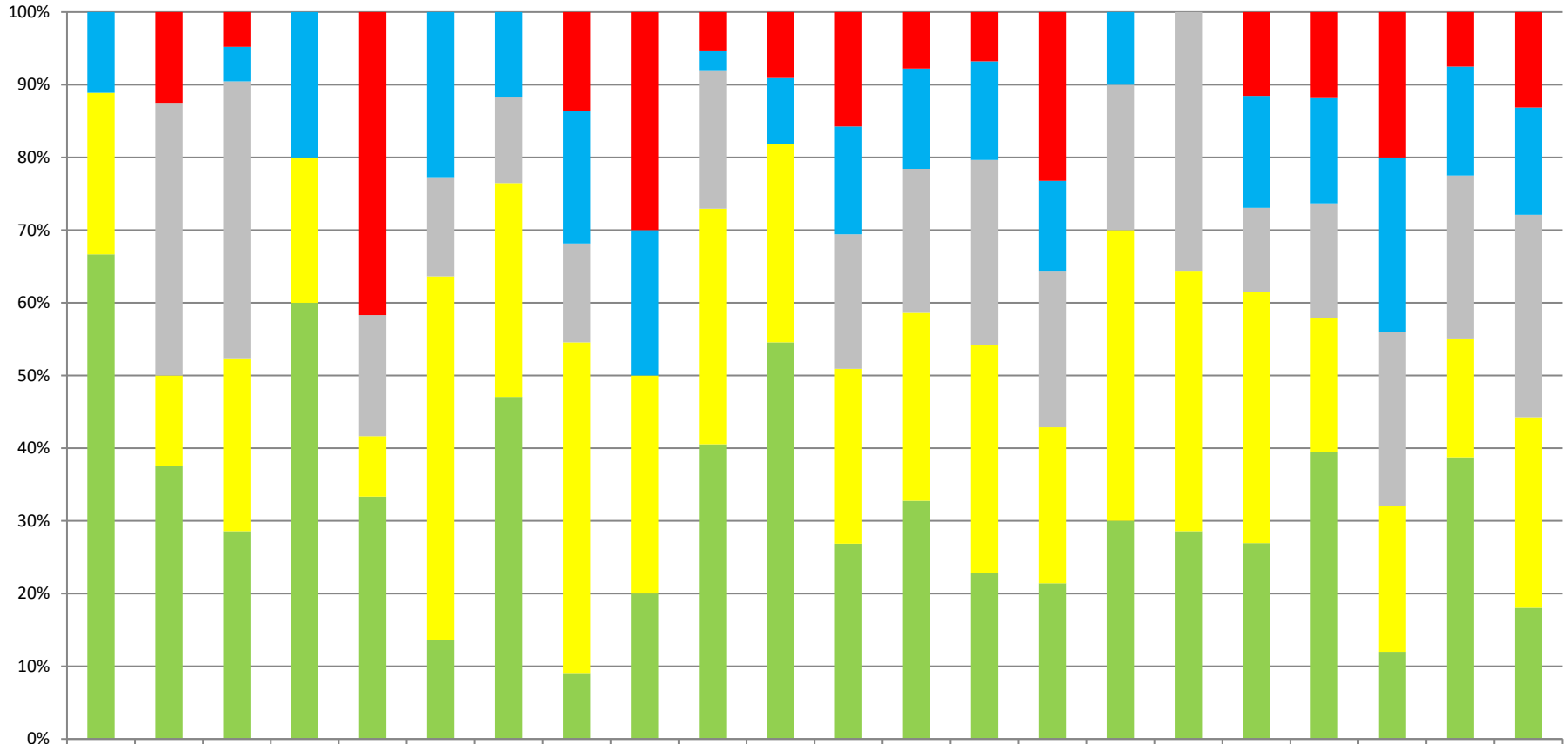


	*BRI	*CUL	*DHG	*HEL	*HER	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	BR 1	BR 2	BR 3	BR 4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
0-59,9	7	2	9		5	3	8	13	16		9	10	29	25	7	19	7	5	36	24	8	17	3
60-69,9	2	3	1		1		7	10	12		6	4	19	17	16	21	5	7	12	27	4	16	11
70-79,9	5	5	4	3	2		6	31	10	1	11	5	30	22	27	20	12	10	28	18	4	18	10
80-89,9	5	13		2		1	5	21	5		13	4	35	23	29	20	19	8	16	17	6	37	13
90-100	4	14		4	1		1	20	3		5	1	18	13	16	7	17	11	12	14	2	16	10

8.3.5. Mathematics 5P (Success rate: 88.74%)

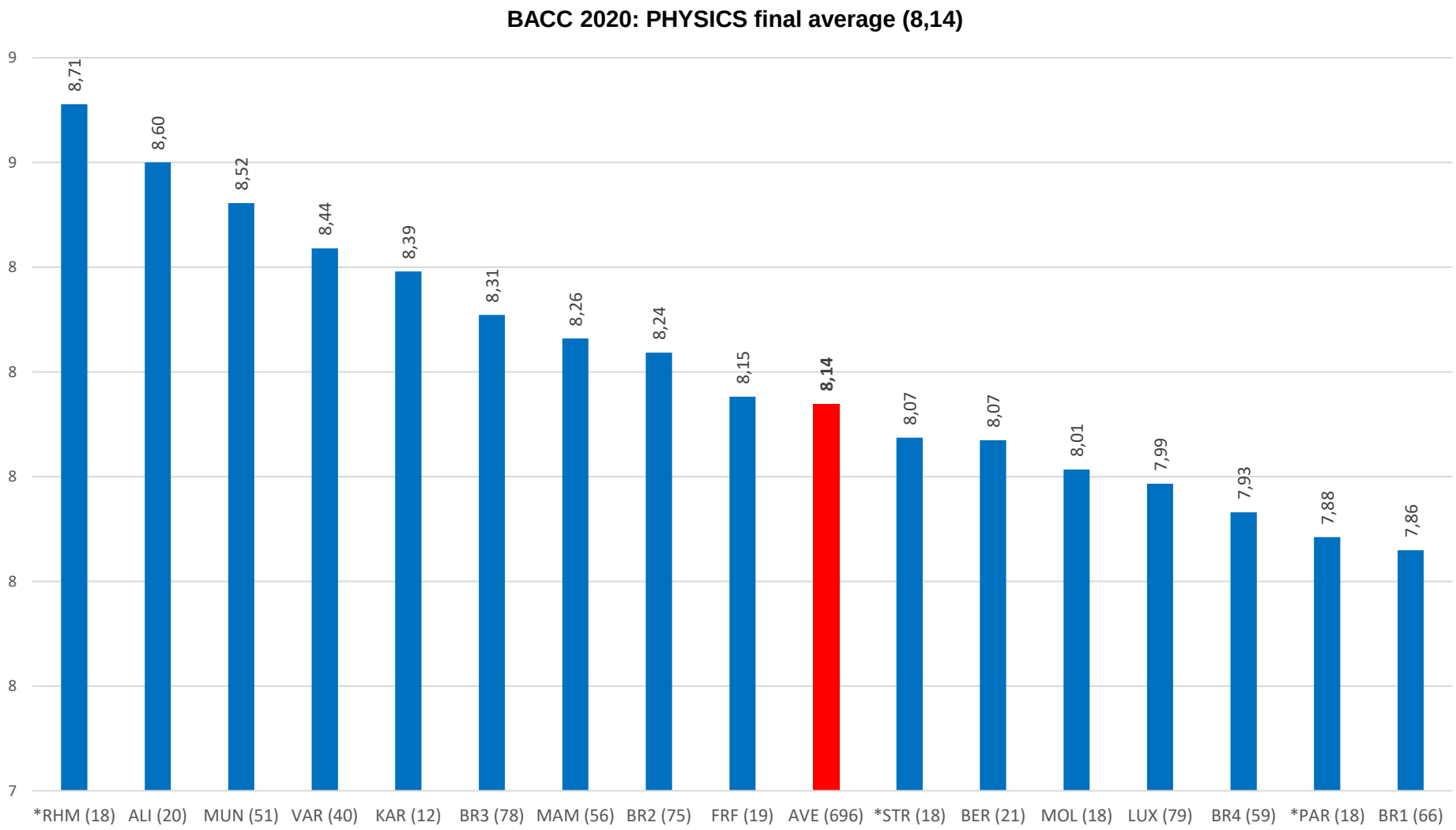


MATH 5P: distribution of final marks

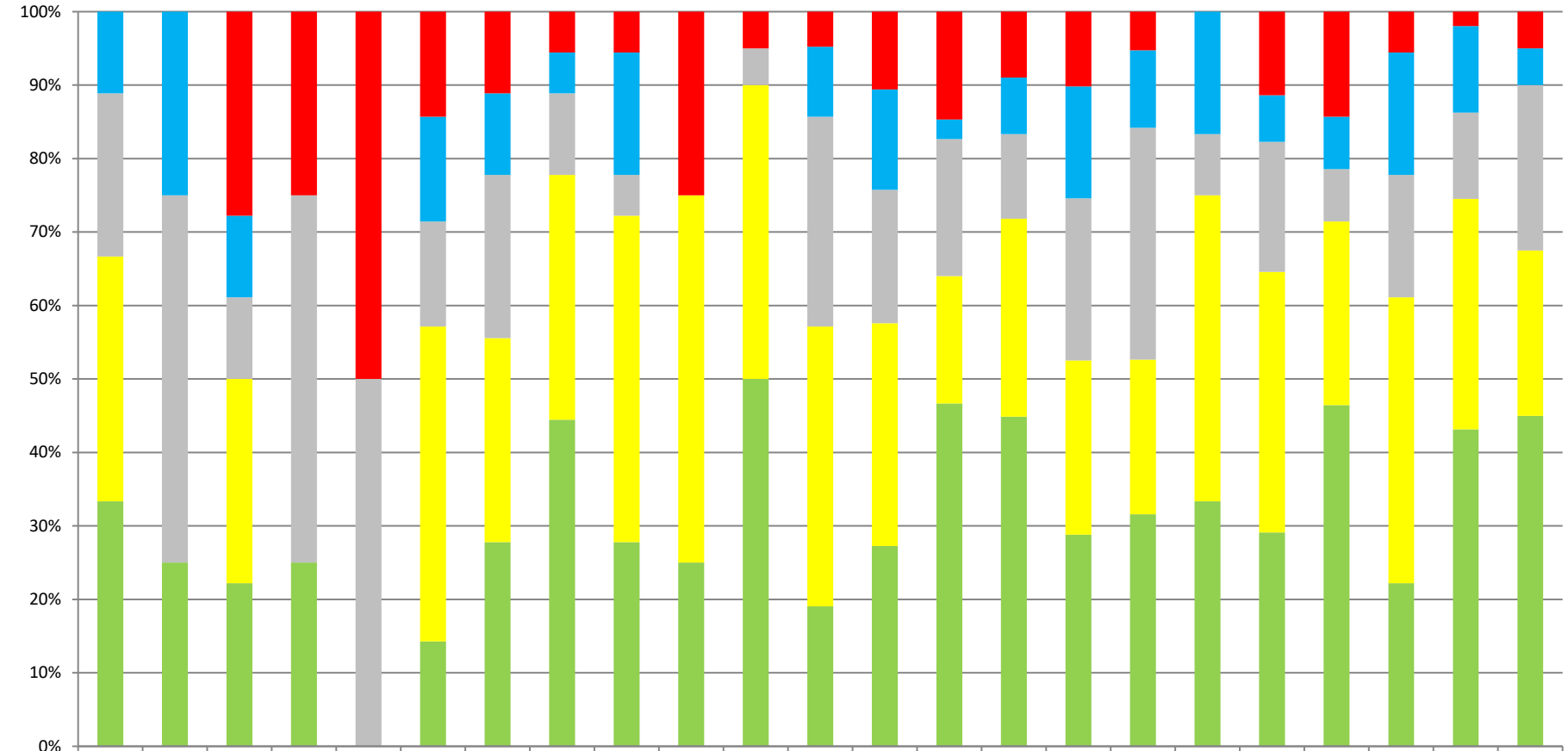


	*BRI	*CUL	*DHG	*HEL	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	BR 1	BR 2	BR 3	BR 4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
0-59,9		1	1		5			3	3	2	2	17	9	8	26			12	9	5	6	8
60-69,9	1		1	1		5	2	4	2	1	2	16	16	16	14	4		16	11	6	12	9
70-79,9		3	8		2	3	2	3		7		20	23	30	24	8	5	12	12	6	18	17
80-89,9	2	1	5	1	1	11	5	10	3	12	6	26	30	37	24	16	5	36	14	5	13	16
90-100	6	3	6	3	4	3	8	2	2	15	12	29	38	27	24	12	4	28	30	3	31	11

8.3.6. Physics (Success rate: 89.81%)



PHYSICS: distribution of final marks



	*BRI	*CUL	*DHG	*HEL	*HER	*MAN	*PAR	*RHM	*STR	*TAL	ALI	BER	BR 1	BR 2	BR 3	BR 4	FRF	KAR	LUX	MAM	MOL	MUN	VAR
0-59,9			5	1	1	1	2	1	1	1	1	1	7	11	7	6	1		9	8	1	1	2
60-69,9	1	1	2			1	2	1	3			2	9	2	6	9	2	2	5	4	3	6	2
70-79,9	2	2	2	2	1	1	4	2	1		1	6	12	14	9	13	6	1	14	4	3	6	9
80-89,9	3		5			3	5	6	8	2	8	8	20	13	21	14	4	5	28	14	7	16	9
90-100	3	1	4	1		1	5	8	5	1	10	4	18	35	35	17	6	4	23	26	4	22	18

9 EB Report 2020 On-Line Version: Interactive graphs

Interactive graphs available on-line.

http://schola-europaea.eu/bacc/report/2020

Please take into consideration that in some of these interactive graphs of the European Baccalaureate 2020 could be empty or not give the same picture as previous years. The reason is because of the special circumstances of COVID-19. Since the written and oral examinations have not been held, there are no marks from these examinations. However, you can filter and obtain this information from previous years if you wish.

01	Candidates by School
02	Candidates by Subject
03	Final Mark Averages
04	Final Mark by school and subject-language Box Chart
05	Final Mark by subject and school Box Chart
06	Distribution of candidates by school and BACC mark
07	Averages A, B, C, W, O and final
08	Written and Oral corrections by school, section and subjects
09	Averages per school and subject
10	SWALS
11	Additional Written Examinations
12	Literary subjects
13	Scientific subjects

ANNEX 1

Schola europaea

Office of the Secretary-General

European Baccalaureate Unit

Ref.: 2020-07-D-2-en-1

FINAL REPORT ON THE MODERATION METHOD FOR THE EUROPEAN BACCALAUREATE MARKS IN 2020

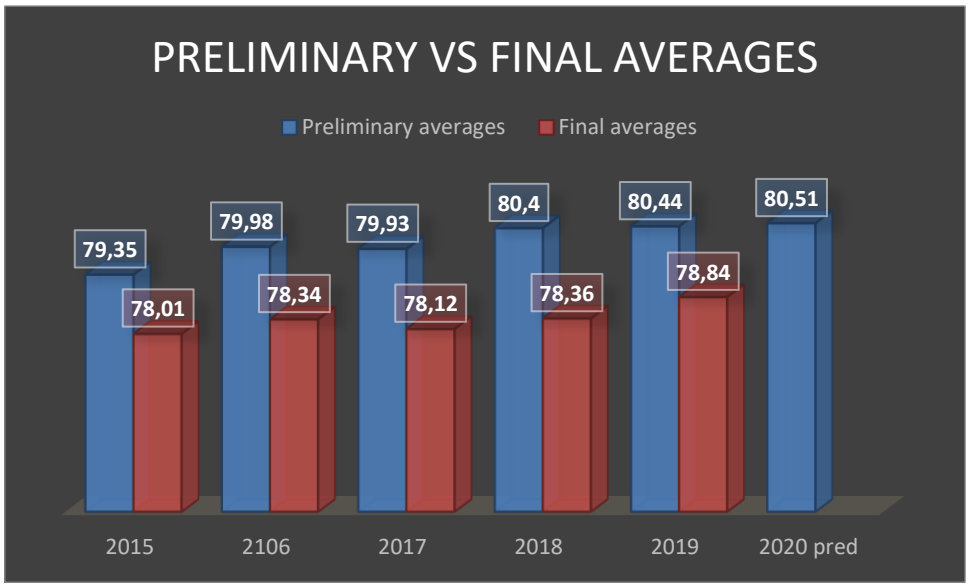
Goal:

The Board of Governors cancelled the organisation of the 2020 European Baccalaureate examinations and decided to award the European Baccalaureate Diplomas using only A1, A2 and B1 marks (preliminary marks). The distribution of results might differ significantly from previous years' final marks distributions. The European Baccalaureate Regulations foresee the possibility of applying moderation, the prerogative of the Chairman and Vice-Chairmen of the European Baccalaureate. In order to safeguard the credibility of the European Baccalaureate Diploma, it might be necessary to:

- Demonstrate that the final marks distribution, calculated using only A1, A2 and B1 in the previous years, differed significantly from the actual final marks. Also to compare this year's preliminary marks distribution with previous years' final marks distributions.
- Create a method/algorithm to moderate the 2020 final marks. The method should not negatively affect this year's students, compared with those of earlier years.

Preliminary investigations

The mean preliminary and final marks of the years 2015 to 2019 are shown in the chart below, as well as that of the final marks for 2020 calculated using A1, A2 and B1 marks only (A2 marks were not yet known for 2020 so the A1 marks were replicated as a prediction for the A2 marks; for the sake of simplicity, I will refer to these as "preliminary marks").



The overall averages fell by between 1.34 and 2.04 marks between the preliminary and the final marks, so moderation should decrease the mean of 2020 preliminary marks from 80.51 to somewhere between 78.5 and 79.2, with the maximum and minimum decrease recorded in the past years used as a reference range. The fact that the average of the final marks ranged between 78.02 and 78.84 in the past five years should also be taken into consideration.

To test whether uniform moderation (where every student's final mark is decreased by the same percentage to guarantee an ideal mean) could be used, the distributions were compared.

- First, there is no evidence for any similarities between each year's distribution of preliminary and final marks. Using a chi-squared test, the table below shows the p-values of comparing the two distributions for the years 2015 to 2019.

	2015	2016	2017	2018	2019
p	2.7×10^{-9}	7.3×10^{-12}	2.2×10^{-16}	6.0×10^{-21}	1.36×10^{-13}

- The distribution of the 2020 preliminary marks was also compared with the distributions of previous years' final marks using a chi-squared test. The table below show the p-values for its comparison with the years 2015 to 2019.

	2015	2016	2017	2018	2019
p	7.6×10^{-29}	1.1×10^{-13}	6.4×10^{-8}	0.031	0.23

Based on the results of the above two tests, it can be safely concluded that it is not enough to apply uniform moderation as the distribution of the marks also needs to be adjusted.

My first attempts were to use back and forth normalisation with a Box-Cox transformation. Apart from being perfectly capable of achieving a desired mean and standard deviation, it also significantly improved the p-value in the chi-squared tests in most years. This improvement, however, was still not good enough to declare a "really good fit"; not to mention that its functioning would not be transparent for most people involved.

I opted therefore for a different, possibly more broadly intelligible approach.

Initial proposal

Step 1: Determine the desired distribution: students' results have been grouped in cohorts each corresponding to a range of 5 marks (except for the first one): 0 to 59.99, 60 to 64.99, 65 to 69.99, etc. In order to fix the distribution, we can propose possible "ranges" for the percentage (or number) of students in each cohort based on the evidence from the previous years. The final decision about what distribution to adopt (i.e. which percentage to use for each cohort) would then lie with the body responsible

for moderation of the results. Once this decision is made, we would reach the desired number of students with the marks 0 to 59.99, 60 to 64.99, etc.

Using the past five years' final marks, the ranges for the different cohorts using the number of students for 2020 are shown in the table below.

	min.	max.
0-59.99	38	51
60-64.99	137	144
65-69.99	240	296
70-74.99	340	377
75-79.99	394	429
80-84.99	431	488
85-89.99	342	414
90-94.99	170	227
95-100	18	23

Step 2: It is requested that it be ensured that no student, with an overall result of at least 60 as preliminary mark, would eventually fail. Therefore, once the results are known, the number of students in the two lowest cohorts may need to be adjusted: if the number of students with a preliminary mark below 60 (f) is smaller than the "ideal" number of students who should end up with a mark below 60 (i, determined in step 1), we will have to use f to determine the number of students who are failing. Consequently, it is necessary to add the difference ($i - f$) to the desired number of students in the 60 to 64.99 cohort.

Step 3: Take the preliminary marks and determine the percentage grades corresponding to the limits of the different cohorts. For example, if there are 30 students projected to have a result below 60, consider the result of the 30th student as the highest possible grade which will eventually fall into this cohort (in the case of a tie, we can stop before the 30th student to be as lenient as possible). The next mark

will be the lowest in the 60 to 64.99 cohort. Denote the mean of the two numbers by L_{60}. Repeat this process with 65, 70, etc.

Step 4: Use linear interpolation to calculate the moderated final marks. Individual preliminary results will be referred to as p in the formulae below.

We would thus derive from this the desired distribution of the students' final marks (apart from small differences arising from potential ties).

It would still be necessary to check that the overall mean would fall into the expected range.

Denoting the preliminary marks by p and the corresponding moderated final mark by $f(p)$, this means that the following formula is to be applied:

$$f(p) = \begin{cases} 95 + \dfrac{(p_{max} - 95)(p - L_{95})}{p_{max} - L_{95}}, & x \geq L_{95} \\ 90 + \dfrac{4.99(p - L_{90})}{L_{95} - L_{90}}, & L_{90} \leq x < L_{95} \\ 85 + \dfrac{4.99(p - L_{85})}{L_{90} - L_{85}}, & L_{85} \leq x < L_{90} \\ 80 + \dfrac{4.99(p - L_{80})}{L_{85} - L_{80}}, & L_{80} \leq x < L_{85} \\ 75 + \dfrac{4.99(p - L_{75})}{L_{80} - L_{75}}, & L_{75} \leq x < L_{80} \\ 70 + \dfrac{4.99(p - L_{70})}{L_{75} - L_{70}}, & L_{70} \leq x < L_{75} \\ 65 + \dfrac{4.99(p - L_{65})}{L_{70} - L_{65}}, & L_{65} \leq x < L_{70} \\ 60 + \dfrac{4.99(p - L_{60})}{L_{65} - L_{60}}, & L_{60} \leq x < L_{65} \\ x, & 0 \leq x < L_{60} \end{cases}$$

where p_{max} is the highest preliminary mark, while L_n is the lower limit of the cohort with a moderated final mark between n and $n + 5$ (that is, if $L_n \leq p < L_{n+5}$, $n \leq f(p) < n + 5$).

As mentioned previously, the calculations supporting the above proposal were based upon a projected preliminary mark, which only took the A1 and B1 marks into consideration as the A2 marks had not been available at the time.

Using the actual preliminary marks (A1+A2+B1 marks)

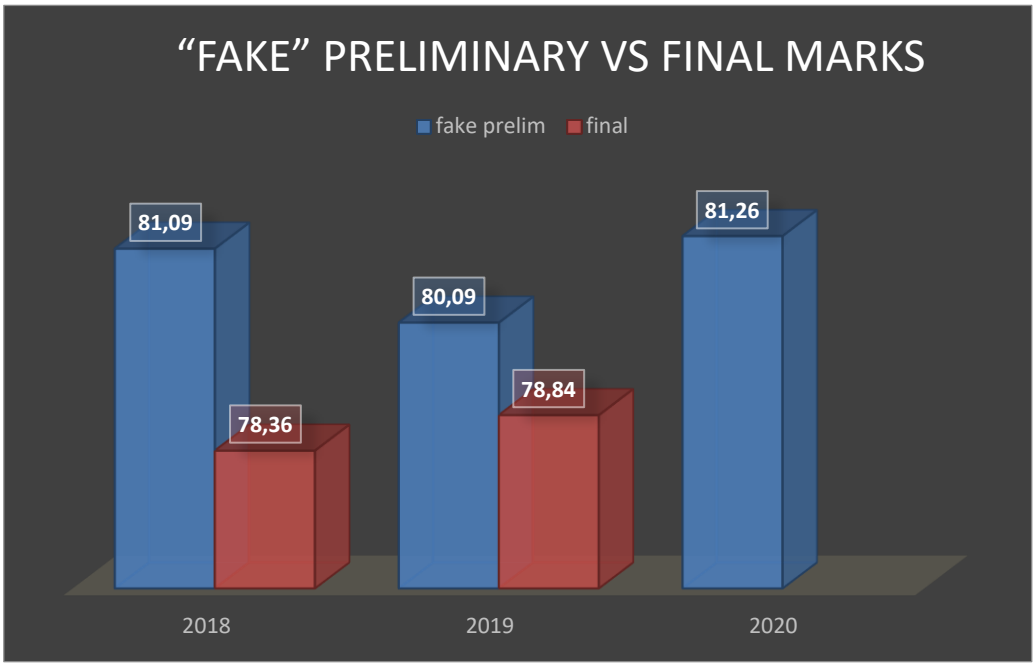
Having received the actual preliminary marks (based on the A1, A2 and B1 marks), performing respective chi-squared tests confirmed that their distribution is statistically significantly different from the distribution of the final marks of past years (while the final marks of past years were statistically very similar), as illustrated in the table below.

	2015	2016	2017	2018	2019	2020 prel.
2015	1	0.999	0.997	0.999	0.97	0.011
2016		1	1	1	1	0.008
2017			1	0.999	0.999	0.04
2018				1	1	0.062
2019					1	0.00000043
2020 prel.						1

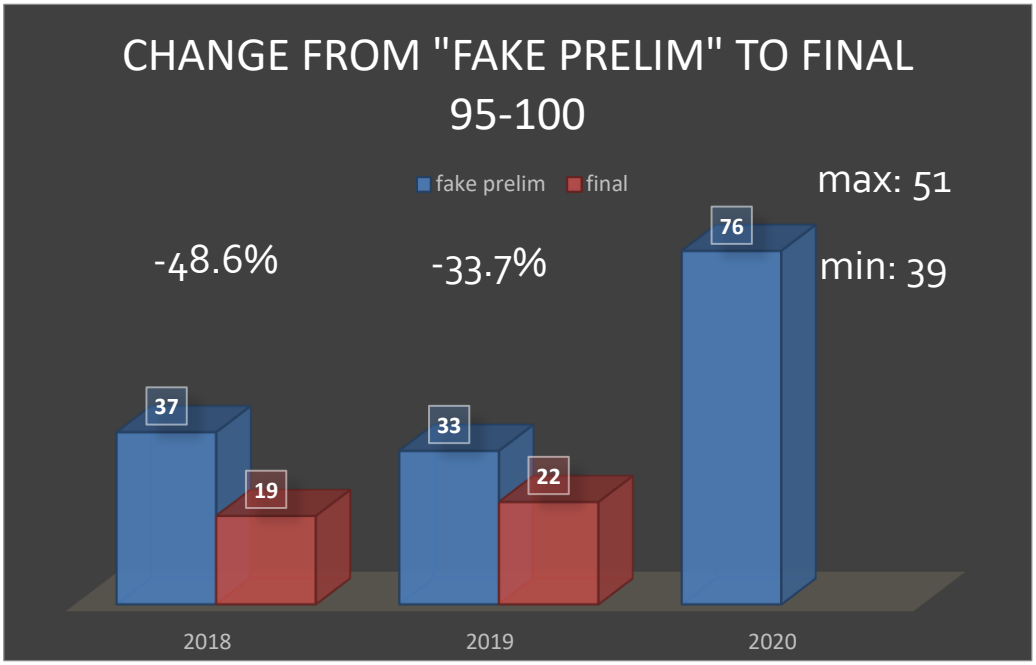
In line with the decision of the Board of Governors, this justifies the application of moderation. It was felt advisable, however, as we will see, to modify the formerly proposed moderation method to students' advantage.

A considerable difference in both the mean and the distribution of these marks and those of both the preliminary and the final marks of previous years was detected. It then became reasonable, in order to provide fairer and more balanced moderation in the light of the new data available, to compare the results with the results of the past years calculated in the same way (A1+A2+B1 duplicated; this calculation will be referred to as “fake preliminary results” below). This would make it possible to produce a fair comparison of the performance of the different populations. Since the time period between the arrival of the A2 marks from the schools and the meeting of the Board of Inspectors was less than 72 hours (including a whole weekend), this could only be done for the past two years. The findings and their consequences for the proposed moderation, as well as some further considerations, will follow:

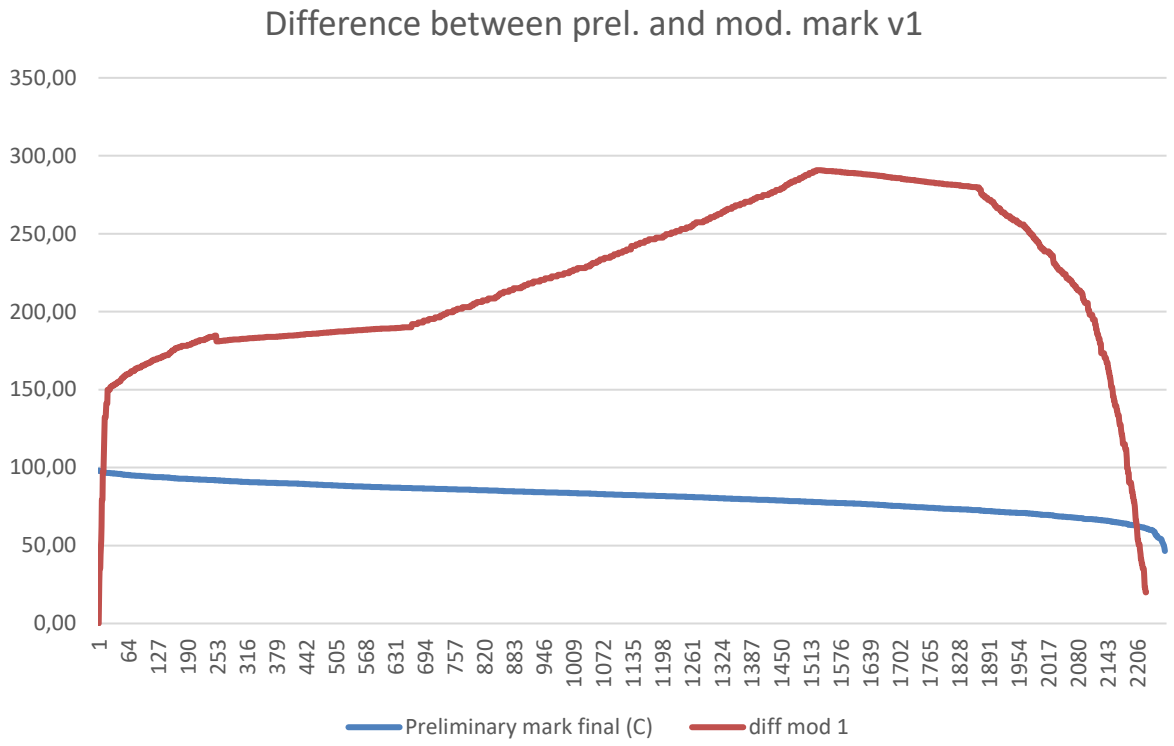
1) The difference between the average of “fake preliminary” and that of the final marks ranged between 1.25 and 2.73 (the final mark average being lower). If this is also taken into consideration when determining the range in which the mean of the final marks should fall, the aforementioned range is extended, and now the final average should be between **78.01** and **80.01**.



2) Comparing the distribution of the "fake preliminary" marks of this year and the past two years, one striking difference is the percentage of students in the highest cluster (95-100). While the highest value in previous years was **1.75%**, this year it is **3.36%**, which implies a large group of top students. To be able to reach a fair distribution this year, the change in the number of students in the top cohort from the "fake preliminary" to the final marks was looked at. If the range of percentage change is preserved, the number of students in the top cohort can be expected to be between 39 and 51 (compared with 18 to 23 if calculated from the final marks of previous years).



3) If we simulate moderation based on the original proposal, we also find that there is an extremely sharp decline in the results of students in the top cohort. This is illustrated in the graph below. (100.00 corresponds to losing 1 mark.)



This is the result of using linear interpolation for a much smaller number of students than in other cohorts. It is desirable to avoid this and provide a smoother decrease. In order to do so, the cohorts need to be redefined so that the different cohorts are of comparable size. (Note that the bottom cohort, that is the number of students who are below 60, is fixed.) A better distribution is achieved if, instead of constant 5-mark cohorts, we use the following (the minimum and maximum number of students, determined by the results of the past years, in each cohort is given):

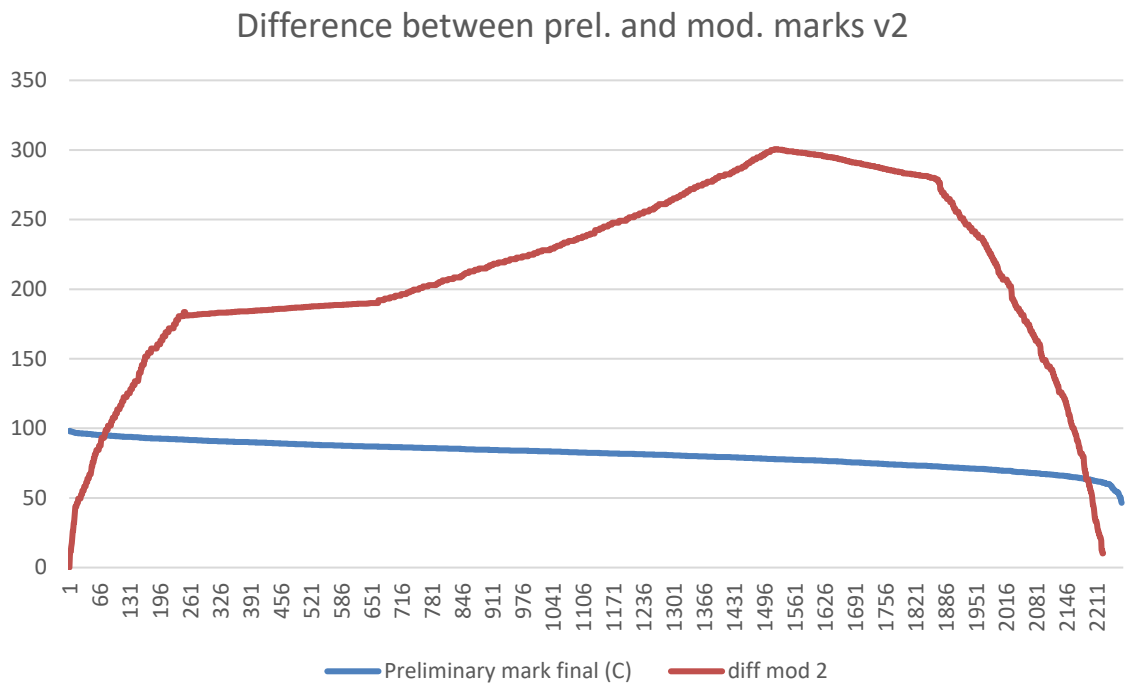
	min.		max.
0-59.99	38		51
60-69.99	382		440
70-74.99	340		377
75-79.99	394		429

80-84.99	431		488
85-89.99	342		414
90-100	190		300

Note that this will imply adaptation of the moderation formula, which becomes

$$f(p) = \begin{cases} 90 + \dfrac{(p_{max} - 90)(p - L_{90})}{p_{max} - L_{90}}, & x \geq L_{90} \\ 85 + \dfrac{4.99(p - L_{85})}{L_{90} - L_{85}}, & L_{85} \leq x < L_{90} \\ 80 + \dfrac{4.99(p - L_{80})}{L_{85} - L_{80}}, & L_{80} \leq x < L_{85} \\ 75 + \dfrac{4.99(p - L_{75})}{L_{80} - L_{75}}, & L_{75} \leq x < L_{80} \\ 70 + \dfrac{4.99(p - L_{70})}{L_{75} - L_{70}}, & L_{70} \leq x < L_{75} \\ 60 + \dfrac{4.99(p - L_{60})}{L_{70} - L_{60}}, & L_{60} \leq x < L_{70} \\ x, & 0 \leq x < L_{60} \end{cases}$$

4) If a lenient version of the above moderation (meaning that the maximum number of students is used for top cohorts and the minimum number for bottom cohorts) is applied, the differences between the preliminary and the moderated marks are shown in the graph below.



While the sudden drop in the results of the top cohort has been avoided, it can be observed that the results of individual students are decreased by up to 3 marks from the “fake preliminary” to the final results. The average student loses about 1.5 marks, between preliminary and final mark, based on evidence from the previous years. In order to avoid negatively affecting this year's students, compared with those of earlier years, it is reasonable to set a ceiling on the number of reduced marks at 1.5 marks, in line with the “average” student of the past years.

This means that the formula to be used needs to be adjusted again. Using the lenient version of the moderation above and applying the 1.5-mark ceiling to the reduction of any individual mark results in the following formulae:

$$f(p) = \begin{cases} i(p), & p - i(p) < 1.5 \\ p - 1.5 & \text{otherwise} \end{cases}$$

where

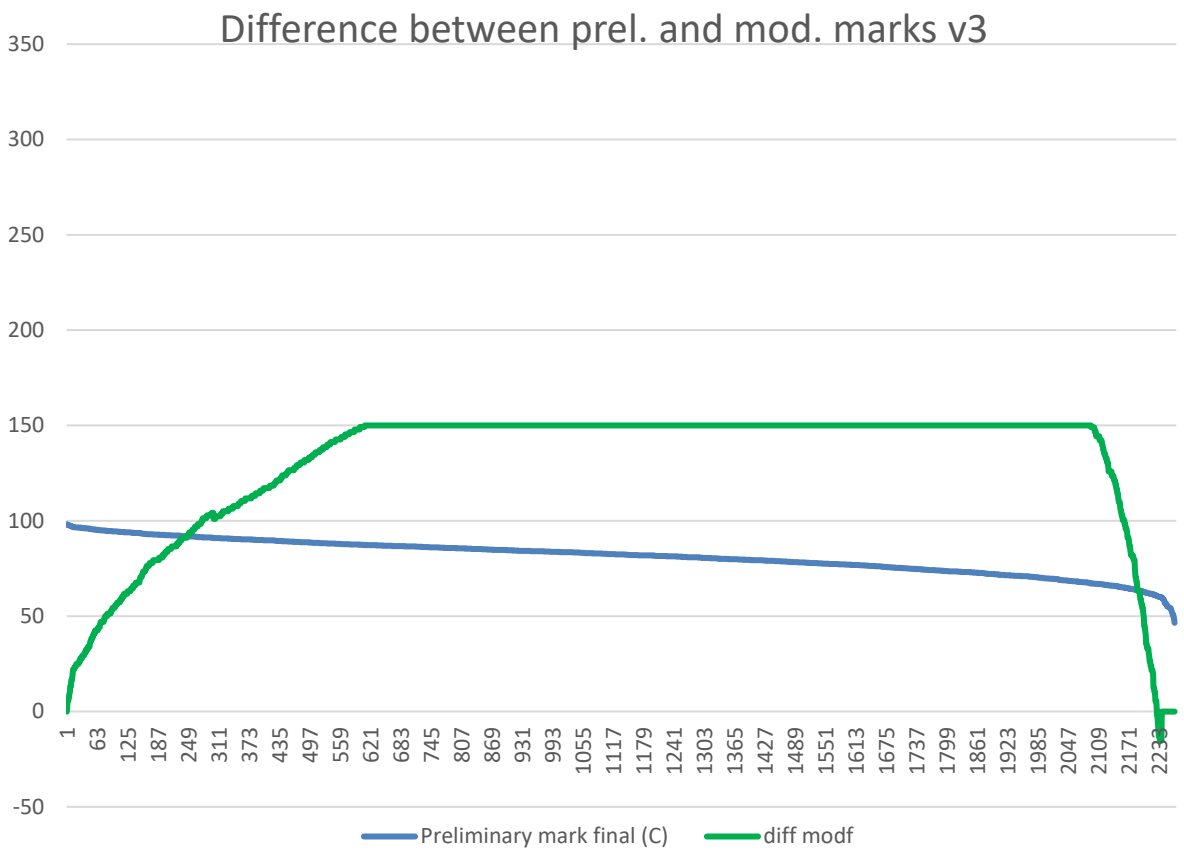
$$i(x) = \begin{cases} 90 + \dfrac{8.2(x - 91.05)}{7.15}, & x \geq 91.05 \\ 85 + \dfrac{4.99(x - 86.6)}{4.4}, & 86.6 \leq x < 91.05 \\ 80 + \dfrac{4.99(x - 82.4)}{4.2}, & 82.4 \leq x < 86.6 \\ 75 + \dfrac{4.99(x - 78)}{4.4}, & 78 \leq x < 82.4 \\ 70 + \dfrac{4.99(x - 72.8)}{5.2}, & 72.8 \leq x < 78 \\ 60 + \dfrac{9.99(x - 59.8)}{13}, & 60 \leq x < 72.8 \\ x, & 0 \leq x < 59.8 \end{cases}$$

(As before p is the preliminary mark and $f(p)$ is the corresponding moderated final mark.)

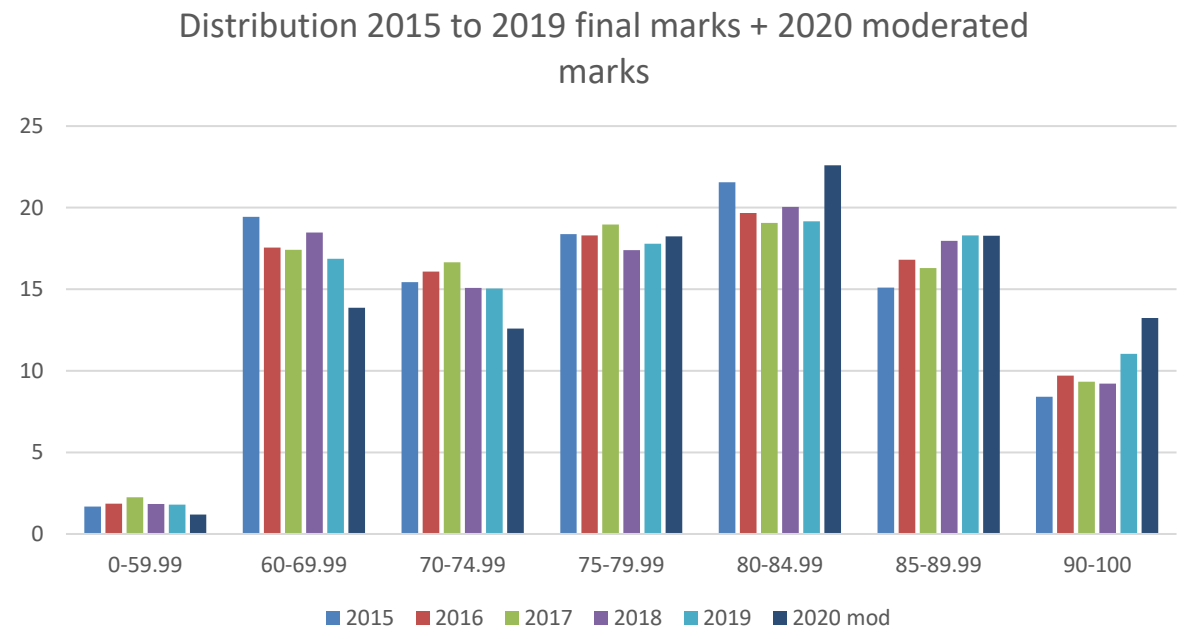
This will obviously improve the overall results as well as the individual results for the vast majority of students, but we will still remain within our predefined ranges: the mean result will be 79.96 (range: 78.01 to 81.01 so it is very close to the higher extreme of the range). The number of students in each cohort will also be in or near the target range:

	min.	mod.	max.
0-59.99	38	27	51
60-69.99	382	375	440
70-74.99	340	346	377
75-79.99	394	386	429
80-84.99	431	430	488
85-89.99	342	401	414
90-100	190	300	300

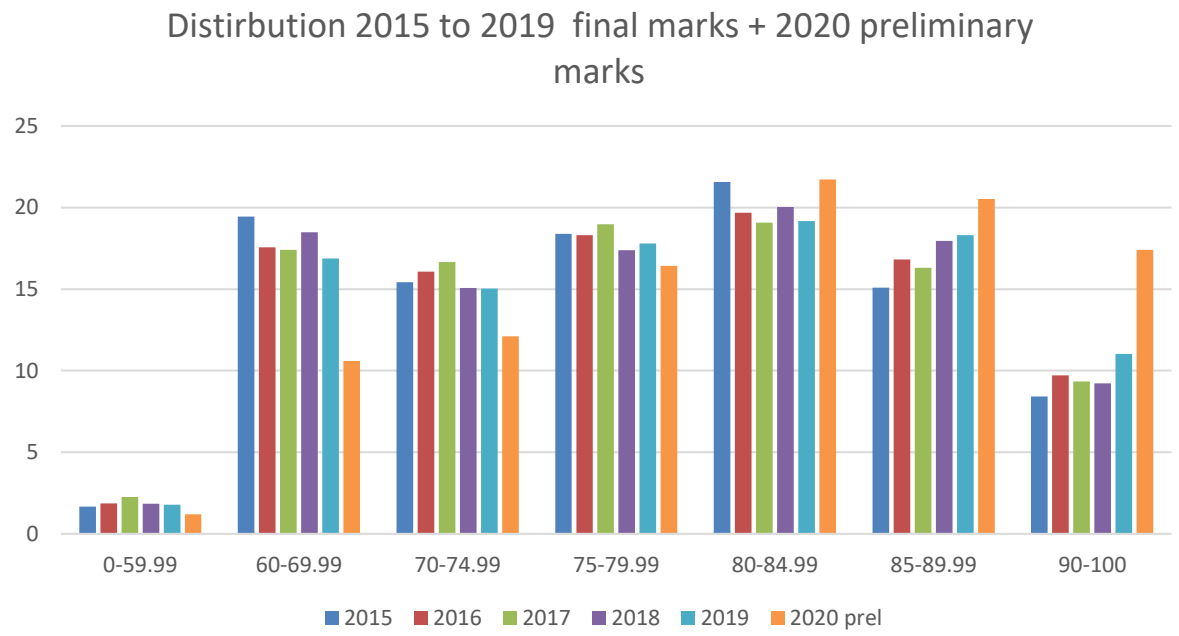
If we look at what the graph of the differences between the preliminary and moderated marks looks like, it can be concluded that we have successfully reduced moderation's negative effects upon individual students.



Comparison of the distribution of final marks in the past five years with that of this year's final marks shows that there is still a difference that can arise from the specificities of this year's population of students.



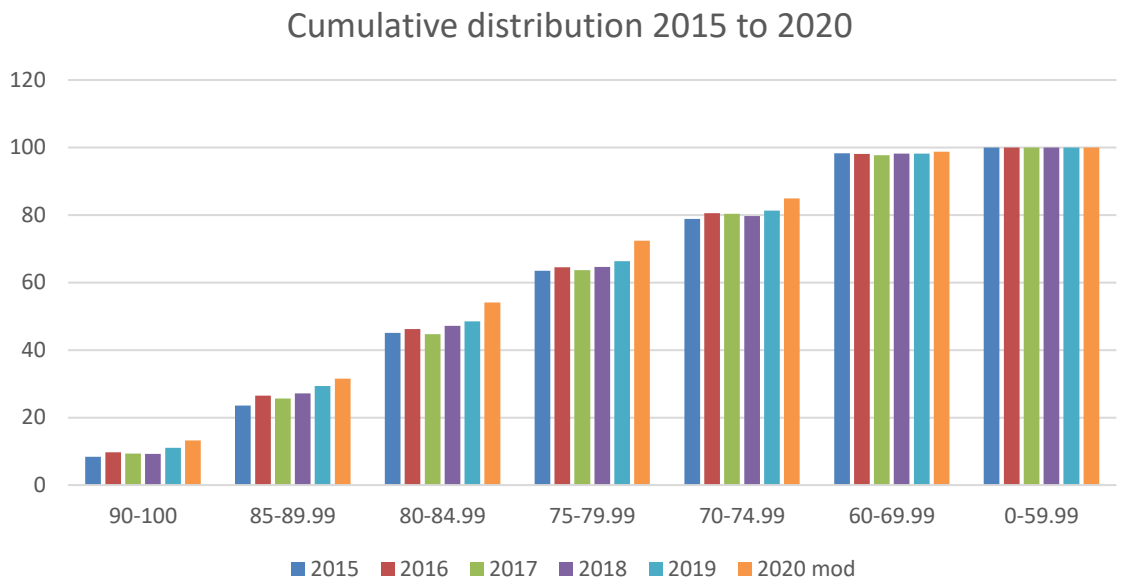
At the same time the striking difference that characterised the distribution of this year's preliminary marks when compared with the final marks of the last five years has been reasonably moderated, preserving the credibility of the European Baccalaureate.



The visual impression is confirmed repeating the chi-squared test with the moderated marks: its results show that the statistical difference between the distributions of the final marks of the past years and this year's moderated marks has been considerably reduced.

	2015	2016	2017	2018	2019	2020 mod.
2015	1	0.999	0.997	0.999	0.97	0.45
2016		1	1	1	1	0.727
2017			1	0.999	0.999	0.571
2018				1	1	0.686
2019					1	0.9
2020 mod						1

The comparison of cumulative graphs of the past five years and of this year helps in understanding that, reasonably, this year's students have not been negatively affected, compared with those of earlier years.


Cumulative distribution 2015 to 2020
120
100
80
60
40
20
0
90-100
85-89.99
80-84.99
75-79.99
70-74.99
60-69.99
0-59.99
2015
2016
2017
2018
2019
2020 mod