Rewarding Learning

Annual Qualifications Insight 2015

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Annual Qualifications Insight 2015

Chief Executive Preface

CCEA is a unique education organisation. We bring together the areas of curriculum, examinations and assessment. We report to the Department of Education and work with a wide range of organisations, including educational bodies, employers and industry, to advise on and create economically and socially relevant learning opportunities.

Each year, we produce a significant amount of information and analysis about GCSE and GCE qualifications, using data from across Northern Ireland and our own qualification results.

We present much of this information and analysis to the media and public during the summer months. However, we believe a detailed analysis of this data and projection is of interest to a narrower educational audience.

With this in mind, we have developed the first Annual Qualifications Insight Report. It contains analysis and a broad forecast, based on historic trends and patterns, for GCSE and GCE qualifications. It aims to promote discussion and engagement on educational matters. Alongside the report, we are hosting a series of Insight events aimed at providing a platform for further discussion among industry, business, policy makers and educationalists.

This report and the supporting events will contribute to the ongoing dialogue and help to inform policy makers, education professionals and industry so that we can improve education together.

Justin Edwards
Chief Executive
Council for the Curriculum, Examinations and Assessment (CCEA)

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Executive Summary

N. Ireland GCSE Results 2015

- Improved GCSE results – an increase in A*–C grades.
- Performance in Mathematics and English continues to rise.
- Males show notable improvement, but females still ahead.
- Increases in participation across the STEM subjects.

Figures released in August 2015 show students making steady improvement in GCSE examinations with increases in entries gaining grades A*–C.

The proportion of entries awarded A*–C grades has risen by 0.7 percentage points this year to 78.7%. Entries achieving A*–A have improved 0.4 percentage points to 28.6%, and the number of entries achieving the top A* grade now sits at 9%, a slight rise of 0.1 percentage points on 2014.

This year performance in Mathematics improved with 66.6% of entries awarded A*–C, up 0.4 percentage points on 2014. Performance in English also improved with A*–C grades now representing 75.8% of entries in the subject, a considerable rise of 2.8 percentage points.

Males have made a notable contribution to this year's rise in performance with the percentage of male entries achieving A*–C rising a full percentage point in 2015 to 75.1%. Females are still well ahead in GCSE performance with 82.2% of all female entries gaining the A*–C grades, up 0.5 percentage points on last year.

The total number of entries in GCSE examinations in N. Ireland has fallen by 0.8% to 171,325. This is in line with an overall drop in the Year 12 student cohort.

In 2015, the proportion of entries in STEM subjects (Science, Technology, Engineering and Mathematics) has grown by 3%. This figure is being driven by Mathematics (up 3.3%) and ICT (up 6.3%). There were also rises in the percentage of the overall entry taking Biology, Chemistry and Physics.

Overall, entries for languages fell in 2015, with the exception of Spanish, which rose by 7%. There were also falls in entries for languages across the combined Three Countries (England, N. Ireland and Wales).

Three Country GCSE results are stable.

There is little change in the Three Country results compared with last year:

- Grade A* declined marginally, 0.1 percentage point to 6.6%.
- Grades A*–A follow the same pattern, falling 0.1 percentage point to 21.2%.
- Grades A*–C increased, 0.2 percentage points to 69.0%.

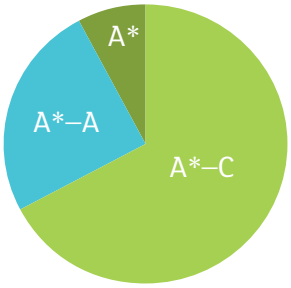
The number of GCSEs increased 1.2 percent to 5,277,604:

- As expected, 16 year olds made up the greatest proportion of entries, increasing 1.7% to 4,544,077 (the Three Countries 16-year-old cohort was down 1.5% year on year).
- Significantly, the number of entries from 17 year olds increased 18.2% to 309,846.
- Entries by 15 year olds dropped 13.4% to 423,681.

GCSE Entries

A*
Increased to
9%

A*–A
Increased to
28.6%



A*–C
Increased to
78.7%

Entries achieving A*–C

Performance in Mathematics and English

Mathematics

0.4% Increase
66.6%
awarded
A*–C

English

2.8% Increase
75.8%
awarded
A*–C

STEM Subjects

The proportion of entries in **STEM subjects has grown by**

3%

Mathematics increased by 3.3%
ICT increased by 6.3%

Languages

Overall fall in entries for languages in 2015 with the exception of Spanish, which rose by

7%

1

Executive Summary

GCE A Level

- Mathematics now the most popular A Level in N. Ireland.
- Female entry is responsible for the increases in STEM subjects.
- High performance maintained, N. Ireland continues to be the top performing region in the Three Country comparison.

GCE A Level results issued to students in N. Ireland in August 2015 show an increase in numbers taking A Levels in N. Ireland this year, driven by a notable rise in entries in Mathematics. The subject is now the most popular A Level, accounting for 1 in 10 of all N. Ireland A Level entries. Entries in Mathematics rose by 8.6%. Overall A Level entries rose by 2.5% from 31,600 in 2014 to 32,390 this year.

Participation in the STEM subjects (Science, Technology, Engineering and Mathematics) remains strong. Along with Mathematics, there were increases in numbers taking Design and Technology, up 8.8%, and ICT, up by 4.5%. Of particular interest is an increase this year in the number of females taking A Levels in STEM subjects, with increases in Biology (+5.7%), Chemistry (+3.3%), Physics (+2.1%), Mathematics (+10.6%) and Design and Technology (+24.5%).

Students continue to perform strongly at A Level, with the overall A*–E pass rate rising slightly by 0.1 percentage point to 98.2%. There was also a small increase in those awarded the top grade, with 7.6% of entries receiving an A*, up 0.3 percentage points on last year. The percentage of entries achieving A*–A fell slightly to 29.3%, down by 0.6 percentage points. While females still account for the majority of A*s awarded (7.8%), this year the percentage of males achieving the highest grade rose by 0.6 percentage points to 7.4%.

The Three Country results (England, N. Ireland and Wales) show there is stability across the grades at A Level, with the A* remaining unchanged at 8.2 percent of all awards; A*–A declining marginally by 0.1 percentage point to 25.9 percent; and A*–E rising by 0.1 percentage point to 98.1 percent.

The number of A Levels taken in the Three Countries has risen 2.0% compared with 2014, from 833,807 to 850,749. This is despite a 1.1 percent fall in the 18-year-old cohort.

There is also an increase in the largest entry subject, Mathematics (up 3,895). Mathematics remains the most popular A Level in the Three Countries, with 10.9 percent of all entries. English is second with 10.5 percent and Biology third with 7.4 percent.

STEM Subjects

Increase this year in the number of females taking A Levels in STEM subjects

Biology + **5.7%**
Chemistry + **3.3%**
Physics + **2.1%**
Mathematics + **10.6%**
Design & Technology + **24.5%**

Overall A Level Entries

2.5% Increase in 2015

Increase in numbers taking:

Design & Technology up **8.8%**

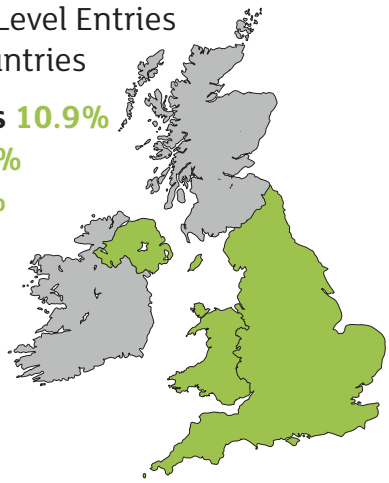
ICT up **4.5%**

7.6% of entries receiving an A* – A 0.3% increase on last year

Three Countries

Most Popular A Level Entries in the Three Countries

1. **Mathematics** 10.9%
2. **English** 10.5%
3. **Biology** 7.4%



2 Rationale

This document contains a comparative analysis aimed at identifying trends in 16–18 year olds students' uptake of selected GCSE, AS and A Level subjects across a five-year period (2011–2015). The aim of this analysis is to provide stakeholders with a summary of the trends in these subjects over the past 5 years and encourage debate and discussion on the issues raised.

Analysis

The analysis focuses on notable changes in entry, mainly Science, Technology, Engineering and Mathematics (STEM) subjects and Languages (French, German, Irish, and Spanish) at GCSE, AS and A Level. The STEM subjects included in the analysis at GCSE level are Biology, Chemistry, Physics, Mathematics, ICT and Design and Technology. At AS and A Level, the STEM subjects examined are identical except for the addition of Further Mathematics. The languages reviewed in this Qualifications Insight Report are French, German, Irish and Spanish at all three levels: GCSE, AS and A Level.

The trends in entry figures for subjects are examined for all N. Ireland students irrespective of awarding organisation, and then for CCEA, N. Ireland's only awarding organisation.

The main analysis involved comparisons of entry differences and grade outcomes for each academic year in the period 2011–15 across gender (males and females), subject (all STEM and Language subjects) and level (GCSE, AS and A Level). The average entry figures for males and females at each subject across the 2011–15 were also examined for GCSE, AS and A Level. Analysis also considered the percentage of entry increase or decrease for each subject in the five-year period.

Finally, the report takes putative information and forecasts subject entries for the next five years. This analysis was conducted by using prior entry data, population and economic projections.

Report structure

The first section of this Report provides the summary analysis for GCSE subjects and grade outcomes, in particular English, Mathematics, STEM and Languages for the period 2011–15. Similarities and differences between the entry figures for each year for males and females for all N. Ireland students and for those who took these subjects with CCEA are outlined. Notable entry patterns are highlighted. This is followed by an equivalent summary analysis for AS and A Level. Much of the information is displayed graphically and scales are individually customised to provide optimum viewing.

The final section of the report estimates possible subject entries for the period 2016–20.

Section 3

GCSE Qualifications Analysis

3 GCSE Qualifications Analysis

The **General Certificate of Secondary Education (GCSE)** is an internationally recognised qualification awarded in a specified subject, generally taken in a number of subjects by pupils in post-primary education in N. Ireland.

The qualifications 'brand' of GCSE is a shared brand across N. Ireland, England and Wales (Three Countries). Although the principles of the brand remain constant, devolution across the three 'owning' jurisdictions is increasingly diversifying the format of the qualifications in each region.

The GCSE Mathematics, English and ICT qualifications are equivalent to a Level 1 (Grade G–D) or Level 2 (Grade C–A*) Essential Skills Numeracy, Literacy and ICT qualification in N. Ireland. Some pupils may decide to take one or more GCSEs before or after they sit the others, and people may apply to take GCSEs at any point either internally through an institution or externally.

GCSE Entries – Overall Performance

Across N. Ireland, the 2015 entries for GCSE have seen a small decline on previous years, falling by 0.8% to 171,325. This slight decline is in line with the falling age population, suggesting that the trend is not a decline in the breadth of qualifications undertaken by students, but rather consistency in the number of GCSE being taken.

The total number of GCSEs undertaken by students across the three nations was 5,277,604 making N. Ireland students accountable for 3.3% of the overall entries.

The age profile of GCSE candidates in N. Ireland remains stable and in-line with 2014. Three Country results show an 18.2% increase in entries from 17-year-old students in 2015.

Table 1: 2015 GCSE Results by Age

AGE	2015	2014
15 year olds	3.1% (5,345)	2.9% (5,057)
16 year olds	75.9% (129,951)	76.2% (131,658)
17 year olds	21% (36,029)	20.8% (35,977)
ALL	**171,325**	**172,692**

In 2015, there was a 0.1 percentage point increase at A* from 8.9% to 9.0%. Grades A*–A also show a 0.4 percentage point increase to 28.6%. Grades A*–C increased by 0.7 percentage points to 78.7%. Grades A*–G showed no change from last year.

Females continue to outperform males at A* by 4.7%, at A*–A by 10.2%, at A*–C by 7.1%, and at A* –G by 0.4%. This gender trend is the same across the three countries (Table 2).

Table 2: 2015 GCSE Results N. Ireland

2015 provisional	Overall		Males		Females	
	NI	THREE	NI	THREE	NI	THREE
%A*	9.0	6.6	6.7	5.2	11.4	8.0
%A*–A	28.6	21.2	23.4	17.5	33.6	24.7
%A*–C	78.7	69.0	75.1	64.7	82.2	73.1
%A*–G	99.2	98.6	99.0	98.3	99.4	98.9

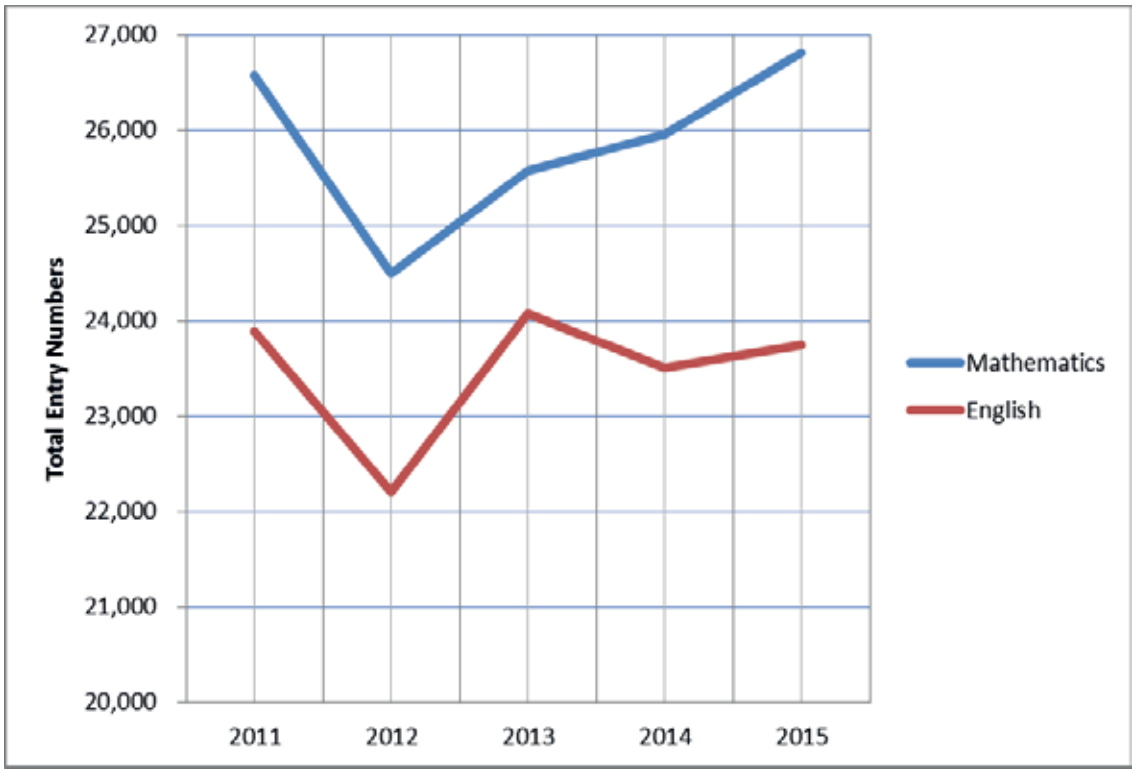
GCSE Mathematics and English Performance

Mathematics and English remain statutory subjects for compulsory school age students in N. Ireland. The following section presents information on GCSE students' performance in Mathematics and English over the last five academic years (2011–15).

Table 3: Mathematics and English Performance (Overall) (2011–15)

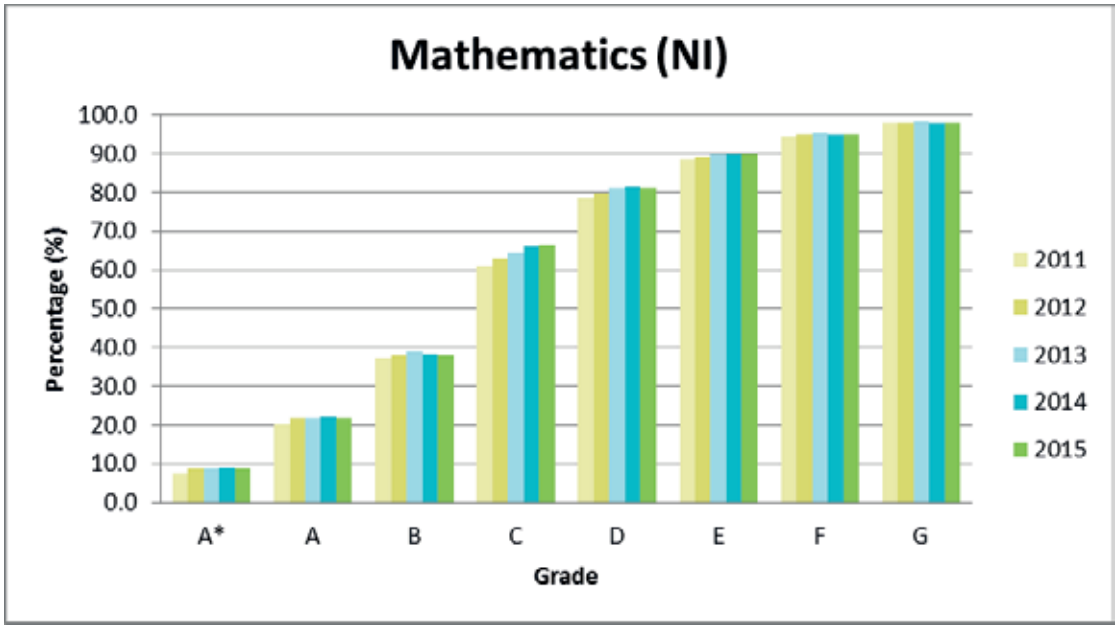
			CUMULATIVE PERCENTAGES by Grade							
Subject	Year	Entry (NI)	N. Ireland				THREE			
			A*	A	B	C	A*	A	B	C
Mathematics	2011	26,576	7.6	20.1	37.3	60.9	5.2	16.5	32.0	58.8
	2012	24,498	8.9	21.8	38.0	62.9	5.5	15.4	30.1	58.4
	2013	25,578	8.9	21.9	39.0	64.6	4.9	14.3	30.5	57.6
	2014	25,954	9.1	22.0	38.3	66.2	5.4	15.2	32.0	62.4
	2015	26,808	8.8	21.7	37.9	66.6	6.1	16.5	33.4	63.3
English	2011	23,886	3.8	18.6	42.7	68.5	4.7	16.8	37.0	65.4
	2012	22,207	4.2	19.7	44.2	68.2	3.4	15.0	35.5	63.9
	2013	24,079	4.1	18.5	42.2	68.8	3.2	14.1	34.4	63.5
	2014	23,510	4.1	20.3	45.7	73.0	3.6	14.3	34.4	61.7
	2015	23,741	4.3	21.1	47.7	75.8	3.1	14.6	37.0	65.4

Figure 1: GCSE Mathematics and English Entry Numbers (NI) (2011–15)



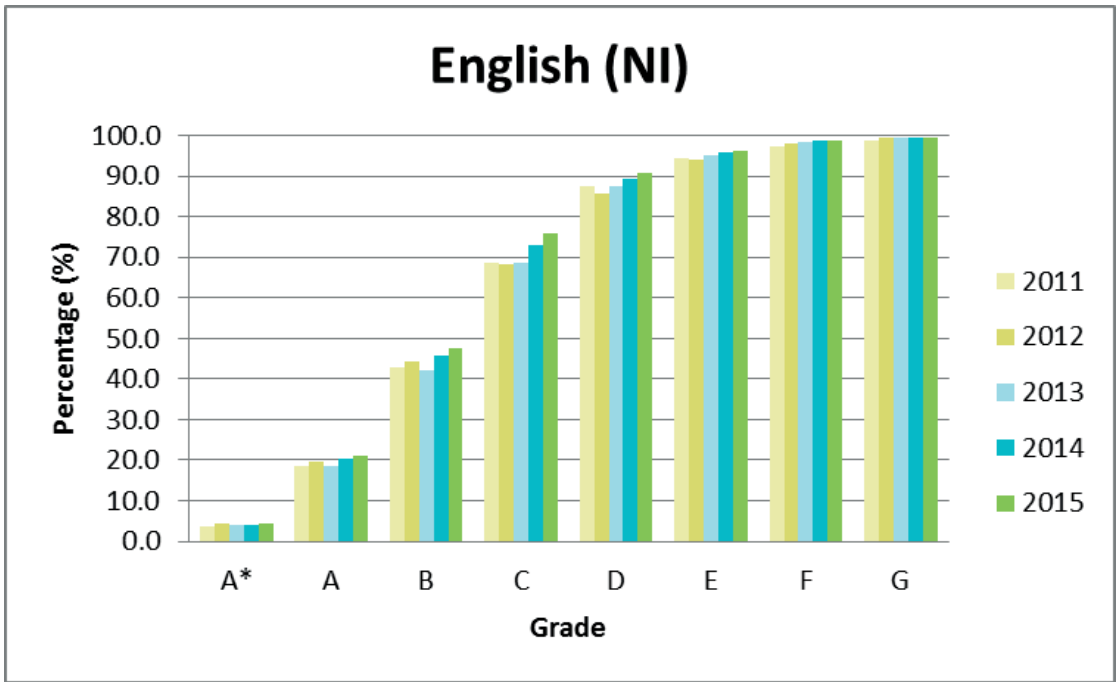
- Table 3 and Figure 1 show that between 60.9% and 66.6% of N. Ireland students achieve Grades A*–C in Mathematics.
- Between 68.5% and 75.8% achieve Grades A*–C in English.
- This is a greater proportion than the Three Countries average were between 57.6% and 63.3% of students achieve Grades A*–C in Mathematics, whilst between 61.7% and 65.4% of students achieve Grades A*–C in English.
- It is encouraging to note that performance in N. Ireland for both Mathematics and English has not declined over the last five years. Performance has maintained a level of consistency across these years with Grades A*–A.
- Additionally, on average, it can be seen from Table 3 that there has been a considerable year on year increase in the proportion of students achieving Grades A*–C in Mathematics and English since 2012 in N. Ireland.

Figure 2: GCSE Mathematics Performance (NI) (2011–15)



- Over the last five years, performance in GCSE Mathematics has maintained a level of consistency.
- The individual bar graphs for the last five years indicate that performance closely follows the same pattern.
- The proportion of students achieving A* Grade has ranged from 7.6%–9.1% over these years.
- Additionally, the proportion of students achieving Grades A*–C has increased by 5.7 percentage points since 2011 from 60.9%–66.6%. The equivalent increase in the Three Countries is 4.7 percentage points (Figure 4).

Figure 3: GCSE English Performance (NI) (2011–15)



- Over the last five years, performance in GCSE English has also maintained a level of consistency.
- The individual bar graphs for the last five years indicate that performance closely follows the same pattern.
- The proportion of students achieving A* Grade has ranged from 3.8%–4.3% over these years.
- Additionally, the proportion of students achieving Grades A*–C has increased by 7.3 percentage points since 2013 from 68.5%–75.8%. The Three Country performance at Grades A*–C remains the same in 2015 (Figure 5).

Figure 4: GCSE Mathematics Performance (Three Country) (2011–15)

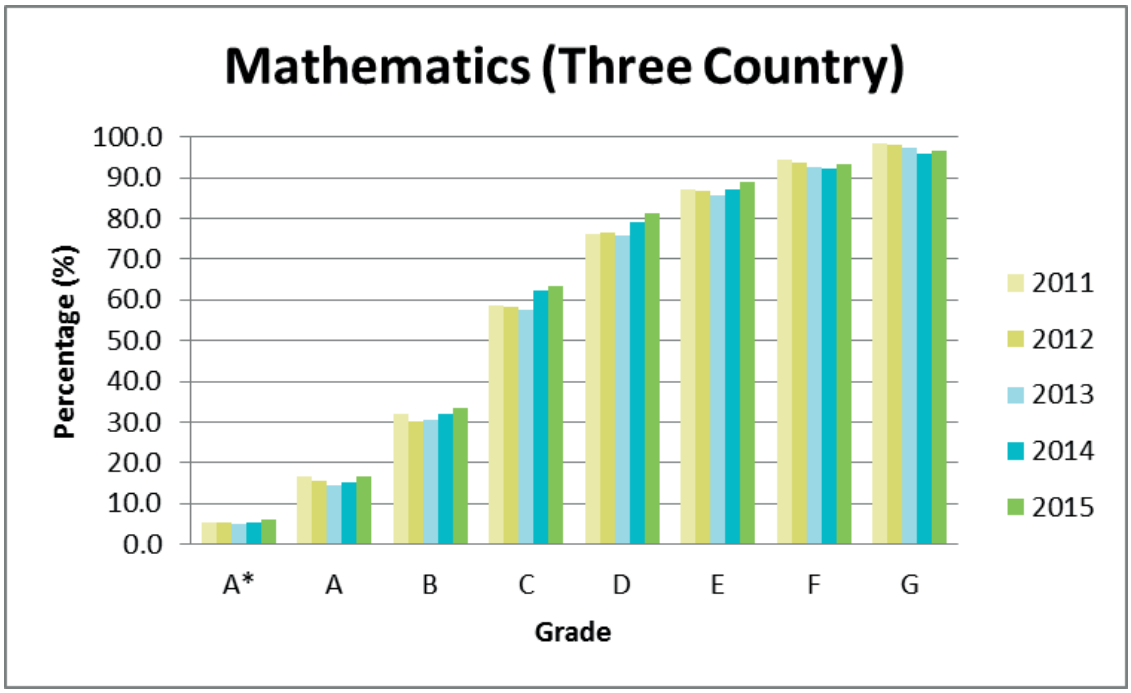


Figure 5: GCSE English Performance (Three Country) (2011–15)

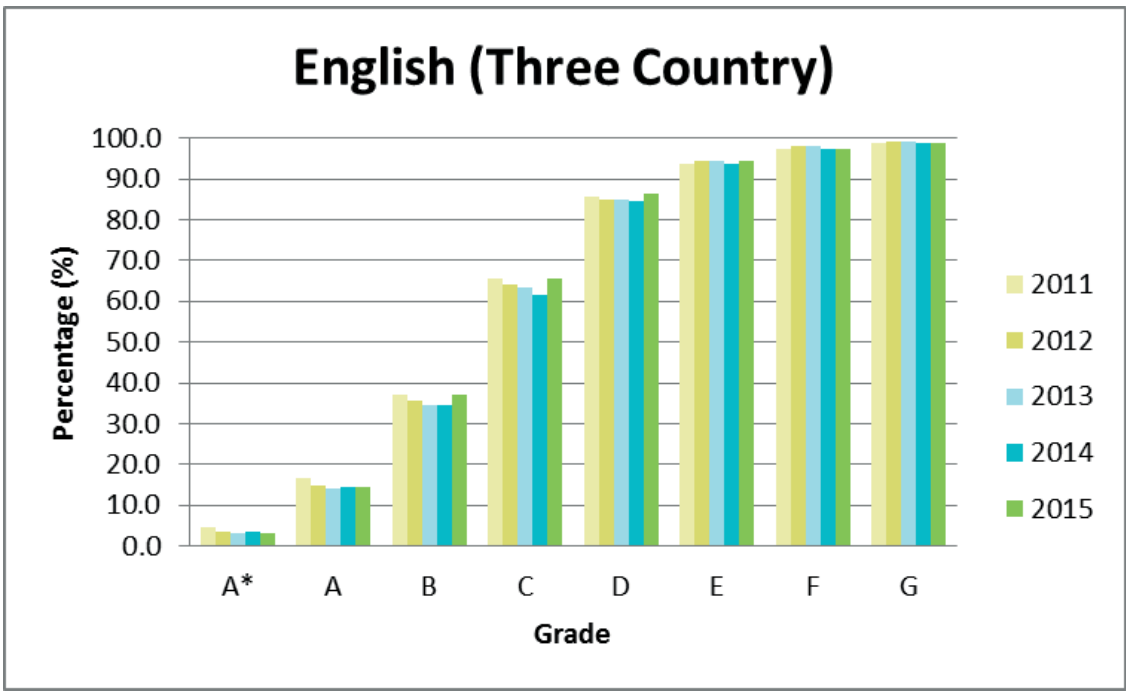
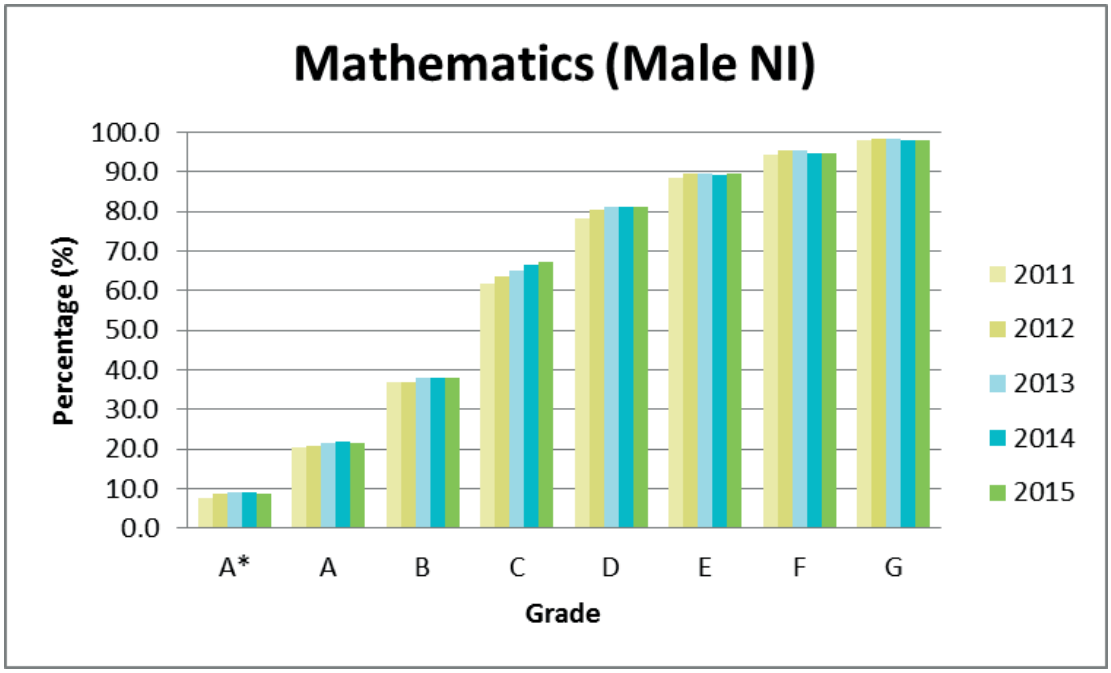


Table 4: GCSE Mathematics Performance (Male) (2011–15)

			***CUMULATIVE PERCENTAGES* by Grade**							
Subject	**Year**	**Number Sat (NI)**	**N. Ireland**				**THREE**			
			A*	A	B	C	A*	A	B	C
Mathematics	2011	12,986	7.8	20.4	37.1	61.8	5.3	16.6	32.2	58.9
	2012	11,988	8.8	21.0	37.1	63.7	5.7	15.6	30.4	58.8
	2013	12,458	9.0	21.4	38.1	65.0	5.2	14.6	30.9	58.0
	2014	12,696	9.2	21.8	38.1	66.7	5.9	15.7	32.6	62.5
	2015	13,270	8.7	21.7	37.9	67.3	6.7	17.3	34.3	63.9
English	2011	11,924	2.0	12.7	34.6	62.0	3.3	12.4	30.0	58.7
	2012	11,296	2.6	13.9	36.4	61.6	2.1	10.6	28.0	56.7
	2013	12,049	2.5	13.0	34.5	61.8	1.9	9.5	26.4	56.2
	2014	11,743	2.6	14.0	37.8	66.4	2.2	9.6	26.4	53.8
	2015	11,842	2.5	14.4	39.5	69.8	1.8	9.6	28.7	57.7

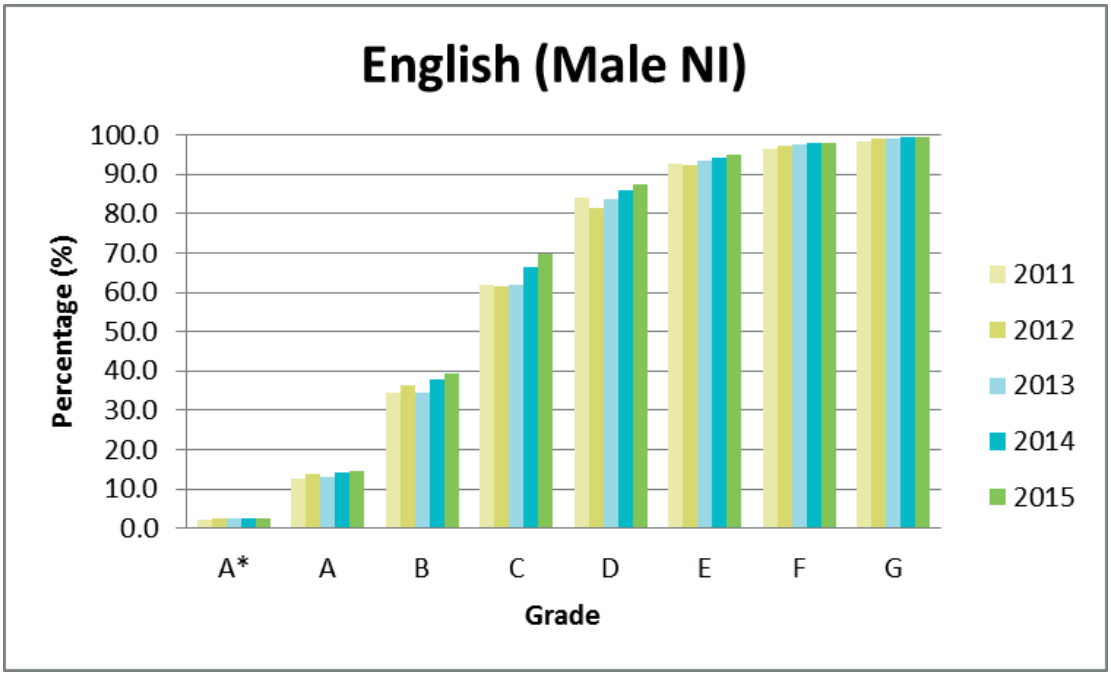
- Table 4 above presents information on male GCSE students' performance in Mathematics and English over the last five academic years (2011–15).
- Between 61.8% and 67.3% of male N. Ireland students achieve Grades A*–C in Mathematics.
- Between 61.6% and 69.8% achieve Grades A*–C in English.
- This is a greater proportion than the Three Countries average were between 58% and 63.9% of students achieve Grades A*–C in Mathematics, whilst between 53.8% and 58.7% of students achieve Grades A*–C in English.
- Performance in both Mathematics and English has not declined over the last five years. Performance has maintained a level of consistency across these years with Grades A*–A.
- Additionally, on average it can be seen from the table above that there has been a considerable year on year increase in the proportion of male students achieving Grades A*–C in English since 2012 in N. Ireland. The opposite trend exists in the Three Country results with the exception of 2015.

Figure 6: GCSE Mathematics Performance (Male) (2011–15)



- Over the last five years, male performance in GCSE Mathematics has maintained a level of consistency.
- The individual bar graphs for the last five years indicate that performance closely follows the same pattern.
- The proportion of male students achieving A* Grade has ranged from 7.8%–9.2% over these years.
- Additionally, the proportion of male students achieving Grades A*–C has increased by 5.5 percentage points since 2011 from 61.8%–67.3%.

Figure 7: GCSE English Performance (Male) (2011–15)



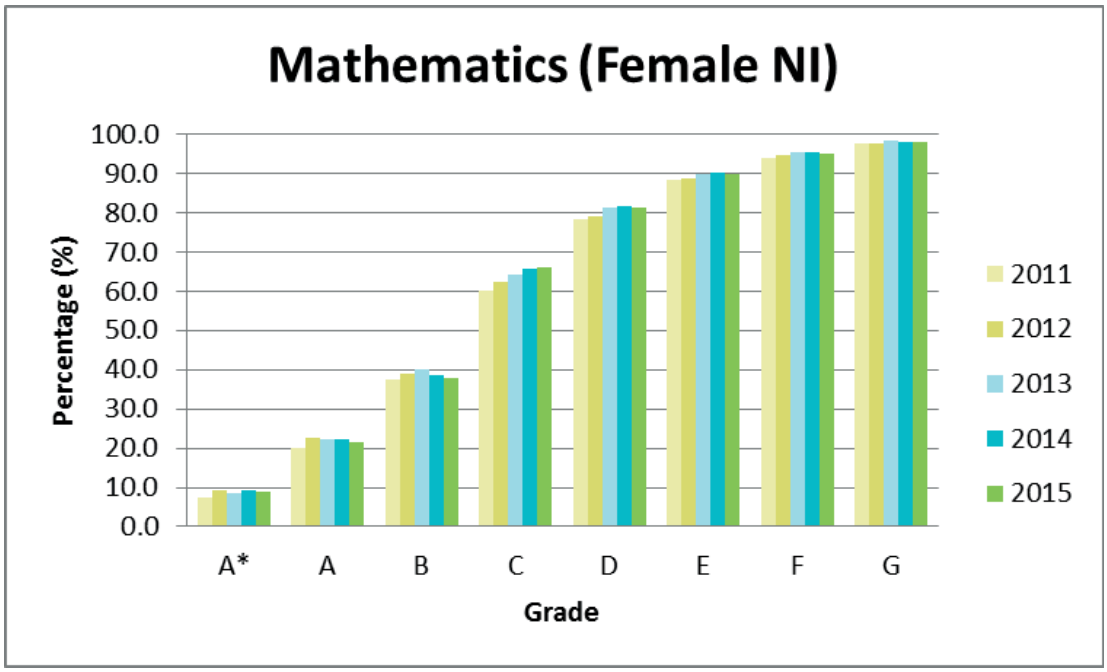
- Figure 7 shows that over the last five years, male performance in GCSE English has maintained a level of consistency.
- The individual bar graphs for the last five years indicate that performance closely follows the same pattern.
- The proportion of male students achieving A* Grade has ranged from 2%–2.6% over these years.
- Additionally, the proportion of male students achieving Grades A*–C has increased by 7.8 percentage points since 2011 from 62% to 69.8%

Table 5: GCSE Mathematics and English Performance (Female) (2011–15)

			***CUMULATIVE PERCENTAGES* by Grade**							
Subject	**Year**	**Number Sat (NI)**	**N. Ireland**				**THREE**			
			A*	A	B	C	A*	A	B	C
Mathematics	2011	13,590	7.5	19.9	37.5	60.0	5.2	16.5	31.9	58.6
	2012	12,510	9.1	22.6	38.9	62.2	5.3	15.3	29.9	57.9
	2013	13,120	8.7	22.4	40.0	64.1	4.7	14.0	30.0	57.3
	2014	13,258	9.1	22.2	38.5	65.8	5.0	14.6	31.3	62.3
	2015	13,538	8.8	21.7	37.9	66.0	5.6	15.6	32.5	62.6
English	2011	11,962	5.7	24.5	50.9	75.0	6.2	21.4	44.5	72.5
	2012	10,911	5.8	25.6	52.4	75.0	4.6	19.5	43.1	71.3
	2013	12,030	5.6	24.0	49.9	75.8	4.5	18.9	42.7	71.1
	2014	11,767	5.7	26.5	53.7	79.6	5.0	19.2	42.6	69.7
	2015	11,629	6.2	27.9	55.9	81.9	4.4	19.4	45.1	72.8

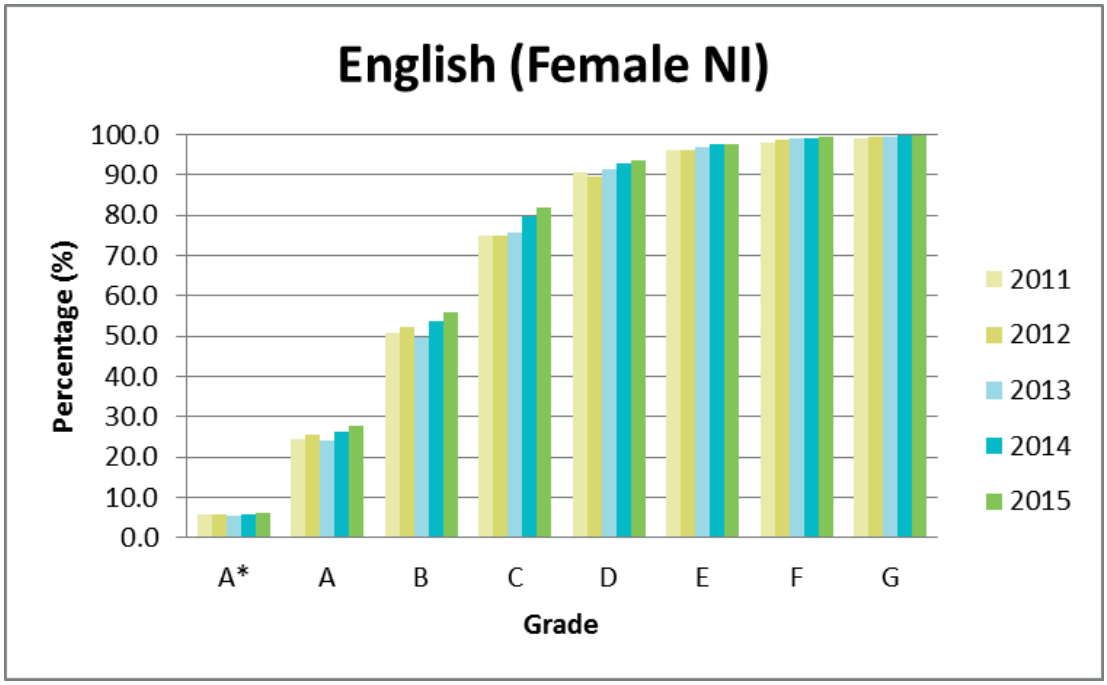
- The table above presents information on female GCSE students' performance in Mathematics and English over the last five academic years (2011–15).
- It is evident from Table 5 that between 60% and 66% of female N. Ireland students achieve Grades A*–C in Mathematics.
- Between 75% and 81.9% achieve Grades A*–C in English.
- This is a greater proportion than the Three Countries average were between 57.3% and 62.6% of students achieve Grades A*–C in Mathematics, whilst between 69.7% and 72.8% of students achieve Grades A*–C in English.
- Female performance in both Mathematics and English in N. Ireland has not declined over the last three years. Performance has maintained a level of consistency across these years with Grades A*–A.
- Additionally, it can be seen from the table above that there has been a considerable year on year increase in the proportion of female students achieving Grades A*–C in English since 2011 in N. Ireland. This is not the same in the Three Country results, where grade C performance has fallen since 2011 with a rise in 2015.

Figure 8: GCSE Mathematics Performance (Female) (2011–15)



- Over the last five years, female performance in GCSE Mathematics has maintained a level of consistency.
- The individual bar graphs for the last three years indicate that performance closely follows the same pattern.
- The proportion of female students achieving A* Grade has ranged from 7.5%–9.1% over these years.
- Additionally, the proportion of female students achieving Grades A*–C has increased by 6 percentage points since 2011 from 60%–66%.

Figure 9: GCSE English Performance (Female) (2011–15)



- Figure 9 shows that over the last five years, female performance in GCSE English has maintained a level of consistency.
- The individual bar graphs for the last three years indicate that performance closely follows the same pattern.
- The proportion of female students achieving A* Grade has ranged from 5.6%–6.2% over these years.
- Additionally, the proportion of female students achieving Grades A*–C has increased by 6.9 percentage points since 2013 from 75%–81.9%.

Table 6: Age and Gender Breakdown GCSE Mathematics and English Candidates (Number) (2013–15)*

Subject			Age		
			≤15	16	≥17
Mathematics	Male	2013	1,048	8,401	3,009
		2014	1,375	8,166	3,155
		2015	1,600	8,580	3,090
	Female	2013	899	8,488	3,733
		2014	1,097	8,376	3,785
		2015	1,298	8,445	3,795
English	Male	2013	30	9,051	2,968
		2014	34	8,618	3,091
		2015	81	8,866	2,895
	Female	2013	32	9,198	2,800
		2014	39	8,953	2,775
		2015	73	8,785	2,771

Table 7: Age and Gender Breakdown GCSE Mathematics and English Candidates (Proportion) (2013–15)†

Subject			Age		
			≤15	16	≥17
Mathematics	Male	2013	8.4%	67.4%	24.2%
		2014	10.8%	64.3%	24.9%
		2015	12.1%	64.7%	23.3%
	Female	2013	6.9%	64.7%	28.5%
		2014	8.3%	63.2%	28.5%
		2015	9.6%	62.4%	28.0%
English	Male	2013	0.2%	75.1%	24.6%
		2014	0.3%	73.4%	26.3%
		2015	0.7%	74.9%	24.4%
	Female	2013	0.3%	76.5%	23.3%
		2014	0.3%	76.1%	23.6%
		2015	0.6%	75.5%	23.8%

* Data only available from 2013–15
† Data only available from 2013–15

Figure 10: Mathematics GCSE Entries (%) for the period 2013–15

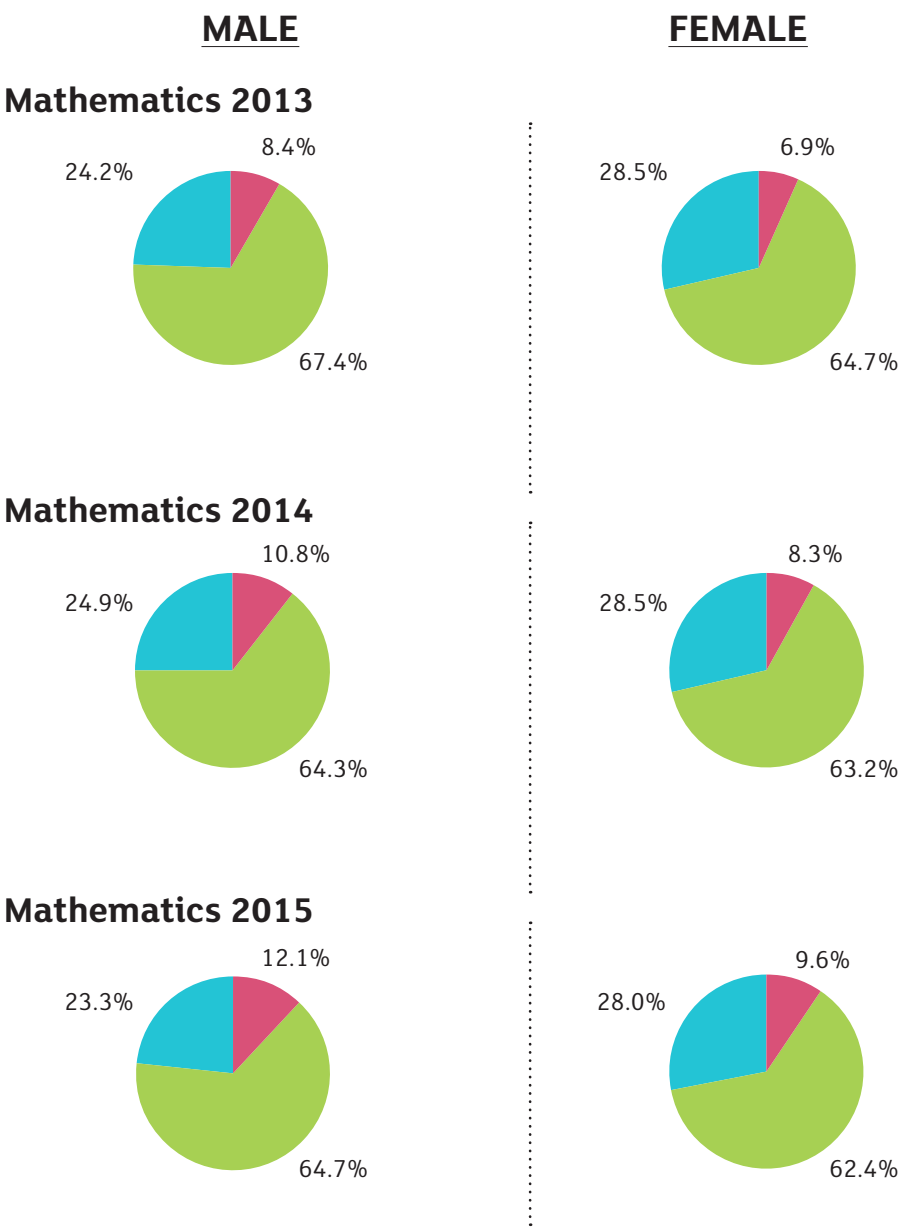
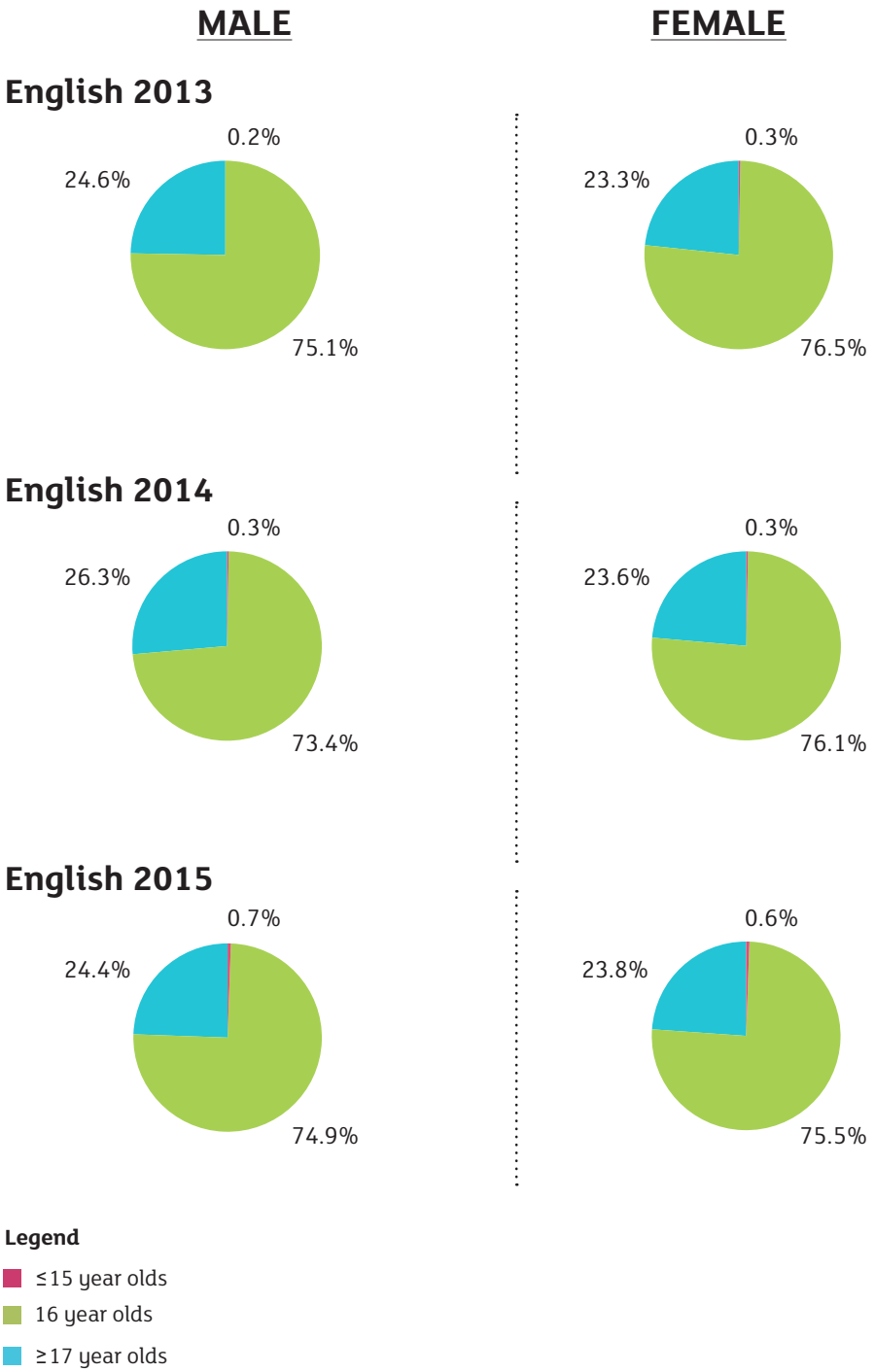


Figure 11: English GCSE Entries (%) for the period 2013–15



- Unsurprisingly the largest proportion of N. Ireland male and female students studying GCSE Mathematics and English are 16 years old (Figures 10 and 11).
- On average 65.5% of male students and 63.4% of female students study Mathematics at age 16, whilst a larger proportion of students study English at age 16, (74.5% male and 76% female).
- Approximately 10% of all male Mathematics candidates (over the last three years) have been aged 15 or under. A slightly smaller proportion of female students study GCSE Mathematics at this age (8.3%). There has been an increase in the proportion of 15 year old Mathematics candidates over the past three years.
- A much smaller proportion of students study English at this age. Less than 1% of male and female students aged 15 or below study GCSE English.
- Around one-quarter of all GCSE Mathematics candidates are aged 17 or over.
- On average 24.1% of male students this age study GCSE Mathematics, whilst a slightly larger proportion of female students study GCSE Mathematics at this age (28.3%).
- A similar proportion of students aged 17 or over study GCSE English.
- On average 25.1% of male students this age study GCSE English, while a slightly smaller proportion of female students study GCSE English at age 17 or over (23.6%).

GCSE Subject Trends

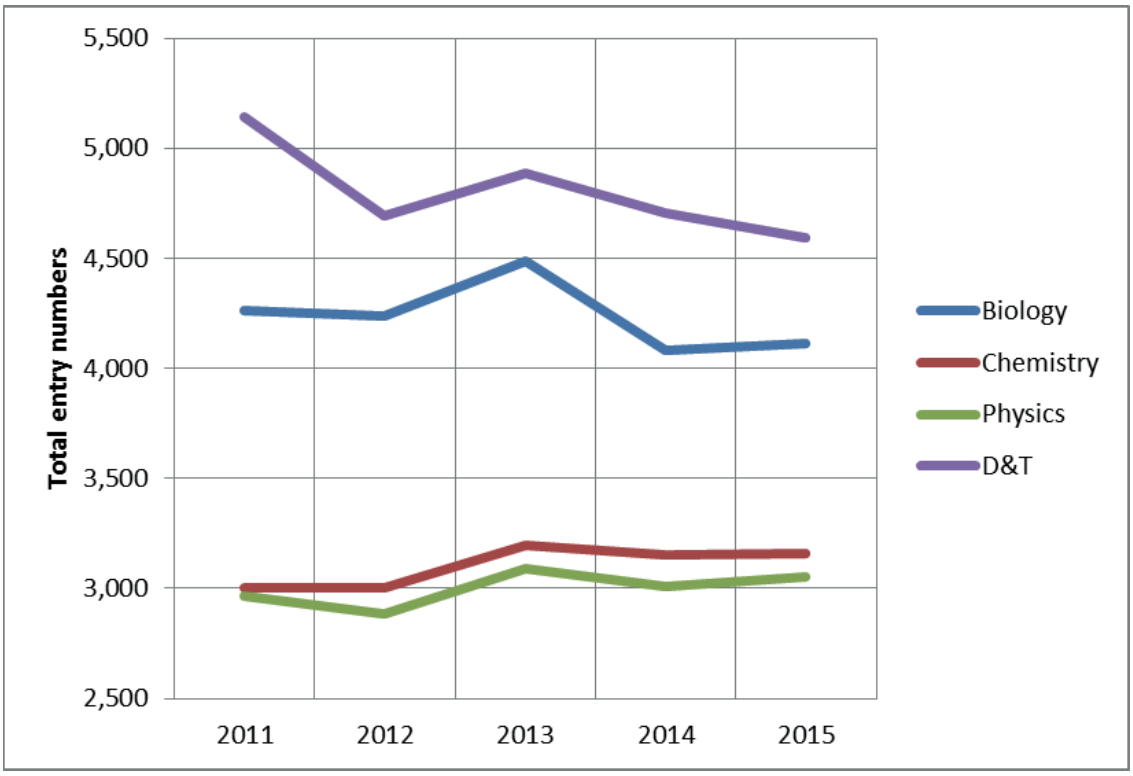
One of the most notable upwards trends in GCSE entries in the past five years is the rise of STEM subjects. STEM incorporates a range of Science, Technology, Engineering and Mathematics subjects. A further interesting phenomenon is the increase of Media and Film studies in recent years. This is most notable in the past two years and detailed in the next section.

Declining trends over the past five years include Languages and Art and Design subjects.

The following section highlights the subject increases and decreases over the five-year period and investigates subject rankings where relevant.

GCSE STEM Subjects

Figure 12: N. Ireland, GCSE STEM Entries (All Excluding Mathematics and ICT) in 2011–15*



* Please Note: GCSE Mathematics and ICT have been excluded from this figure due to the total number of student entries being much higher when compared with other GCSE STEM subjects. This has a negative effect on the axis and makes it difficult to identify trends from all other STEM subjects. As such, GCSE Mathematics and ICT are considered in a separate figure.

Figure 13: N. Ireland, GCSE Mathematics Entries 2011–15

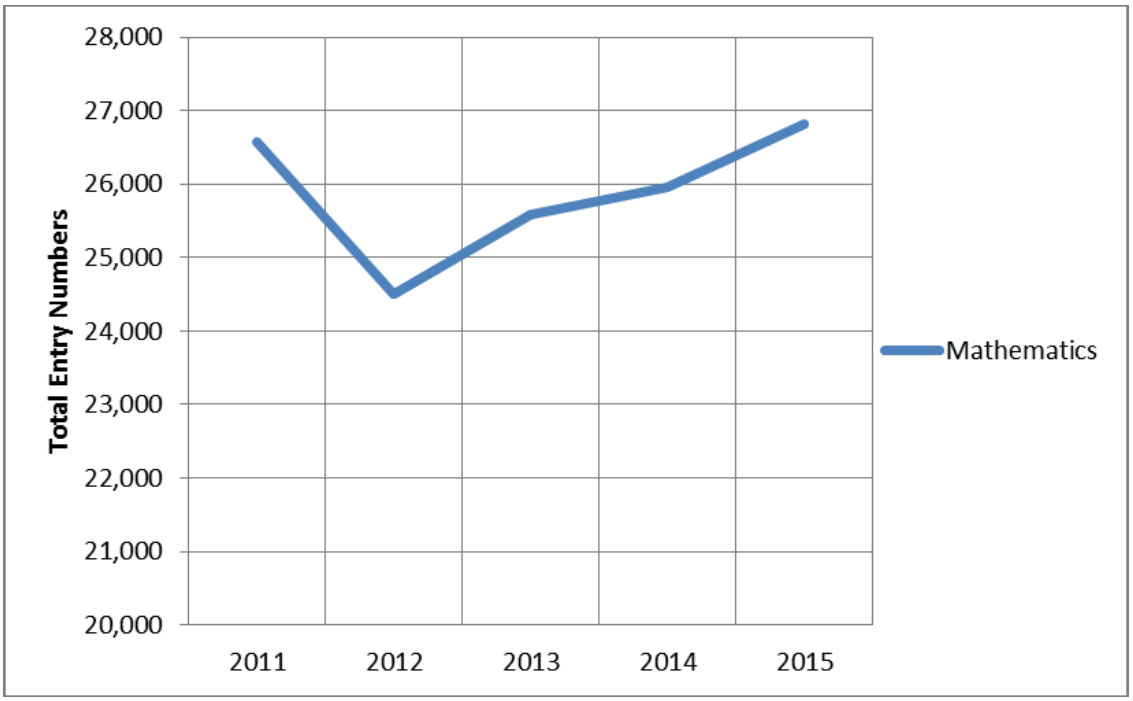


Figure 14: N. Ireland, GCSE ICT Entries 2011–15

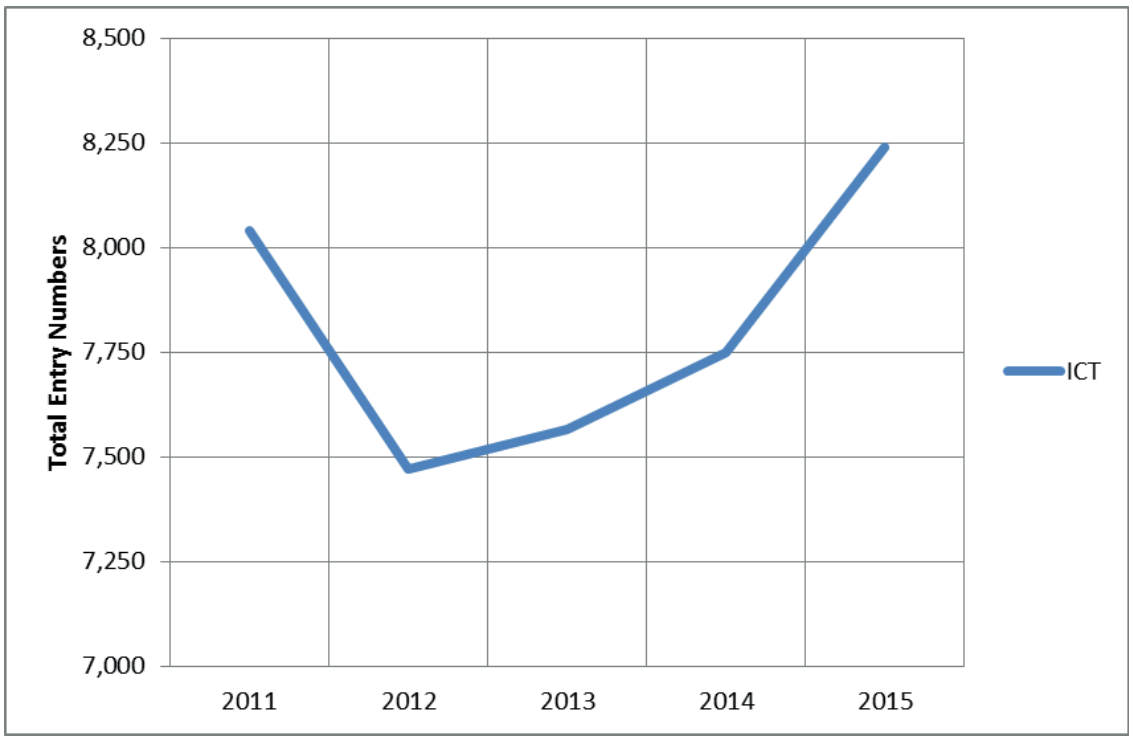


Figure 15: CCEA, GCSE STEM Entries (All Excluding Mathematics and ICT) in 2011-2015*

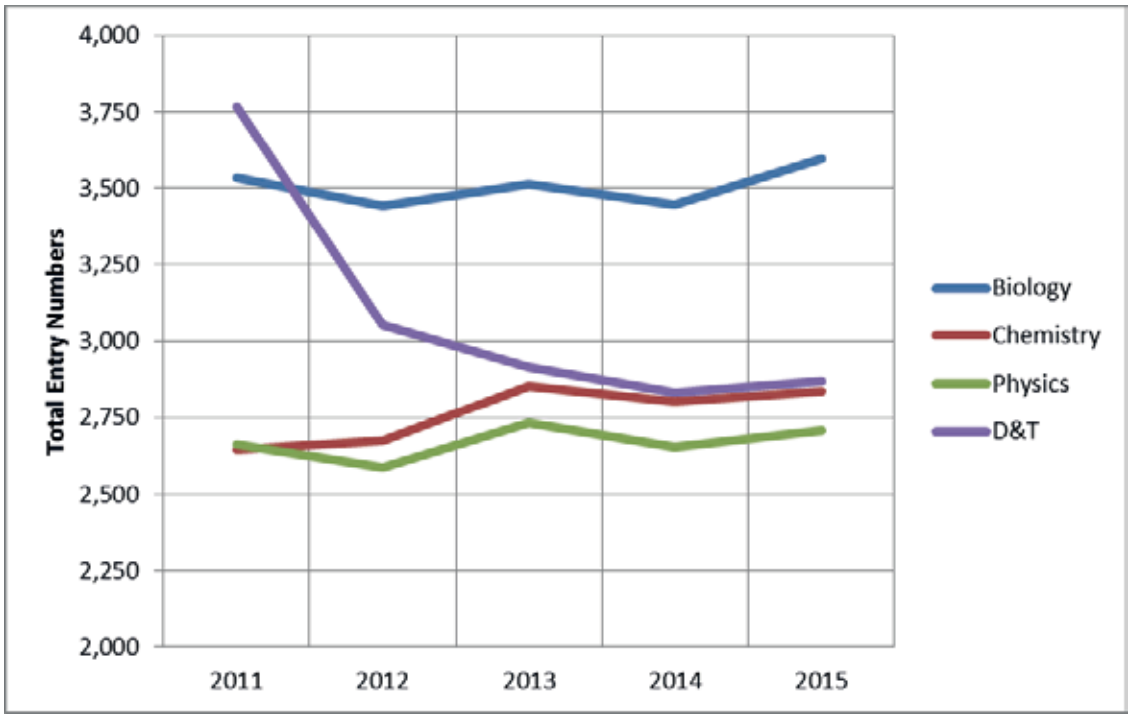
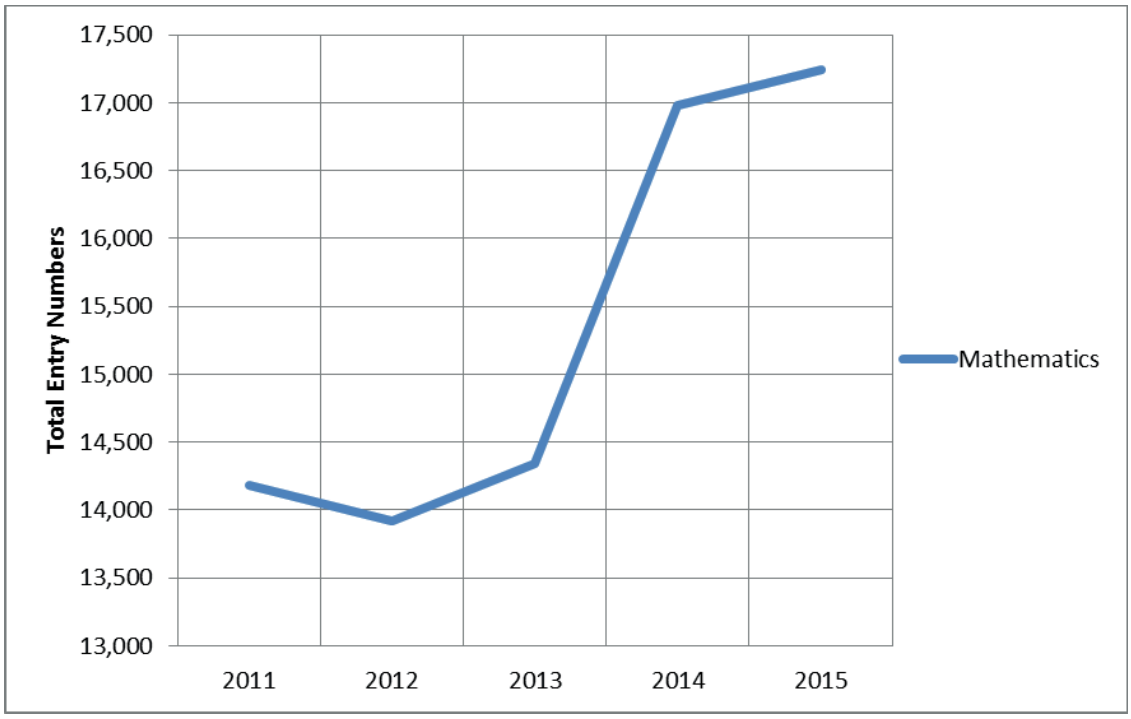
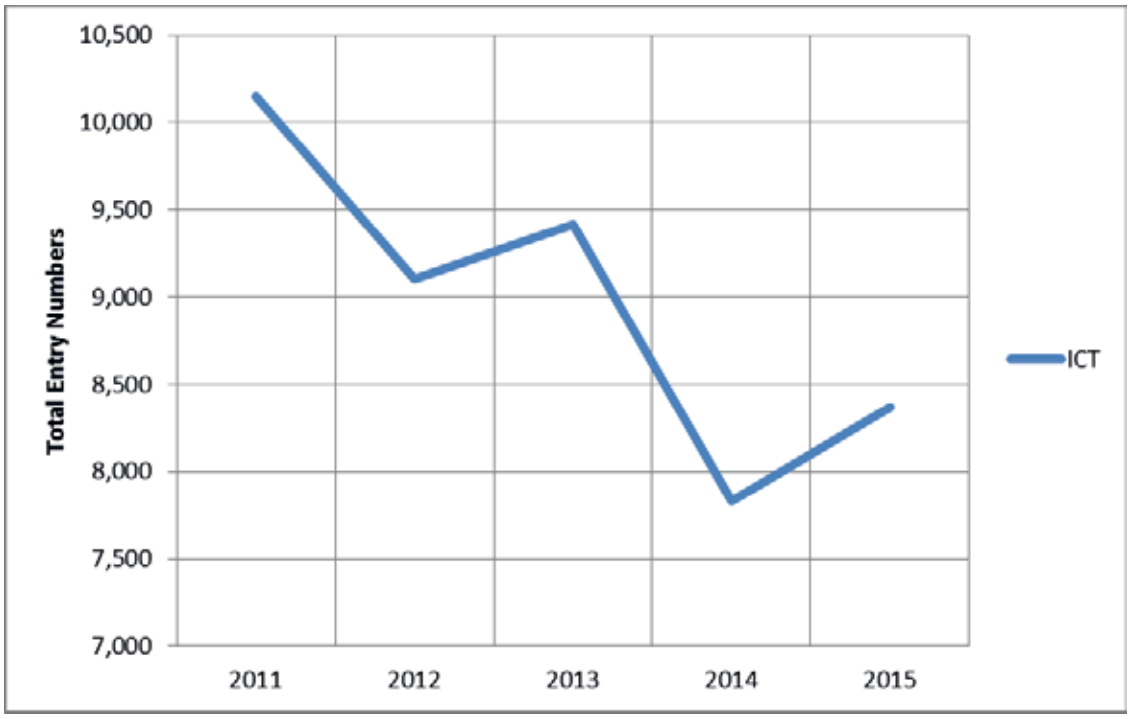


Figure 16: CCEA, GCSE Mathematics Entries 2011–15



*Please Note: GCSE Mathematics and ICT have been excluded from this figure due to the total number of student entries being much higher when compared with other GCSE STEM subjects. This has a negative effect on the axis and makes it difficult to identify trends from all other STEM subjects. As such, GCSE Mathematics and ICT are considered in a separate figure.

Figure 17: CCEA, GCSE ICT Entries 2011–15



STEM entries increased by 2.7% since 2014 and have showed a steady entry in N. Ireland over the past five years despite a falling school population. The corresponding figure for CCEA STEM GCSEs is a rise of 2.9%.

The following Subject Ranks show the average ranking of each subject and the differences in entries by gender during 2011–15. The data is consistent across N. Ireland and CCEA with some notable differences. These are highlighted in the individual sections.

Subject Ranks:

The most popular STEM subject at GCSE level over the five-year period 2011–15 is Mathematics. There are an average of 15,332 entries for CCEA GCSE Mathematics and an average of 25,883 entries for all N. Ireland irrespective of awarding body.

The second most popular STEM subject is ICT. There are an average of 8,973 CCEA entries and an average of 7,804 total entries for N. Ireland. The top two STEM subjects are common for both CCEA and N. Ireland candidates. However, the third most popular STEM subject is different for CCEA and N. Ireland candidates. Biology is the third most popular STEM subject for CCEA (3,505) and Design and Technology (4,804) for N. Ireland students.

The top three most popular STEM subjects for males during the period 2011–15 at GCSE level are Mathematics, ICT and Design and Technology. This trend is characteristic of students who take these subjects with CCEA and for all N. Ireland students. The three most popular STEM subjects for females at GCSE level are very similar to those of males, the only difference being that they favour Biology as their third most popular STEM subject.

Biology:
More females than males took Biology at GCSE level for both CCEA and N. Ireland in the period 2011–15. There are increases and decreases for males and females, who took GCSE Biology with CCEA. The trend for males for all N. Ireland seems to have decreased over the period 2013–15.

Chemistry:
Although the entry numbers for GCSE Chemistry are similar for both CCEA and all N. Ireland candidates, slightly more males are taking this subject compared to females. However, the average gender entry difference between females and males for CCEA candidates is less (42.4) compared to the average difference between females and males for N. Ireland candidates (111.0). There are increases for male and female entries in the period 2011–13 for both CCEA candidates and all N. Ireland candidates. The period 2013–15 marks unsteady rises and falls in both males' and females' entry numbers irrespective of awarding body.

Physics:
More males than females took Physics at GCSE level irrespective of awarding organisation in the period 2011–15. Male entries for CCEA have shown rises and falls but the most substantial decrease (-64) has been in the period 2013–14. Similar to male entries, female entry numbers have risen and fallen over the five-year period while they have shown a relatively larger increase by 129 for CCEA candidates and 165 for all N. Ireland candidates in the period 2012–13.

Mathematics:
More females took Mathematics at GCSE level for both CCEA and N. Ireland candidates in the period 2011–15. There is a consistent trend of gradual increase of male and female Mathematics entries with CCEA. There is a similar trend for all N. Ireland candidates in 2014–15, however during the period 2011–13 entries for all N. Ireland students decreased due to population decreases. This shows that CCEA Mathematics improved market share for Mathematics during this period.

ICT:
More males on average took ICT at GCSE level for the period 2011–15. There is consistent decrease of both males and females who took GCSE ICT with CCEA in the period 2011–14, while there are more gains in entry numbers for N. Ireland males in the period 2012–15. However, in the academic year 2014–15, there were similar increases in ICT entries for males who took the subject with CCEA by over 500.

Design and Technology:
More males took Design and Technology at GCSE level for the period 2011–15. The average entry for females taking Design and Technology with CCEA over this five-year period is 790 while males' average entries for this subject are 2,297. There is an overall decrease in male entries for CCEA and N. Ireland candidates as a whole. The only exception is an increase in entry numbers for all N. Ireland candidates in 2012–13.

GCSE Languages

With the exception of Spanish, language entries continue to decline in N. Ireland and the Three Countries. German is of most concern with almost a 10% reduction in both N. Ireland and the Three Countries. French saw a 5.5% reduction in N. Ireland and a 6.2% reduction in the Three Countries.

Figure 18: N. Ireland, GCSE Languages Entries (ALL) in 2011–15

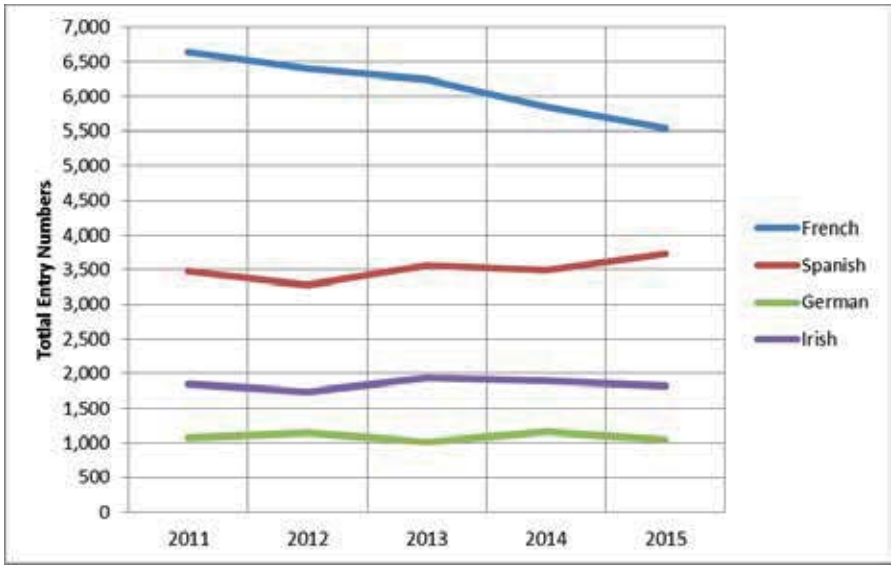


Figure 19: N. Ireland, GCSE Languages Proportion in 2011–15

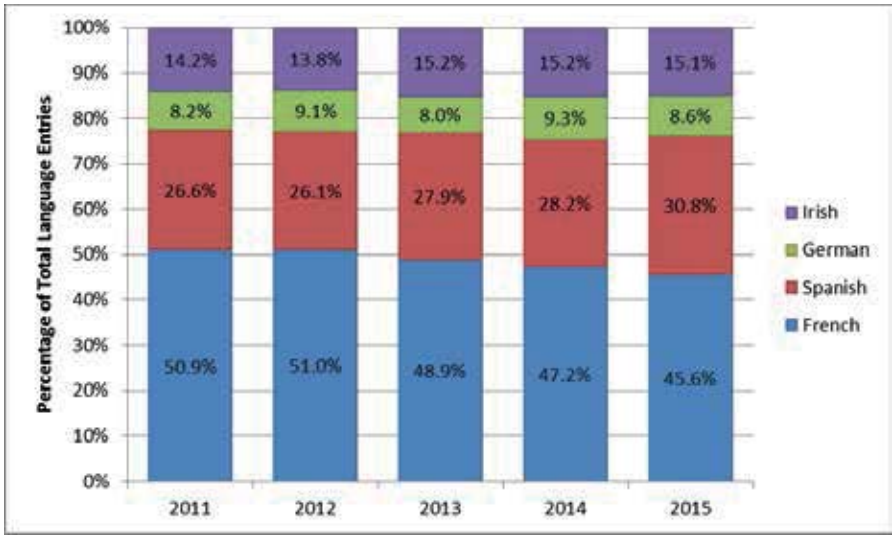


Figure 20: CCEA, GCSE Languages Entries (ALL) in 2011–15

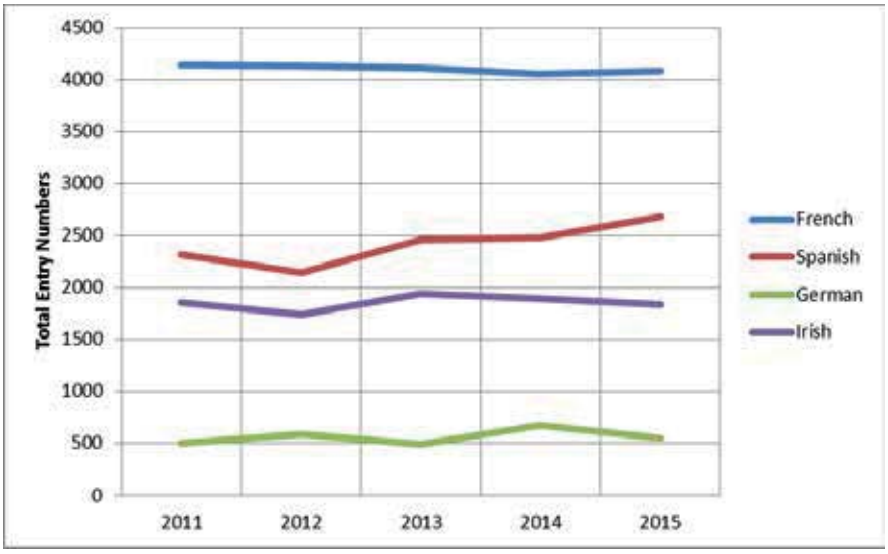
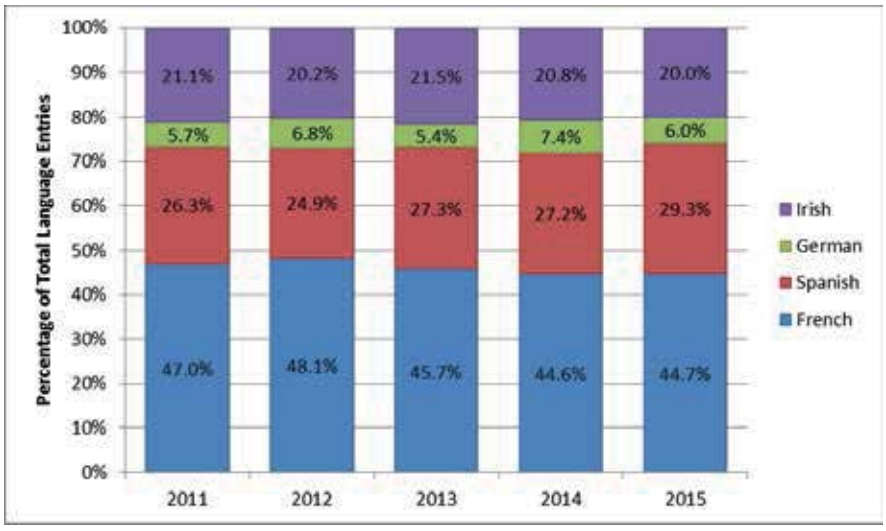


Figure 21: CCEA, GCSE Languages Proportion in 2011–15



Subject Ranks:

The most popular language subject at GCSE, AS and A Level for both CCEA and N. Ireland candidates is French. The second most popular language is Spanish, followed by Irish and finally German. This trend is consistent across awarding body, gender, year and level.

French:

The entry numbers for French are generally in decline for both CCEA and N. Ireland males and females in the period between 2011 and 2015. The cumulative decrease in entry numbers for French for all N. Ireland candidates is over 1,000, while the drop in entries for CCEA only candidates is 80 in the period 2011–14. It is also notable that females who take GCSE French with CCEA also mark increases in the periods: by 23 candidates in 2012–13 and by 46 candidates in 2014–15.

Spanish:

The entry numbers for Spanish gradually increased for male CCEA and N. Ireland candidates over the five-year period 2011–15. Female entries for CCEA and N. Ireland candidates also share a pattern – there is a decrease between 2011 and 2012, followed by an increase between 2012 and 2013, then a decrease between 2013 and 2014 and finally an increase between 2014 and 2015. It is also interesting to point out that the largest decrease in entries for GCSE Spanish for females is for the academic year 2011–12, while the largest rise in entries for females is the following academic year. A further regional difference exists with GCSE Spanish. In N. Ireland entries increased by 7% in 2015, in the Three Countries it reduced by 2.4%.

Irish:

There is a general increase in the entry numbers for females across the five-year period for both CCEA and N. Ireland candidates. Decrease in female entries is observed only between 2013 and 2014. The trend for males is also common for CCEA and N. Ireland candidates – male entries show decreases in the period 2011–12 and in the period 2014–15.
During 2012–14, there is an increase in male entries for GCSE Irish.

German:

There is a small decrease in entries (-28) for German for N. Ireland candidates, while there is an overall average increase (+44) of GCSE German for candidates who take it with CCEA. The decrease in entries for N. Ireland is mostly due to the overall average decrease of female entries over the five-year period, 2011–15. Conversely, the increase of entries for CCEA candidates is mostly due to the overall average increase of male entries for the entire 2011–15 period. Overall, the pattern of entry variation is the same for males and females for CCEA and N. Ireland candidates – decreases between 2012 and 2013 as well as between 2014 and 2015 and increases in the 2011–12 and 2013–14 academic years.

GCSE Art and Design

Another area with a reduced N. Ireland entry is Art and Design subjects. This category covers a range of subjects in the Art discipline. The entries in N. Ireland have been in decline since 2011 (with the exception of a slight increase in 2013) and this runs contrary to the trend in the Three Countries where Art and Design subjects have steadily increased since 2012.

Figure 22: N. Ireland Art and Design Entries 2011–15

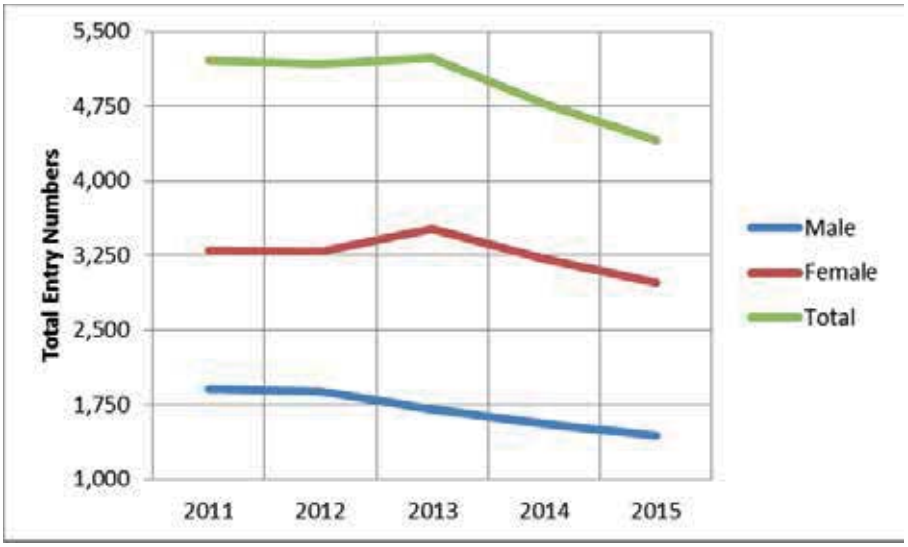


Figure 23: N. Ireland Art and Design Gender Proportion in 2011–15

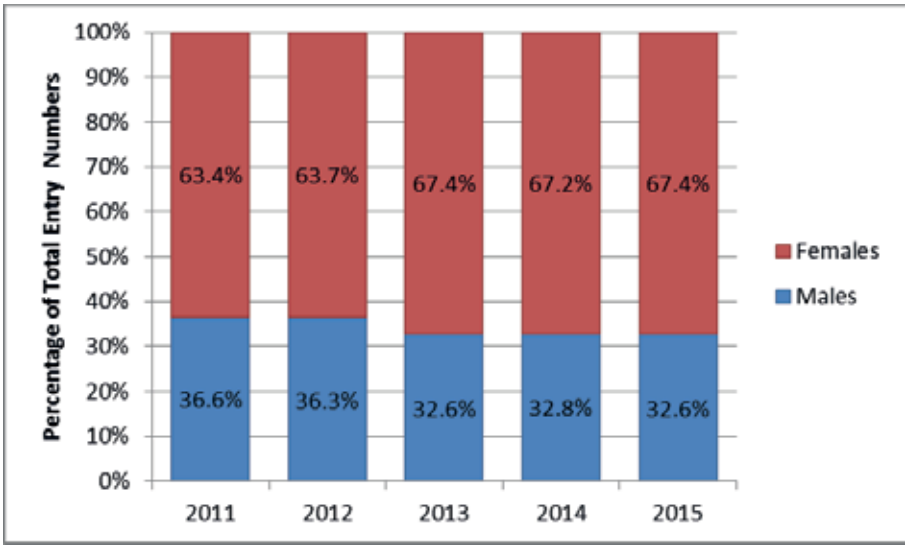


Figure 24: Three Country Art and Design Entries 2011–15

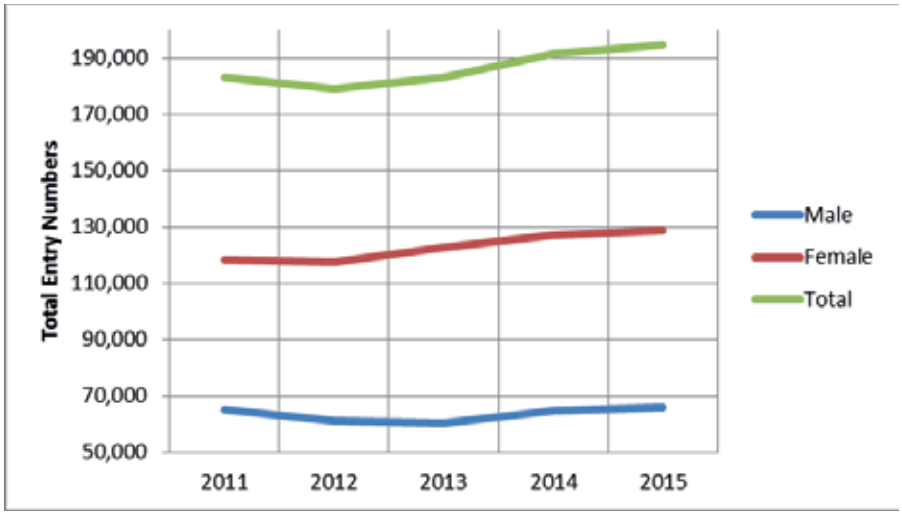
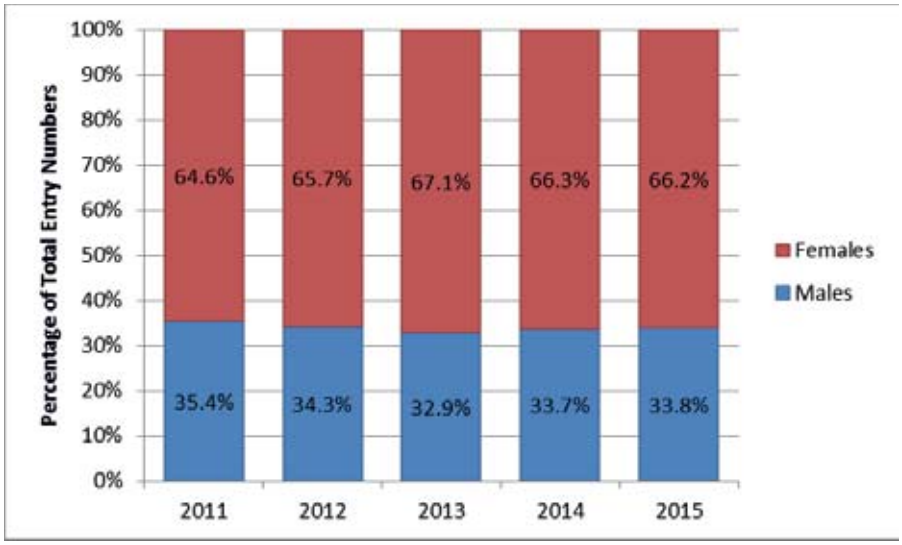


Figure 25: Three Country Art and Design Gender Proportion in 2011–15



Other GCSE Subjects

Creative Industries

N. Ireland witnessed an increase in Media/Film studies at GCSE in 2015. The 11.2% increase is in contrast to the 1.6% fall in entries for these subjects in the Three Countries. In recent years Creative Learning Centres were established in N. Ireland to support this area by offering teacher training and resources. Three centres in Armagh, Belfast and Derry/Londonderry deliver programmes for schools and young people in the use of creative and digital technology. This, and the increase in film and television productions developed in N. Ireland, may account for the increase in the creative subject entries. This trend is replicated in GCE AS and A Level.

Religious Studies

Finally, GCSE Religious Studies has shown a 5% decrease in N. Ireland in 2015. However, it remains one of the most popular GCSE and GCE subjects. Interestingly GCSE Religious Studies has increased by 4.8% in the Three Countries.

Section 4

GCE AS Level Qualifications Analysis

4

GCE AS Level Qualifications Analysis

GCE AS Level Overall Performance

In 2015 N. Ireland entries in AS rose by 2.7% from 2014, this equates to 1,254 more AS grades being awarded. This is the highest entry since AS Levels were first awarded and surpasses last year's record. In the combined Three Countries AS Level entry has decreased by 1.9%, equating to 27,033 fewer grades being awarded.

Table 8: Three Country, N. Ireland and CCEA Entries and Performance

2015	Three Country	NI Only	CCEA
ENTRIES	1,385,901 (1,412,934)	47,005 (45,751)	35,470 (33,447)
%A	20.2 (19.9)	27.2 (27.3)	28.9 (29.1)
%A–E	89.4 (88.8)	94.8 (94.5)	95.4 (95.2)

- AS Level, entries have increased in N. Ireland but have decreased in the Three Countries. The Three Countries saw a decrease of 1.9% (1,385,901) while in N. Ireland there was a 2.7% increase (47,005).
- CCEA AS Level entries increased by 6.0%.
- AS Level results in CCEA showed a slight decrease of 0.2 percentage points at grade A.
- CCEA outcomes exceeded the Three Country result at grade A by 8.7 percentage points and were 1.7 percentage points higher than the total N. Ireland outcomes.
- CCEA also showed a pass rate at A–E, which was greater than the national result by 6.0 percentage points. CCEA also exceeded the N. Ireland pass rate by 0.6 percentage points.

GCE AS Level – Gender

Table 9: Three Country, N. Ireland and CCEA Performance (Gender)

2015	Three Country		NI Only		CCEA	
	MALES	**FEMALES**	**MALES**	**FEMALES**	**MALES**	**FEMALES**
%A	20.0 (19.5)	20.3 (20.2)	25.4 (24.7)	28.6 (29.4)	26.8 (26.3)	30.7 (31.3)
%A–E	87.6 (86.9)	90.9(90.4)	94.0 (93.2)	95.5 (95.4)	94.4 (93.9)	96.1(96.2)

- In 2015, the Three Country results show the gender difference at grade A is 0.3 percentage points, in N. Ireland it is 3.2 percentage points and with CCEA it is 3.9 percentage points.
- Three Country overall pass rate gender differences are 3.3 percentage points, in N. Ireland it is 1.5 percentage points, and with CCEA it is 1.7 percentage points.
- In N. Ireland, females are 8.3 percentage points ahead of the Three Country figure at grade A, and 4.6 percentage points ahead at grades A–E. Males in N. Ireland are 5.4 percentage points ahead of the Three Country figure at grade A and 6.4 percentage points ahead at grades A–E.

- With CCEA, female candidates are 10.4 percentage points ahead of the Three Country figure at grade A, and 5.2 percentage points ahead at grades A – E. Male candidates are ahead of the Three Country figure at grade A by 6.8 percentage points, and ahead by 6.8 percentage points at grades A–E.
- CCEA female candidates are ahead of N. Ireland at grade A by 2.1 percentage points, and by 0.6 percentage points at grades A–E. Male candidates are ahead by 1.4 percentage points at grade A, and ahead by 0.4 percentage points at grades A–E.

GCE AS Level Subject Trends

In concordance with GCSE entries, there was an increase in STEM subject entries at AS Level in N. Ireland. Overall STEM subjects rose by 5% in 2015 (20,060 in 2015; 19,105 in 2014) a rise of 955 individual awards. The largest increases were; Computing +47.3%, Mathematics +9.4%, ICT +8.9%, Biology +4.3%, Physics +1.5%, Chemistry +0.4%, Design & Technology +0.1%. There was a decrease in Further Mathematics (-12.9%).

The Three Country pattern showed a slight increase in STEM subjects, 0.5% increase to 499,983 (+2,645) in 2015 from 497,338 in 2014.

GCE AS STEM Subjects

Figure 26: N. Ireland, AS STEM Entries (Biology and Mathematics) in 2011–15

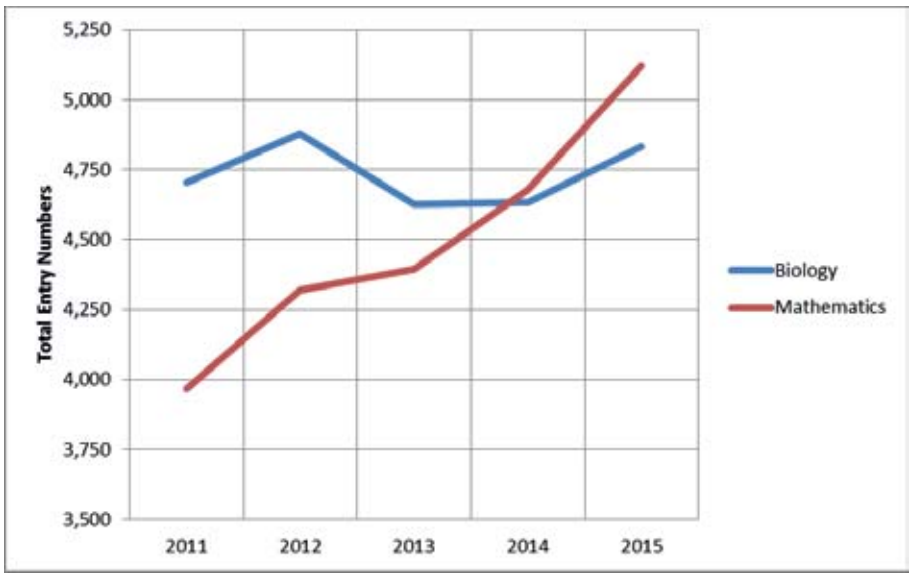


Figure 27: N. Ireland, AS STEM Entries (Chemistry, Physics, ICT and Design & Technology) in 2011–15

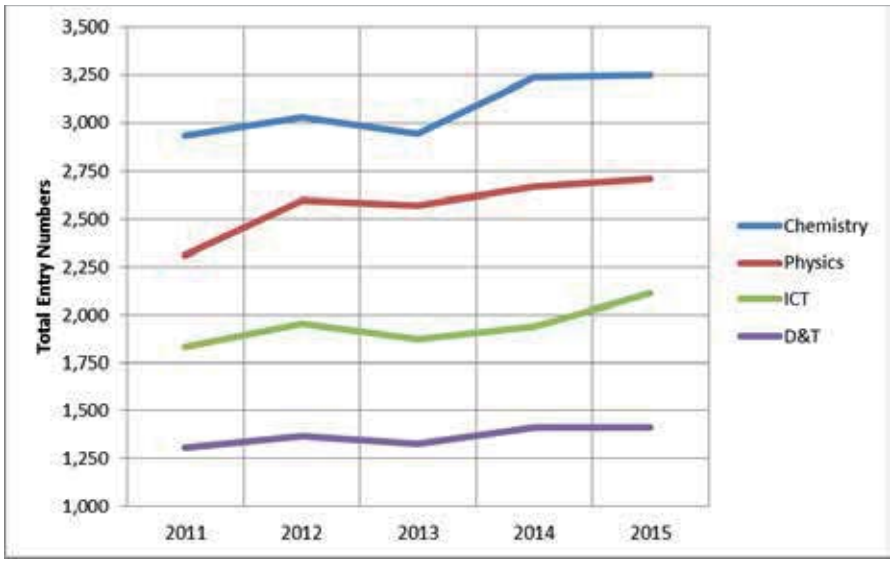


Figure 28: N. Ireland, AS STEM Entries (Further Mathematics) in 2011–15

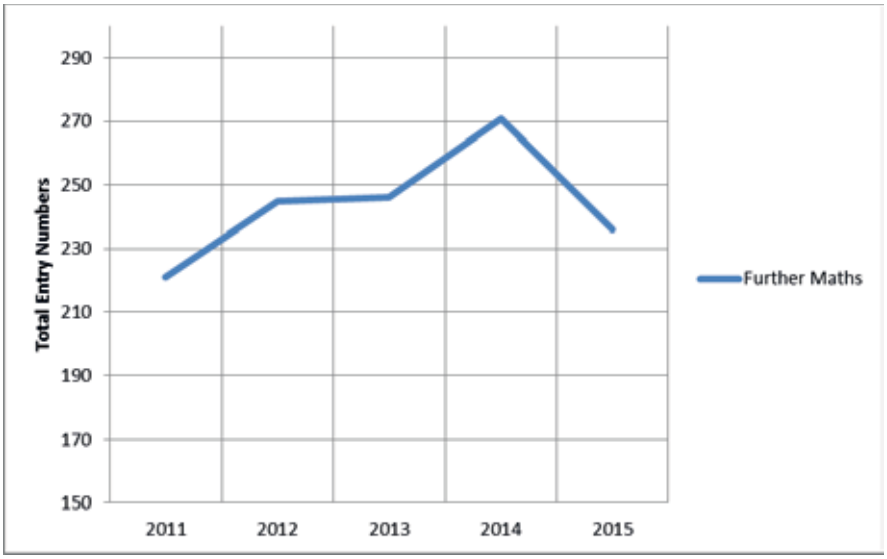


Figure 29: CCEA, AS STEM Entries (Biology and Mathematics) in 2011–15

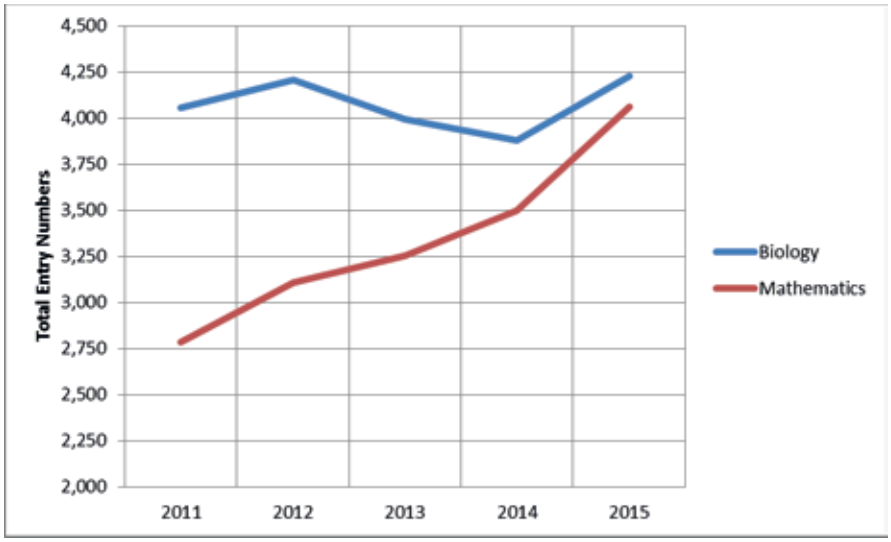


Figure 30: CCEA, AS STEM Entries (Chemistry, Physics and ICT) in 2011–15

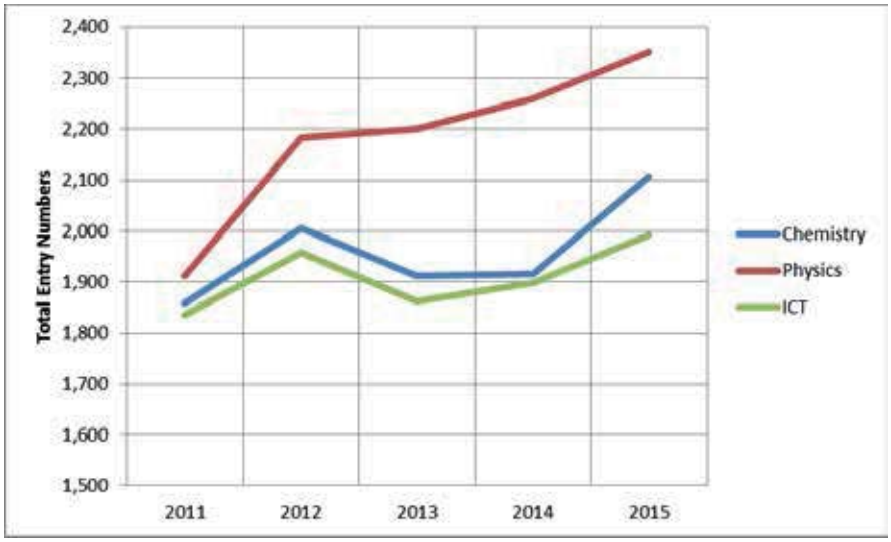
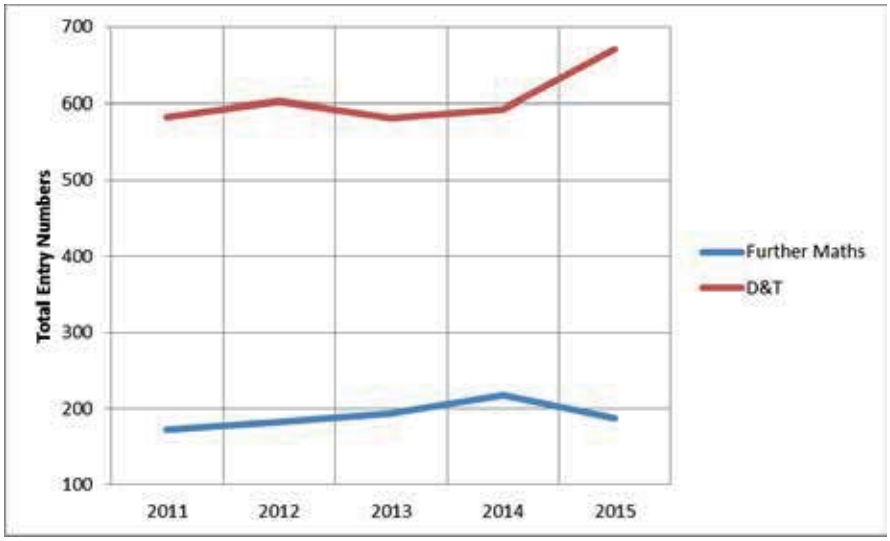


Figure 31: CCEA, AS STEM Entries (Further Mathematics and Design & Technology) in 2011–15



STEM Subject Ranks:

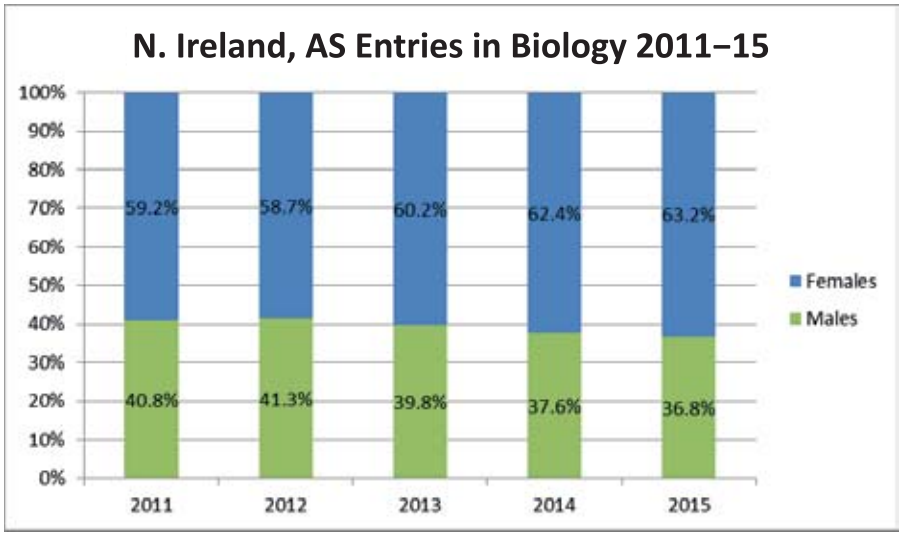
The most popular STEM subject at AS Level in the period 2011–15 is Biology. There were an average of 4,072 entries for candidates who took AS Biology with CCEA and an average of 4,735 entries for all N. Ireland candidates. Mathematics is the second most popular STEM subject with an average of 3,340 CCEA entries and an average of 4,496 for all N. Ireland candidates. The third most popular STEM subject for CCEA candidates is Physics with an average of 2,181 candidates, while the equivalent rank for N. Ireland students is Chemistry with an average of 3,080 candidates.

The top three most popular STEM subjects for males at AS Level are Mathematics, Biology and Physics. This trend is characteristic of both the students who take these subjects with CCEA and for all N. Ireland students. The three most popular STEM subjects for females at AS Level are Biology, Mathematics and Chemistry, which are again characteristic of both CCEA and N. Ireland candidates.

Biology:

More females on average took Biology at AS Level in the period 2011–15 (Figure 33). In addition, the number of females who select to do AS Biology is nearly 1,000 more than males for both CCEA only and N. Ireland candidates. A decrease in entries by over 250 candidates for males is observed in the period 2012–14, while there was an increase in entries for females in the period 2013–15. These trends appear for both CCEA and N. Ireland candidates.

Figure 32: N. Ireland, AS Biology Entries by Gender (% and entry number)



Chemistry:

Slightly more females on average are taking AS Chemistry than males in the period 2011–15. This trend is characteristics of both CCEA and N. Ireland candidates. There are rises and falls in entry numbers for males over the 2011–15 without any identifiable and consistent trend. The trend for females on the other hand shows increases for each year, except for 2012–13 where there was a decrease of 77 for CCEA candidates. Interestingly, the data shows that for N. Ireland female entries there are more decreases in entries with a large increase by 244 candidates in the academic year 2013–14.

Physics:

More males on average took Physics at AS Level in the period 2011–15. While male entries for CCEA have shown increases and decreases year-on-year, entries for males in N. Ireland mark a gradual increase over the five-year period. Female entries for both CCEA and N. Ireland candidates show the pattern of increases and decreases throughout the 2011–15 period.

Mathematics:

More males on average took Mathematics at AS Level in the period 2011–15. There is a consistent trend of gradual increase in the number of males and females taking Mathematics. This trend is characteristic of both CCEA and N. Ireland candidates.

ICT:

More males took ICT at AS Level for the period 2011–15. Male entries in AS ICT have shown increases for both CCEA and N. Ireland candidates except for the 2014–15 academic year where CCEA male entries decreased slightly (-20) while those of males in N. Ireland rose slightly (+14). Female entries are similar for both CCEA and N. Ireland candidates – they mark a decrease in the period 2012–14 by around 100, while they rise more substantially in the academic year 2014–15 by over 100.

Design and Technology:

Nearly three times more males on average took Design and Technology at AS Level for the period 2011–15 for both CCEA and N. Ireland candidates. In addition to that, there are on average twice as many N. Ireland candidates who take AS Design and Technology (+1,367) than those who take it with CCEA (606). Male entries are mostly consistent with increases and decreases throughout the 2011–15 period. There is a consistent increase in entries for females who take Design and Technology with CCEA through the 2011–15 period. The entries are steady for females in the N. Ireland in the period 2011–13 while the 2013–15 mark increases.

AS/A Level STEM drop-out percentages

Many students start their A Level journey studying four AS subjects with the intention of dropping one at the end of the first year. These students gain their AS award and progress the other three subjects to A Level before being awarded three A Levels. Changes in drop-out rates can show interesting patterns and may reflect university entry requirements. The drop-out rate from AS – A Level for all STEM subjects entries between 2011 and 2014 ranged from -27% to -32%.

Mathematics is the only STEM subject which marks an increase in drop-out rates between AS and A Level entries from 2011 to 2014 for both CCEA and N. Ireland candidates. There is a N. Ireland increase from -21% to -29% showing a slight decline in the proportion progressing to A Level. However this information needs to be viewed in the context of increasing entry numbers at AS. It is possible that more students are taking STEM subjects as their fourth 'extra' AS subject without intending to ever progress to A Level. University entry may require STEM qualifications and AS is an option to gain a relevant qualification in one year. It is also possible that some students do not progress due to subject difficulty or motivational reasons. The AS to A Level data does not suggest any subjects with anomalous progression uptake.

Without further research it is not possible to determine cause for these changes.

GCE AS Languages

The entry for AS Languages in N. Ireland, CCEA and the Three Countries has declined over the past five years. N. Ireland experienced a notable overall fall in Language entry in 2013 of -7.6%, the corresponding decline for CCEA was -7.2 % and in the Three Countries was -2.7%. There was an increase in all languages (except German) in 2014 and it is interesting to note that the increase in AS Spanish and Irish is reflected in an increase in these languages at A Level in 2015 (Figures 69 and 70). The relationship between AS and A Level trends suggests that A Level Spanish will continue to increase in 2016.

Figure 33: N. Ireland, AS Languages Entries (ALL) in 2011–15

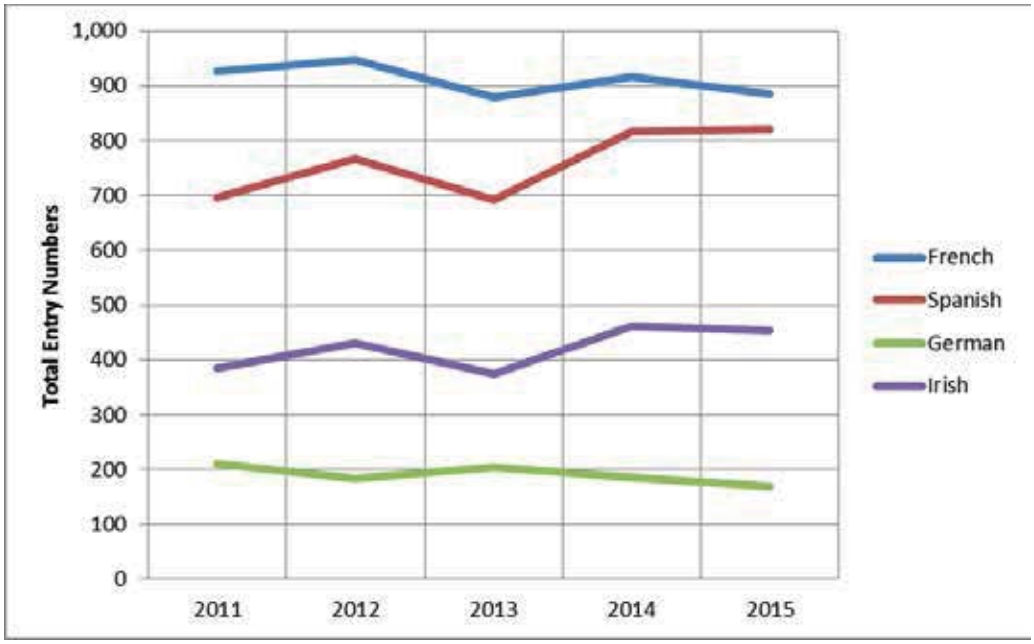


Figure 34: N. Ireland, AS Languages Proportion in 2011–15

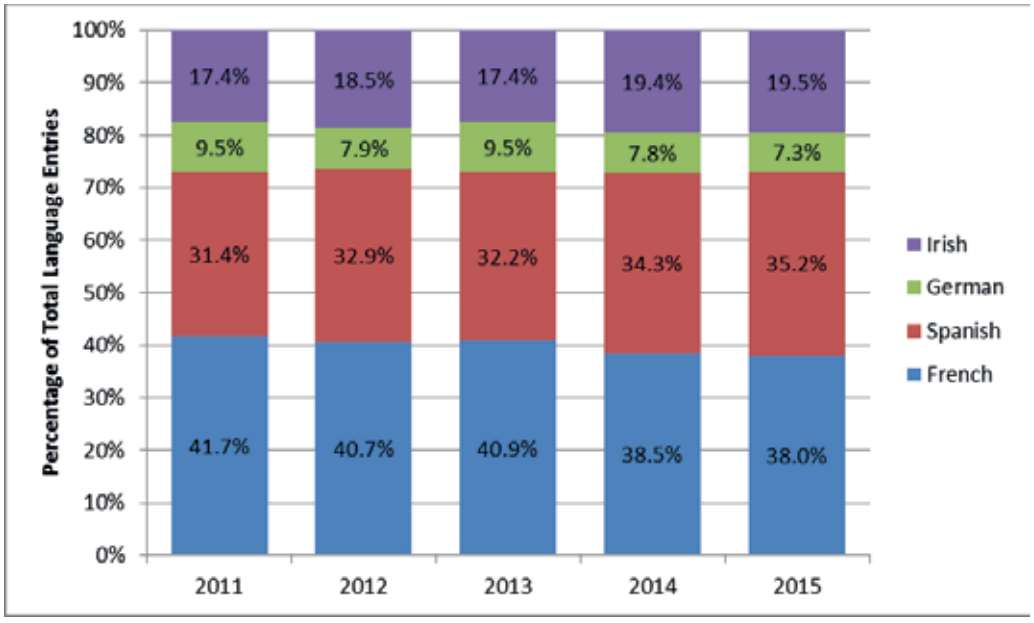


Figure 35: CCEA, AS Languages Entries (ALL) in 2011–15

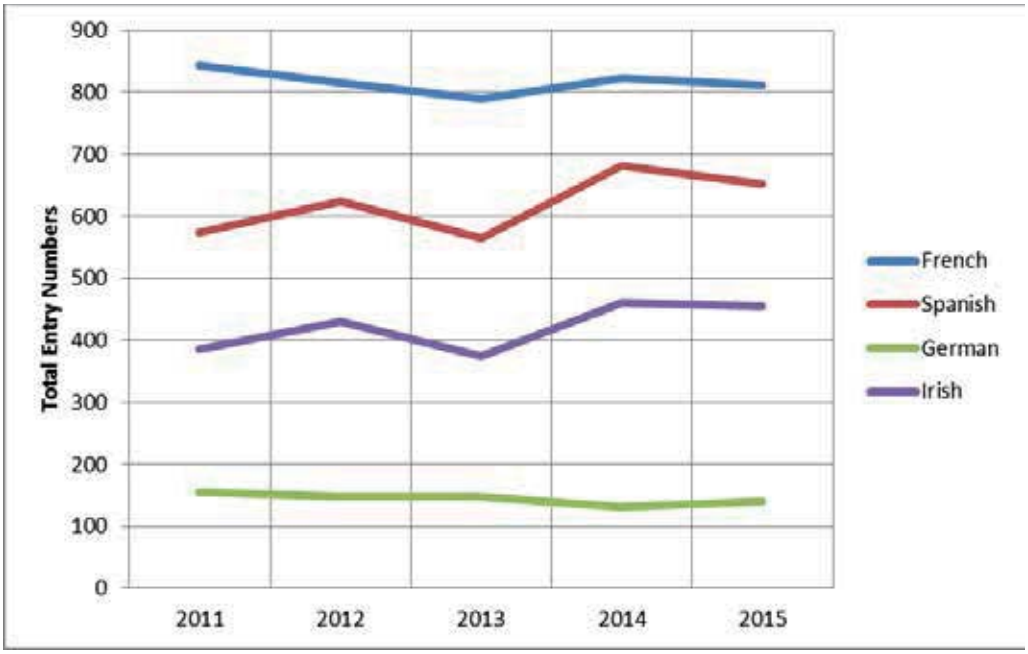
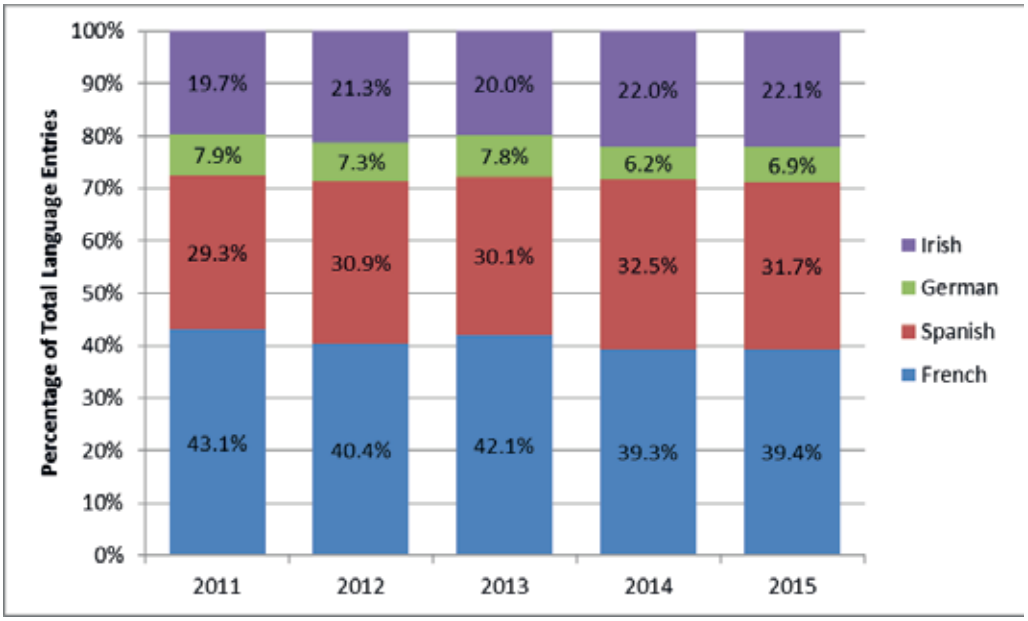


Figure 36: CCEA, AS Languages Proportion in 2011–15



French:

There is an overall decrease in AS Level French for both CCEA and N. Ireland candidates. The pattern for entry variation for males is similar for both CCEA and N. Ireland candidates. Entry numbers are increasing across the period 2011–15, except for the academic year 2012–13 when male entries dropped. Female entries have been rising and falling in different years leading to an overall decrease in entry for both CCEA and N. Ireland candidates. The year 2012–13 also marks the largest decrease for entries for both CCEA and N. Ireland candidates.

Spanish:

The number of candidates taking AS Spanish with CCEA and N. Ireland has increased overall in the period 2011–15. This increase in entry numbers has been mostly due to a gradual increase in male entries during this five-year period. The overall increase for males taking AS Spanish with CCEA is by 67 candidates, while the increase for males from the total of N. Ireland entries is by 92 candidates. Female entries have been rising and falling in the five-year period. Increases are observed for the academic years 2011–12 and 2014–15, but there has also been a more substantial decrease in the period 2012–13 as well as a drop in female entries between 2014 and 2015.

Irish:

There is an overall increase in the entry numbers for AS Irish in the period 2011–15. Since Irish is only offered by CCEA, the overall increase is identical for both CCEA and overall N. Ireland candidates. This increase is largely due to the overall average rise in the number of females who select to do AS Irish. Male entries have been rising and falling, resulting in no change in entry number between 2011 and 2015. However, it should be noted that the academic year 2012–13 marks a decrease for male and female entries for AS Irish.

German:

Overall, there is a decrease in number of candidates studying AS German. This is characteristic of both CCEA and N. Ireland candidates. However, the overall drop in entry numbers is higher for N. Ireland candidates (-41) compared to CCEA candidates (-11). Furthermore, there is an overall decrease in entries for both males and females from N. Ireland, while the drop in entries for CCEA candidates is mainly due to a decrease in entries by females.

Section 5

GCE A Level Qualifications Analysis

5

GCE A Level Qualifications Analysis

GCE A Level Overall Performance

In 2015 the overall A Level entry increased by 2.5% in N. Ireland, this equates to an additional 790 grades awarded. This increase is in-line with a slight population increase. The Three Country entry also increased by 2% in-line with the population.

Over the past five years population changes have shown that despite numbers in the 16 year old statutory population decreasing, the proportion of those staying on from GCSE to A Level has increased (by 8.0 percentage points since 2010 when the current A/AS Levels were introduced, and by 0.3 percentage points since 2014). In 2012–13 (when these students were doing their GCSEs the population had risen but there was still a proportionate increase in A Level entries.)

N. Ireland candidates continue to perform higher than the overall Three Country results in A*–A and A*–E, but not A*. CCEA candidates achieve higher grades overall.

Table 10: Three Country, N. Ireland and CCEA Entries and Performance

2015	Three Country	NI Only	CCEA
ENTRIES	850,749 (833,807)	32,390 (31,600)	24,432 (23,521)
% A*	8.2 (8.2)	7.6 (7.3)	8.5 (8.2)
% A*–A	25.9 (26.0)	29.3 (29.9)	32.0 (32.9)
% A*–E	98.1 (98.0)	98.2 (98.1)	98.6 (98.6)

- In the Three Countries 8.2% of candidates achieved the A* grade.
- Overall in the Three Countries there was no change at grade A* (8.2%) from last year, grades A*–A dropped by 0.1 percentage point (26.0% to 25.9%), and there was an increase of 0.1 percentage point at grade A*–E (%).
- In N. Ireland 7.6% of candidates achieved grade A*, an increase of 0.3 percentage points from last year.
- There was a 0.6 percentage points decrease at grades A*–A, and a 0.1 percentage point increase at grades A*–E.
- 8.5% of candidates with CCEA achieved a grade A*, an increase of 0.3 percentage points, with a decrease of 0.9 percentage points at grades A*–A (32.0%). There was no change at grades A*–E (98.6%).

GCE A Level – Gender

Table 11: Three Country, N. Ireland and CCEA Performance (Gender)

2015	Three Country		NI Only		CCEA	
	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES
% A*	8.7 (8.5)	7.8 (7.9)	7.4 (6.8)	7.8 (7.6)	8.0 (7.6)	8.8 (8.6)
% A*–A	25.7 (25.7)	26.1 (26.2)	27.2 (27.4)	31.0 (32.1)	29.4(30.0)	34.1 (35.3)
%A*–E	97.5 (97.4)	98.5 (98.4)	97.9 (97.8)	98.4 (98.4)	98.3 (98.3)	98.8(98.8)

- In the Three Country results, the gender difference at grade A* is 0.9 percentage points. In N. Ireland, it is 0.4 percentage points and with CCEA, it is 0.8 percentage points.
- Three Country results show the gender difference at grade A is 0.4 percentage points. In N. Ireland, it is 3.8 percentage points and with CCEA, it is 4.7 percentage points.
- The overall pass rate gender difference is 1.0 percentage point in the Three Countries. In N. Ireland, it is 0.5 percentage points, and with CCEA, it is 0.5 percentage points.
- In N. Ireland, female outcomes are comparable with the Three Country outcomes at grade A*, 4.9 percentage points ahead at grades A*–A, and 0.1 percentage point behind at grades A*–E. N. Ireland males perform less well than the Three Country males at grade A* by 1.3 percentage points, are 1.5 percentage points ahead at grades A*–A, and 0.4 percentage points ahead at grades A*–E.
- With CCEA, females are 1.0 percentage point ahead of the Three Country figure at grade A*, 8.0 percentage points ahead at grades A*–A and 0.3 percentage points ahead at grades A*–E. Males are 0.7 percentage points lower than the Three Country figure at grade A*, 3.7 percentage points ahead at grades A*–A, and 0.8 percentage point ahead at grades A*–E.
- With CCEA, females are 1.0 percentage point ahead of N. Ireland at grade A*, 3.1 percentage points ahead at grades A*–A, and 0.4 percentage points ahead at grades A*–E. Males are 0.6 percentage points ahead at grade A*, 2.2 percentage points ahead at grades A*–A, and 0.4 percentage points ahead at grades A*–E.

GCE A Level Subject Performance

This section presents a three-year picture of GCE A Level outcomes in N. Ireland. The results are presented as cumulative bar charts. The following bar charts show that GCE A Level performance has remained steady for the past three years in most subjects with very little fluctuation across grades. Where there are noticeable differences entry tends to be small, for example German and Further Mathematics.

The following bar charts show the outcomes for all N. Ireland candidates in all school sectors and highlight the consistency in N. Ireland results for the past three years.

Figure 37: Cumulative Performance in GCE A Level Art and Design (NI) (2013–15) Overall

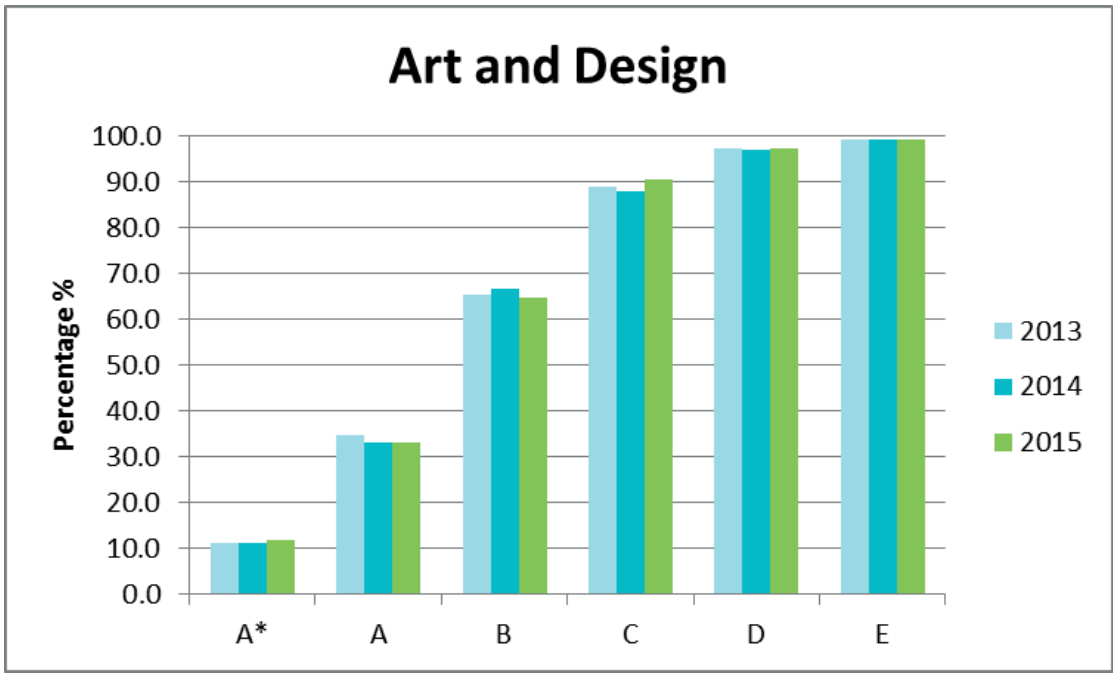


Figure 38: Cumulative Performance in GCE A Level Biology (NI) (2013–15) Overall

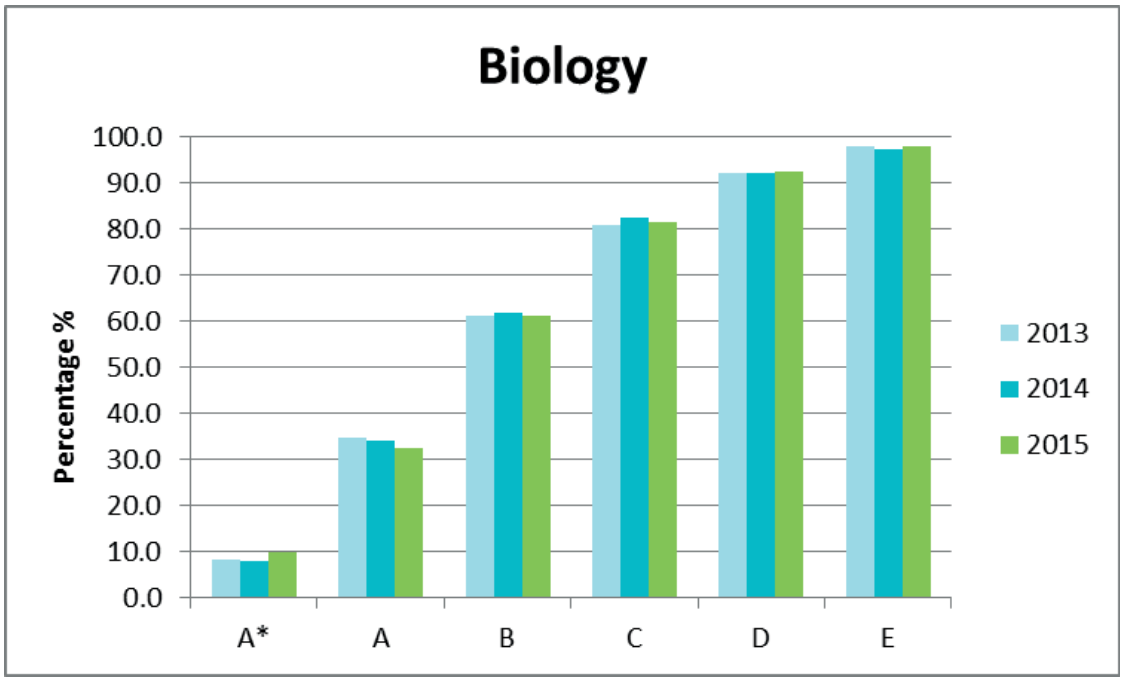


Figure 39: Cumulative Performance in GCE A Level Business Studies (NI) (2013–15) Overall

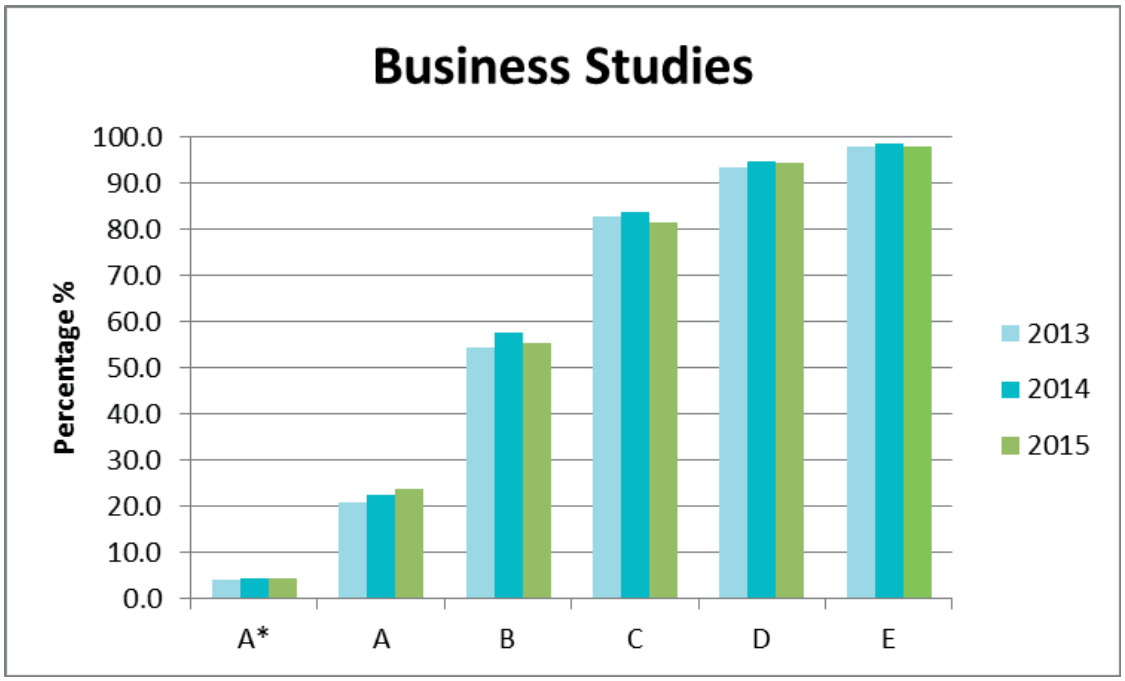


Figure 40: Cumulative Performance in GCE A Level Chemistry (NI) (2013–15) Overall

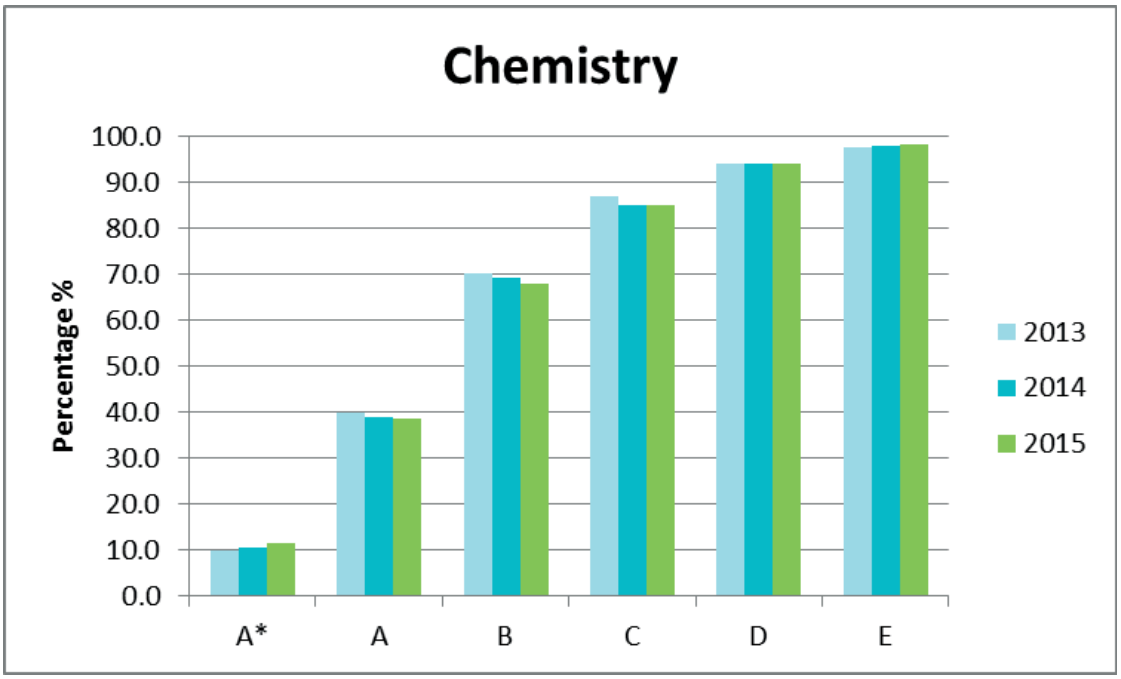


Figure 41: Cumulative Performance in GCE A Level Economics (NI) (2013–15) Overall

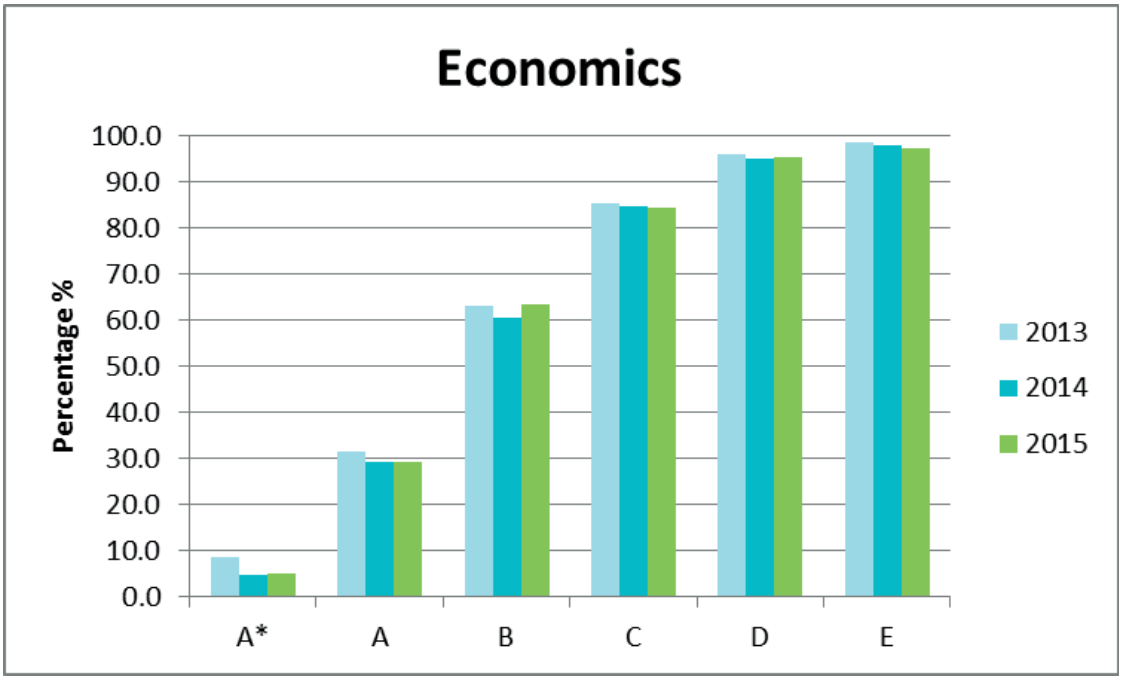


Figure 42: Cumulative Performance in GCE A Level English Literature (NI) (2013–15) Overall

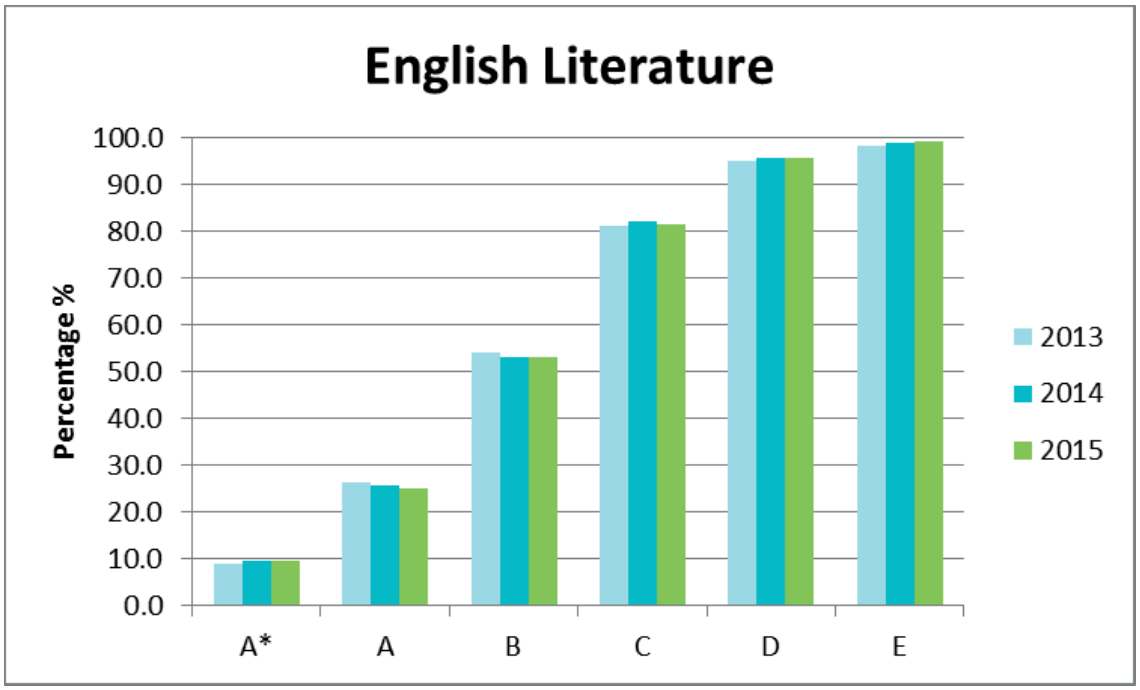


Figure 43: Cumulative Performance in GCE A Level French (NI) (2013–15) Overall

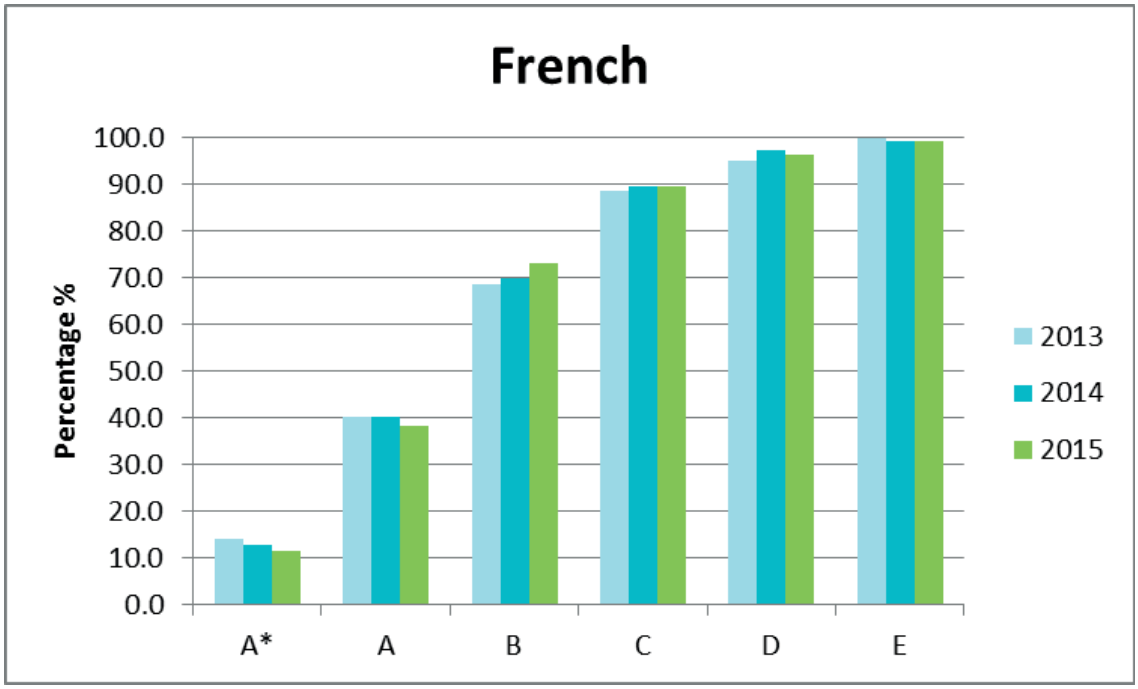


Figure 44: Cumulative Performance in GCE A Level Geography (NI) (2013–15) Overall

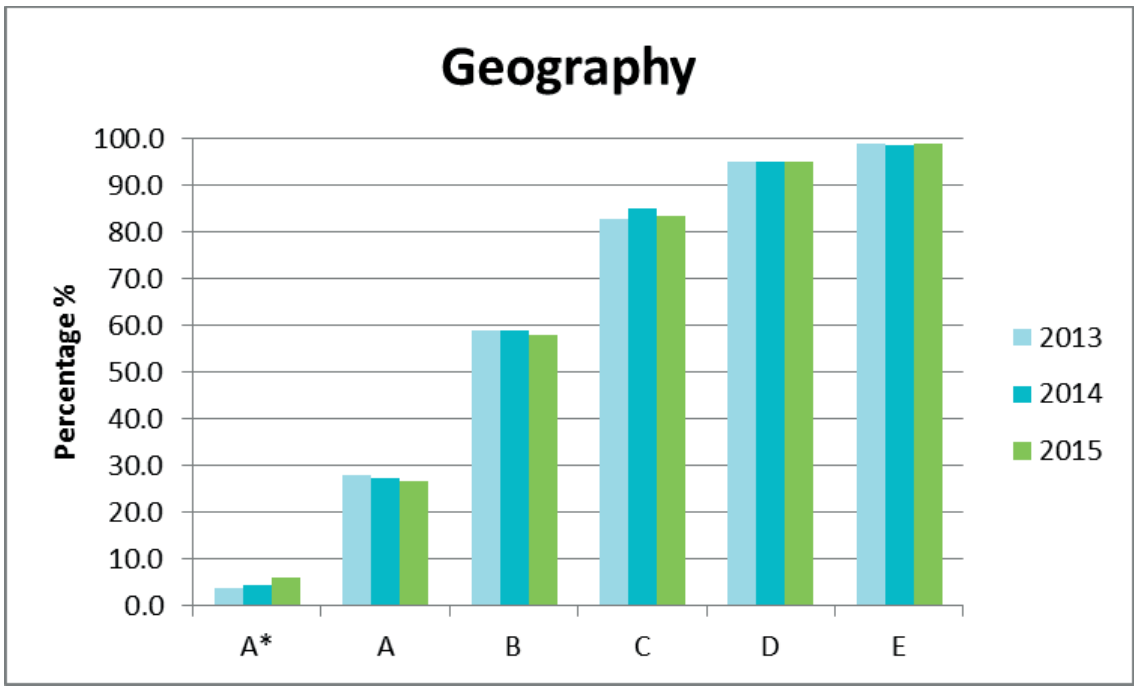


Figure 45: Cumulative Performance in GCE A Level German (NI) (2013–15) Overall

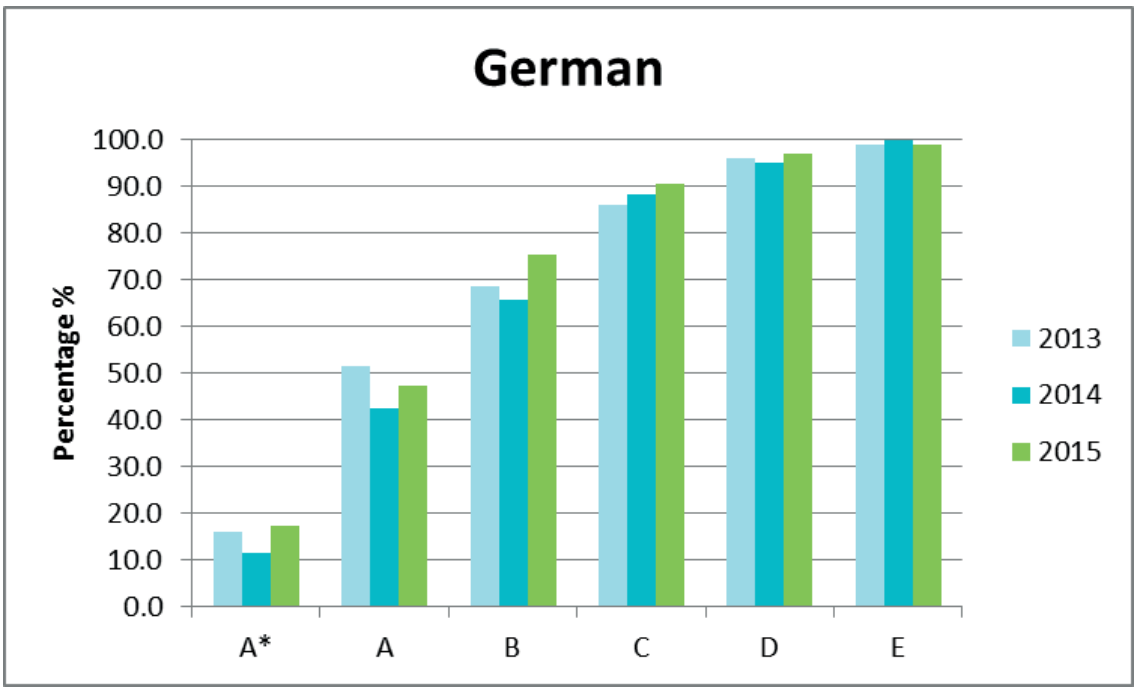


Figure 46: Cumulative Performance in GCE A Level Government & Politics (NI) (2013–15) Overall

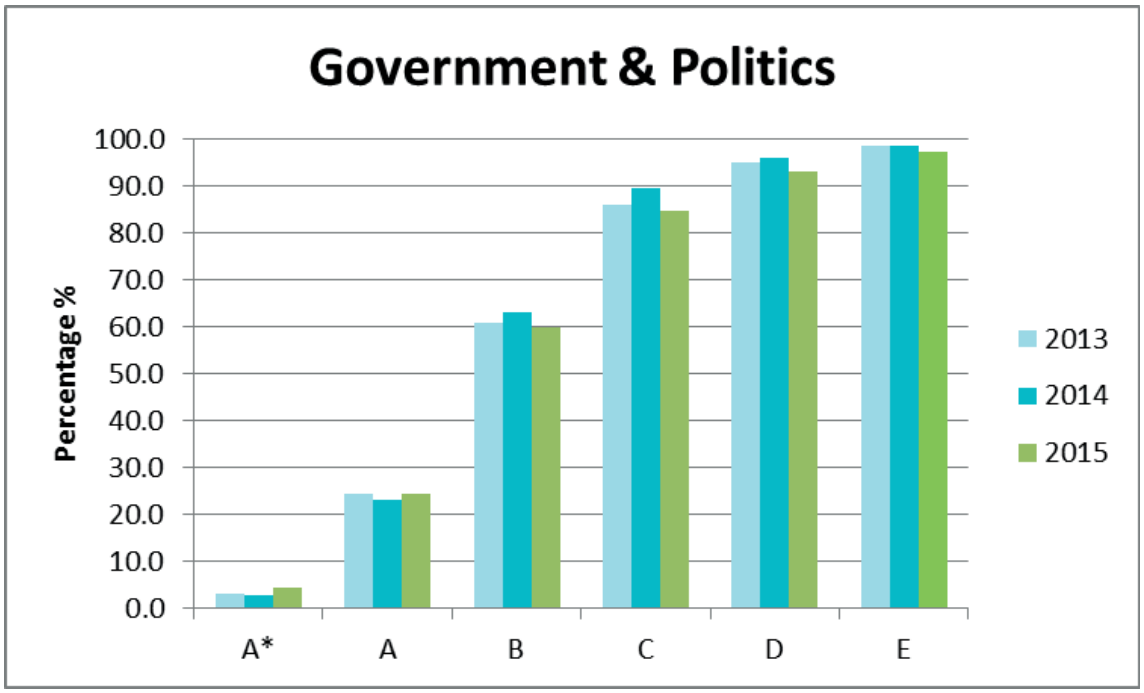


Figure 47: Cumulative Performance in GCE A Level History (NI) (2013–15) Overall

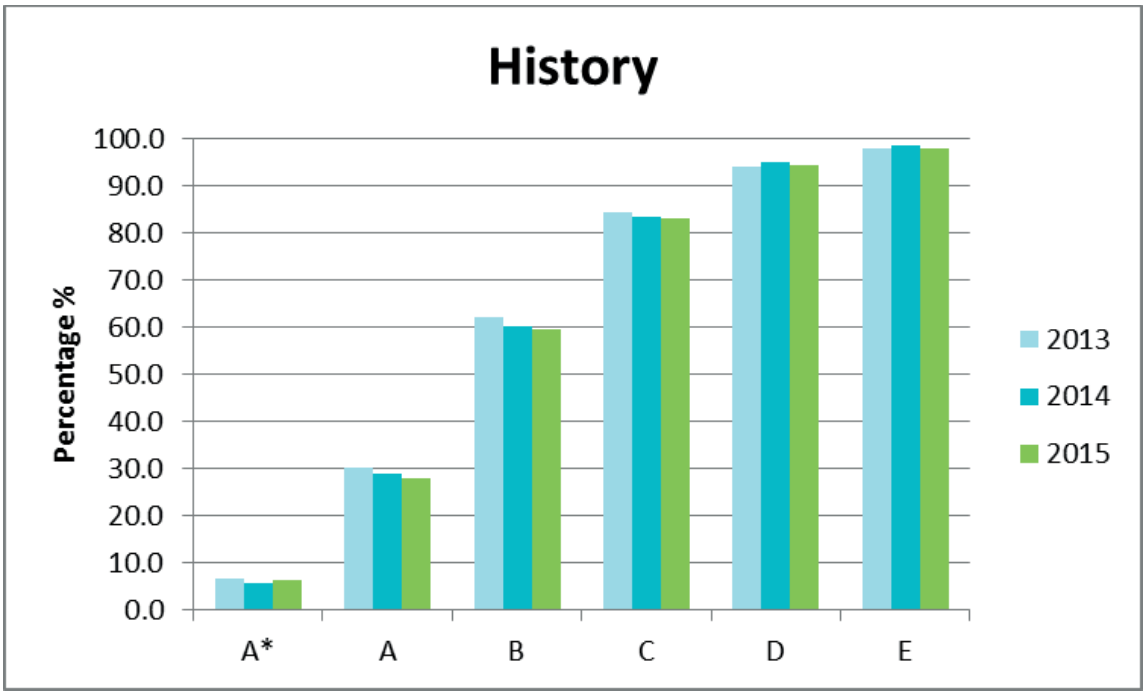


Figure 48: Cumulative Performance in GCE A Level ICT (NI) (2013–15) Overall

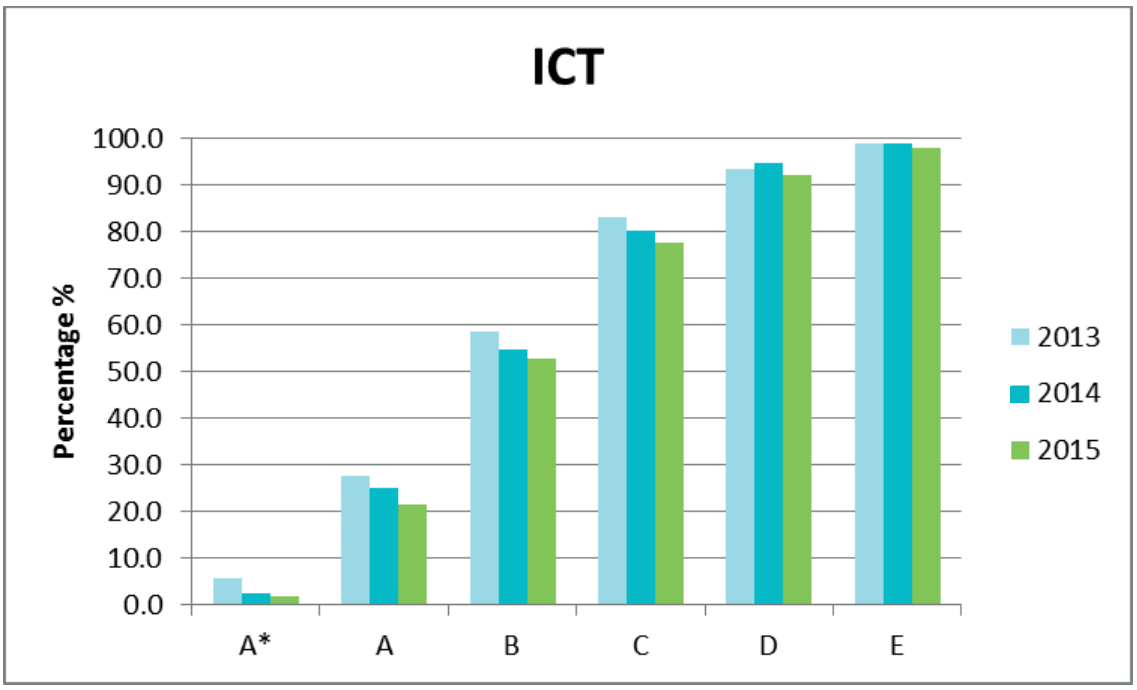


Figure 49: Cumulative Performance in GCE A Level Irish (NI) (2013–15) Overall

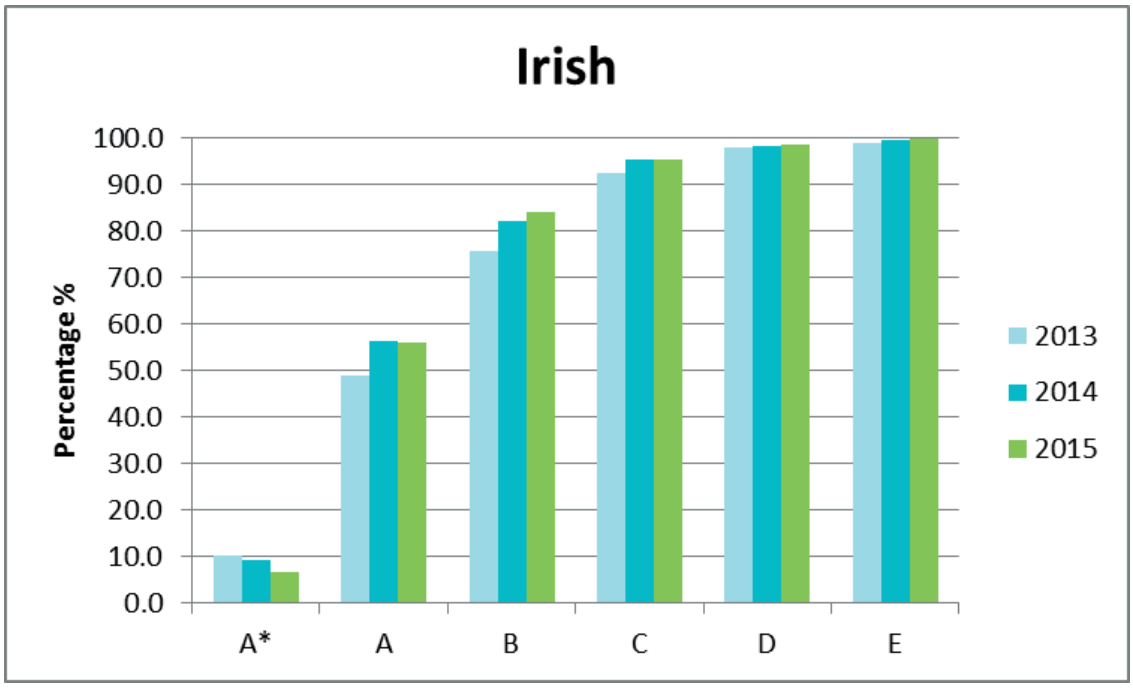


Figure 50: Cumulative Performance in GCE A Level Mathematics (NI) (2013–15) Overall

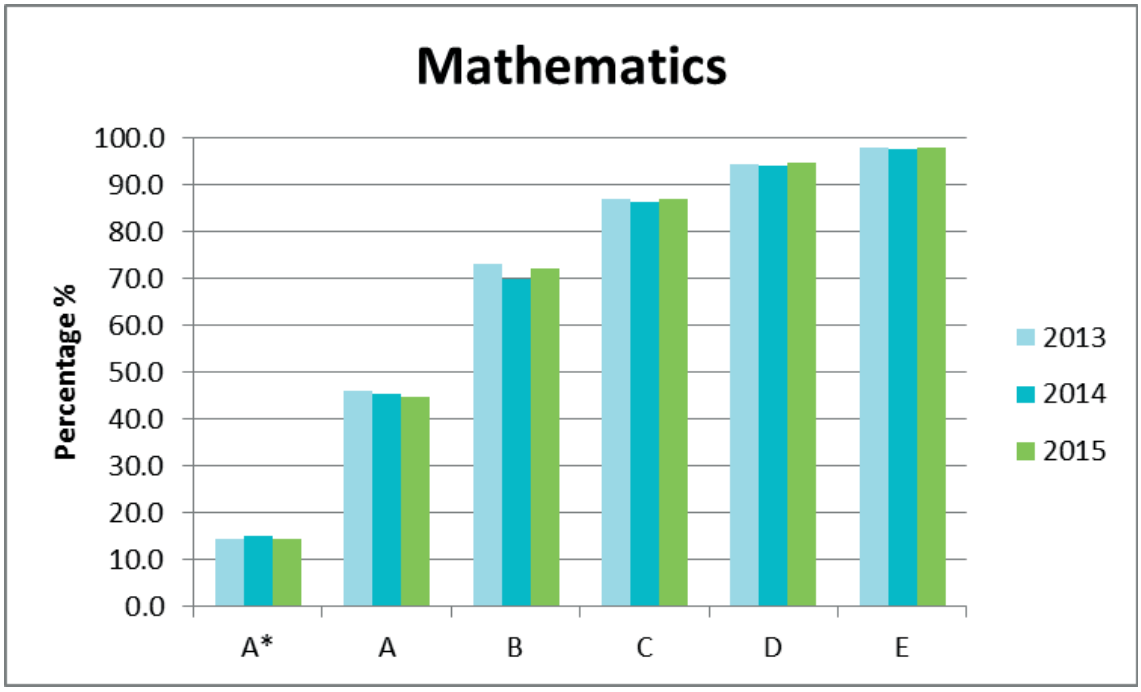


Figure 51: Cumulative Performance in GCE A Level Media Studies (NI) (2013–15) Overall

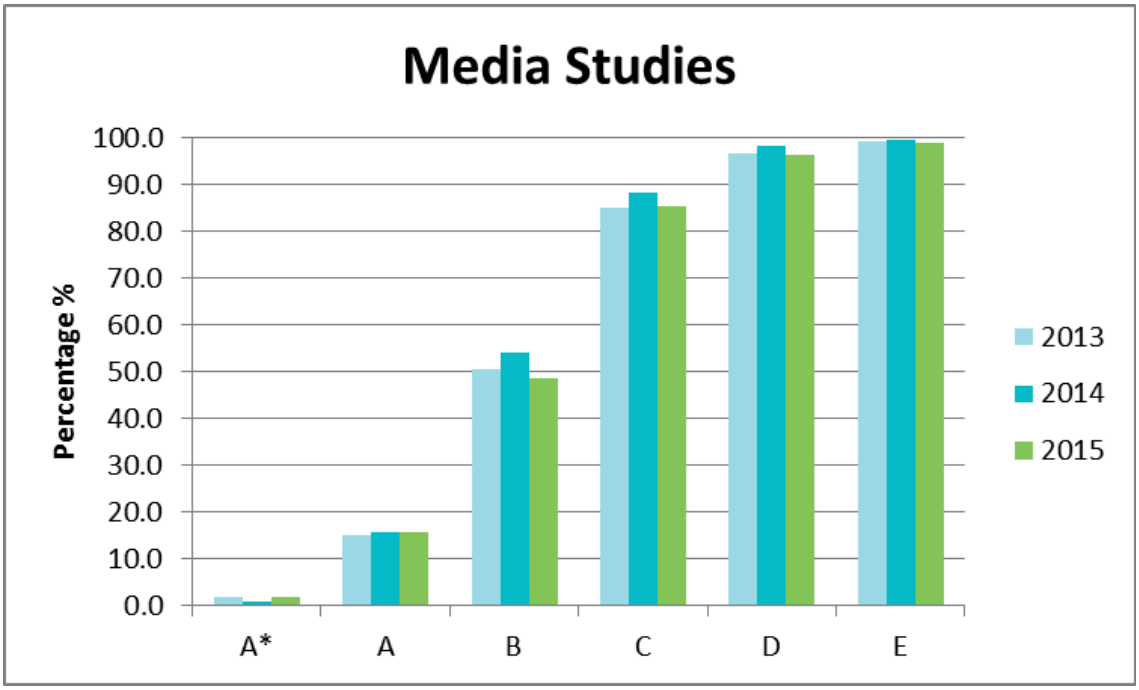


Figure 52: Cumulative Performance in GCE A Level Music (NI) (2013–15) Overall

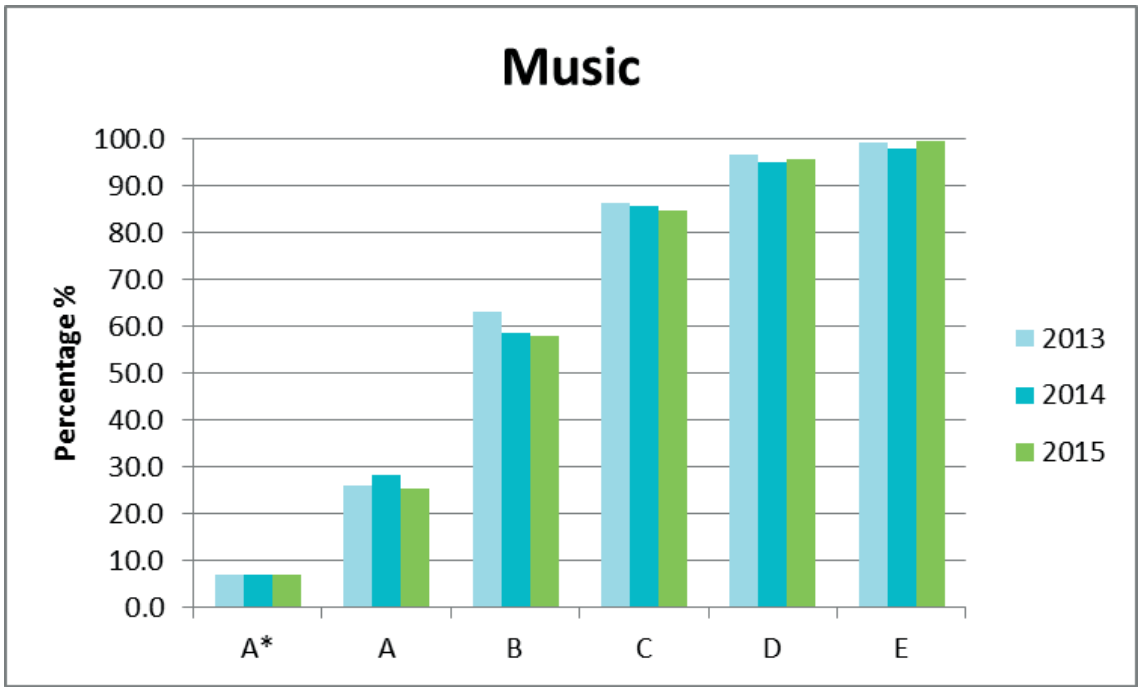


Figure 53: Cumulative Performance in GCE A Level Physics (NI) (2013–15) Overall

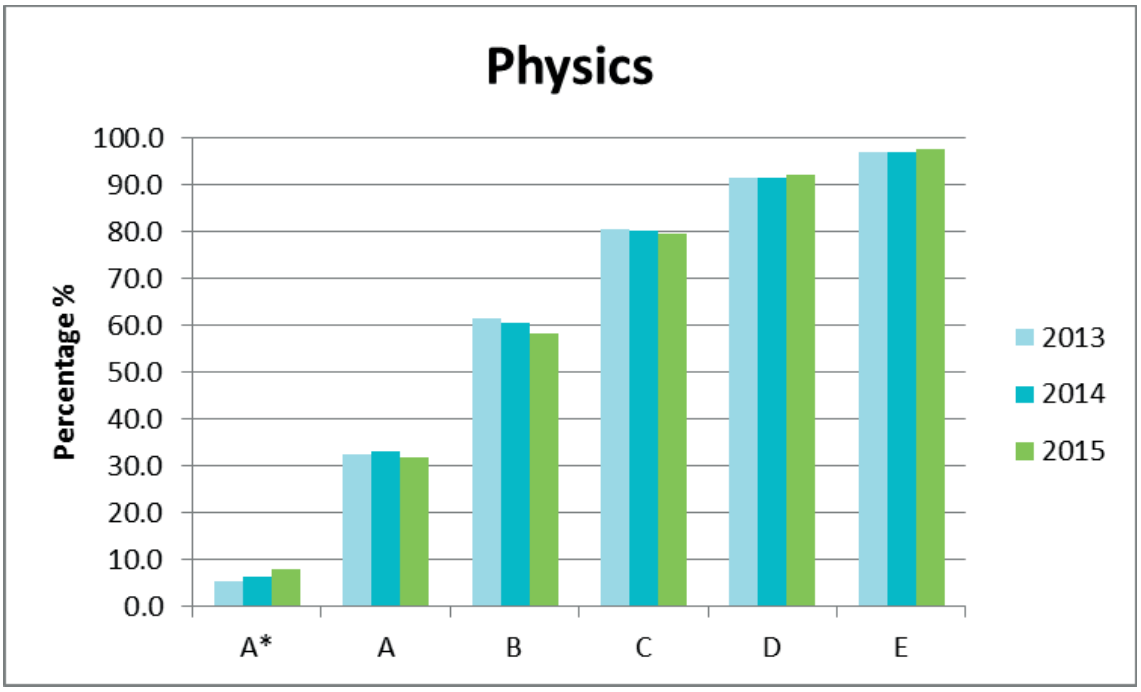


Figure 54: Cumulative Performance in GCE A Level Religious Studies (NI) (2013–15) Overall

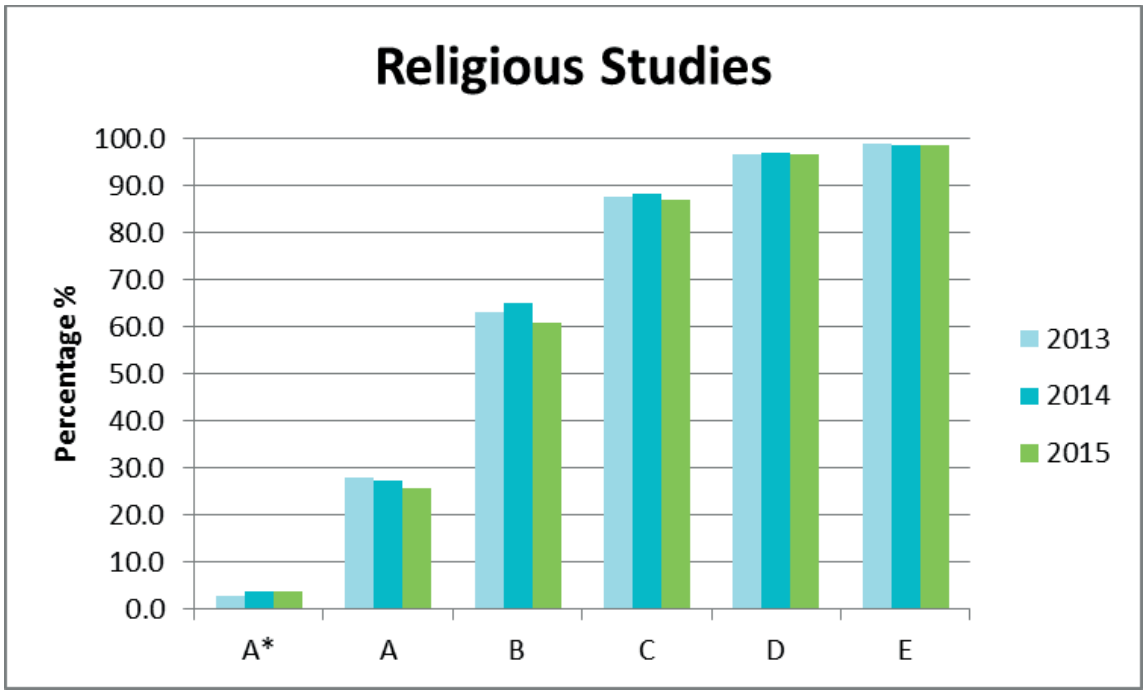


Figure 55: Cumulative Performance in GCE A Level Spanish (NI) (2013–15) Overall

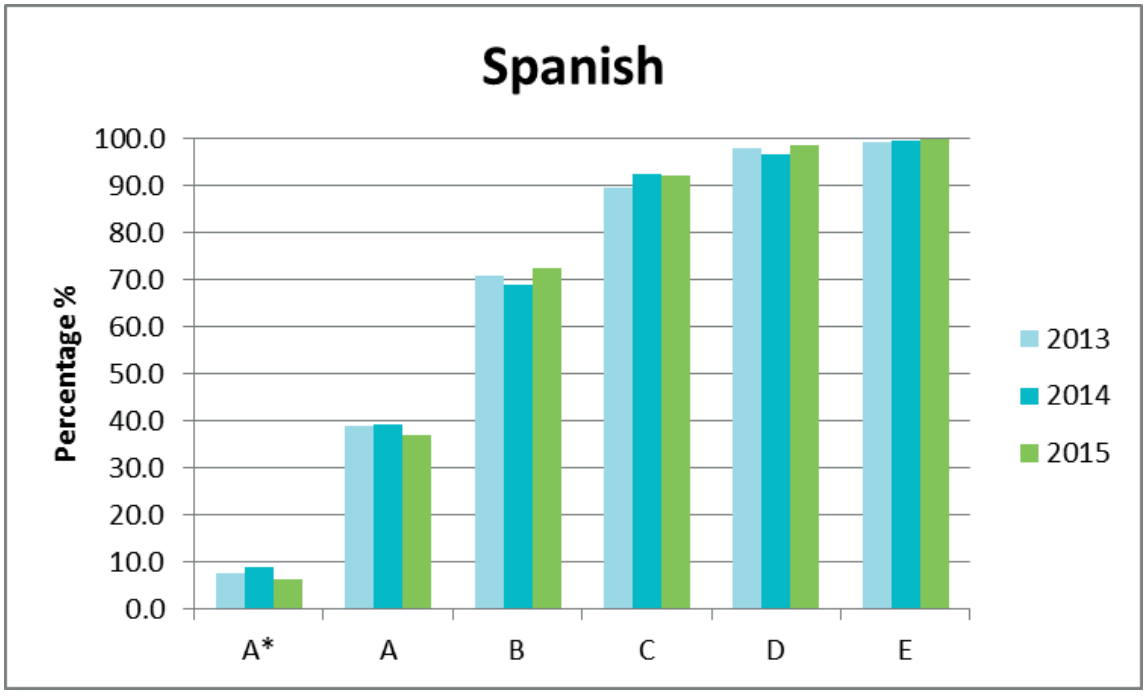


Figure 56: Cumulative Performance in GCE A Level Design & Technology (NI) (2013–15) Overall

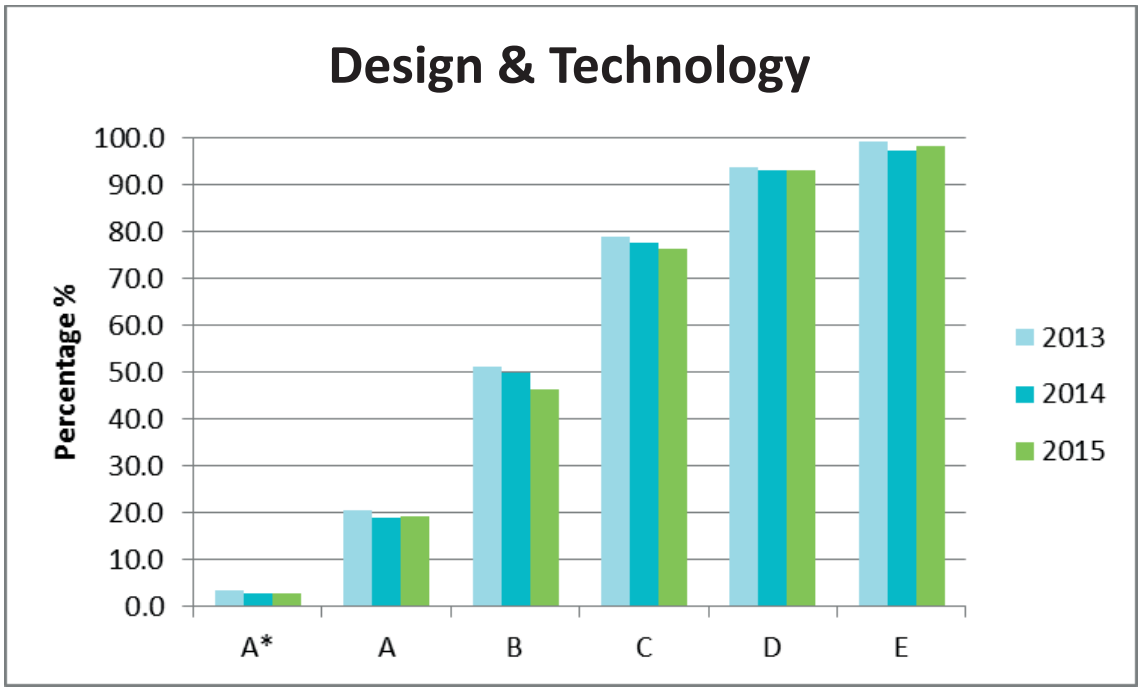
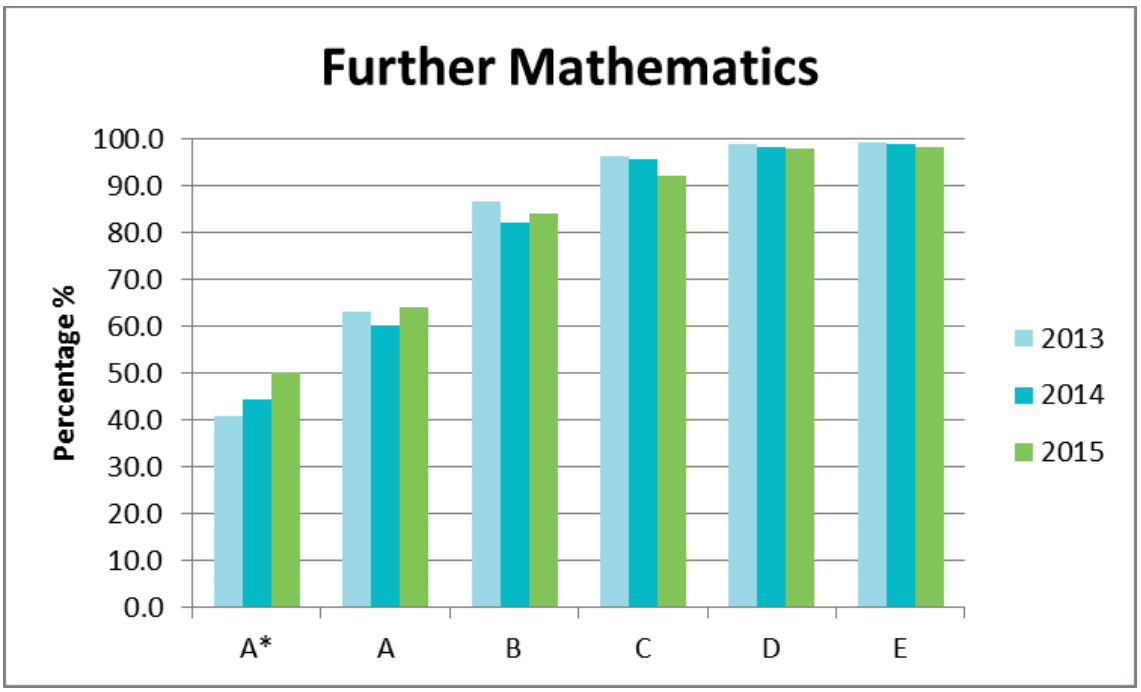


Figure 57: Cumulative Performance in GCE A Level Further Mathematics (NI) (2013–15) Overall



GCE A Level Subject Trends

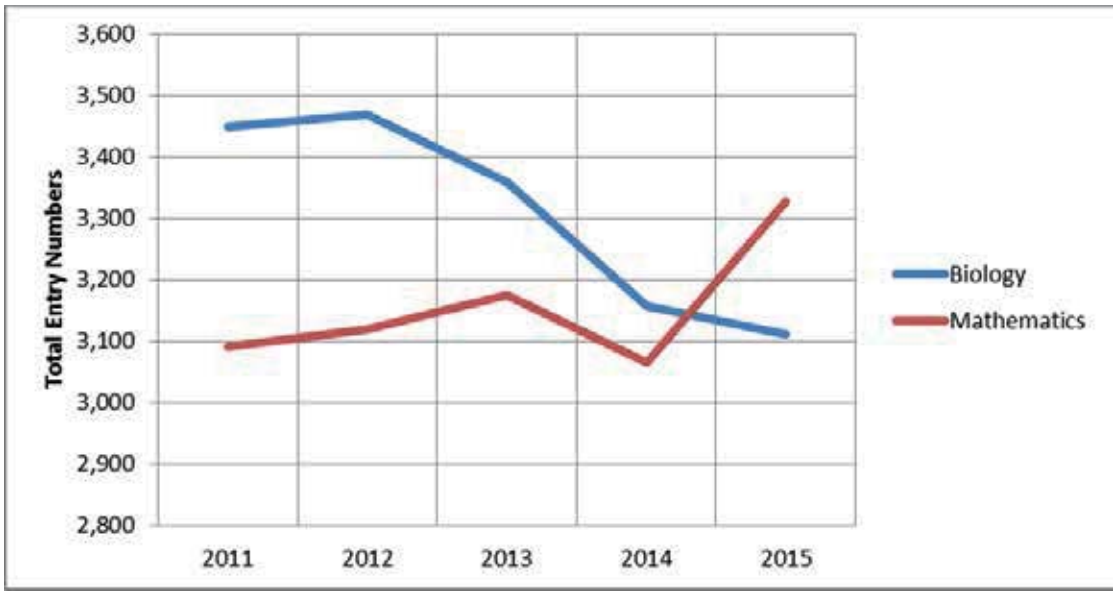
The most substantial trend in GCE during 2011–15 was the increase of STEM subjects. These subjects are not only the most popular, but have the highest grade outcomes in the Three Country, N. Ireland and CCEA results.

The most noteworthy information from the 2015 N. Ireland entry data is the impact that female choice is having on STEM entries overall. The female population are largely responsible for the increase in STEM subjects in 2015 with considerable increases in Design and Technology +24.5%, Mathematics +10.6% and Further Mathematics +10.4%. The female entry in Biology +5.7%, Chemistry +3.3% and Physics +2.1% also increased, leaving ICT as the only STEM subject with a decreasing female entry (-2.1%). The Three Country results do not replicate this pattern. It is distinctive to N. Ireland only.

Another trend emerging over the past five years occurs in Languages. French and German continue to decline at A Level, but Irish and Spanish have seen increases in 2015. Interestingly, GCE A Level Spanish had a 22.5% increase in 2015, following a decrease of 15% in 2014** . The Three Country trend for languages was the same as N. Ireland with a 14% increase in Spanish and decreases in French and German.

GCE A Level STEM

Figure 58: N. Ireland, A Level STEM Entries (Biology and Mathematics) in 2011–15



**Entry numbers are small therefore treat proportional comments with caution

Figure 59: N. Ireland, A Level STEM Entries (Chemistry, Physics, ICT and Design & Technology) in 2011–15

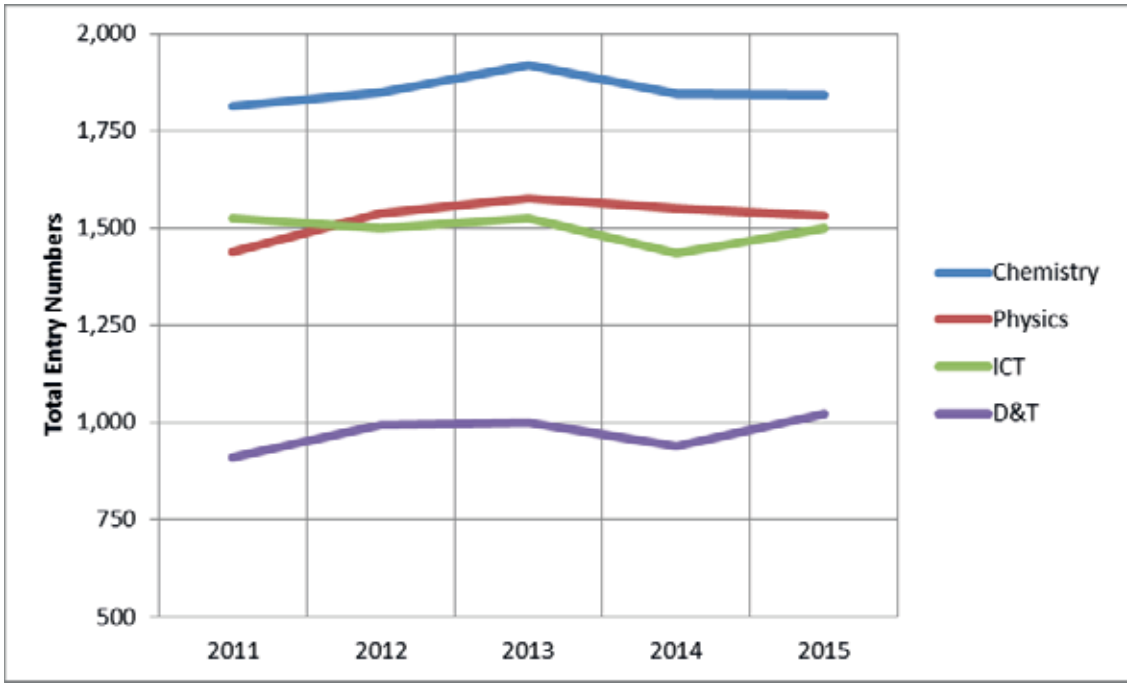


Figure 60: N. Ireland, A Level STEM Entries (Further Mathematics) in 2011–15

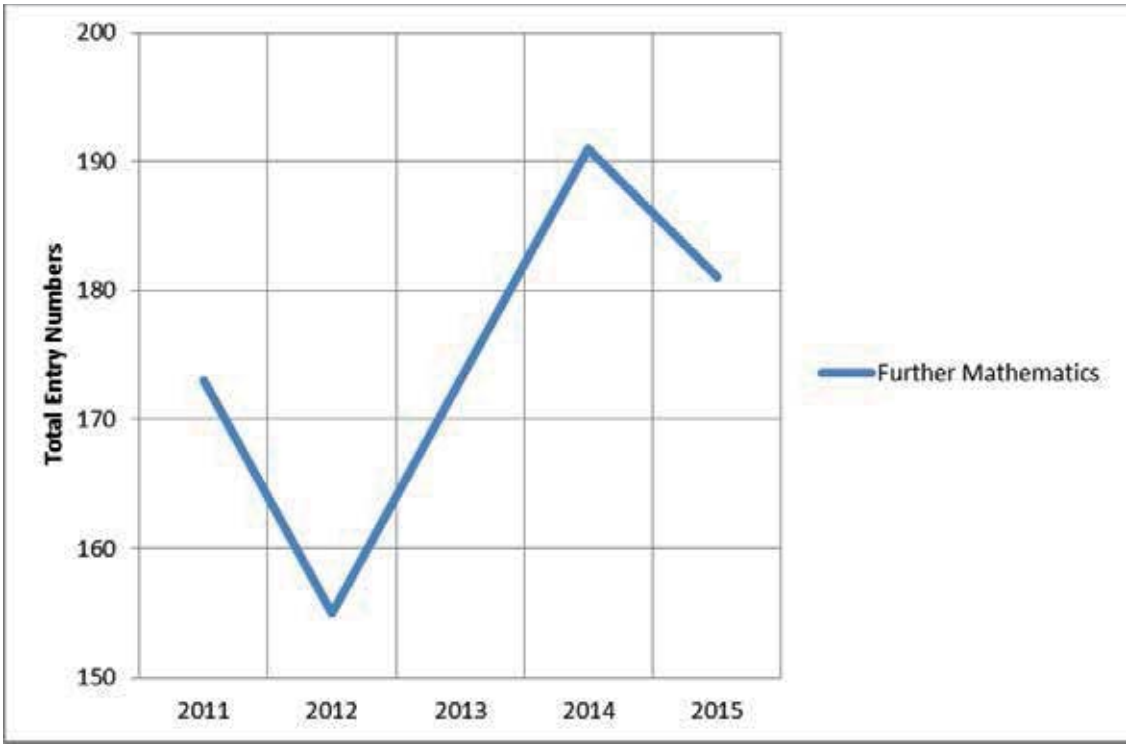


Figure 61: CCEA, A Level STEM Entries (Biology and Mathematics) in 2011–15

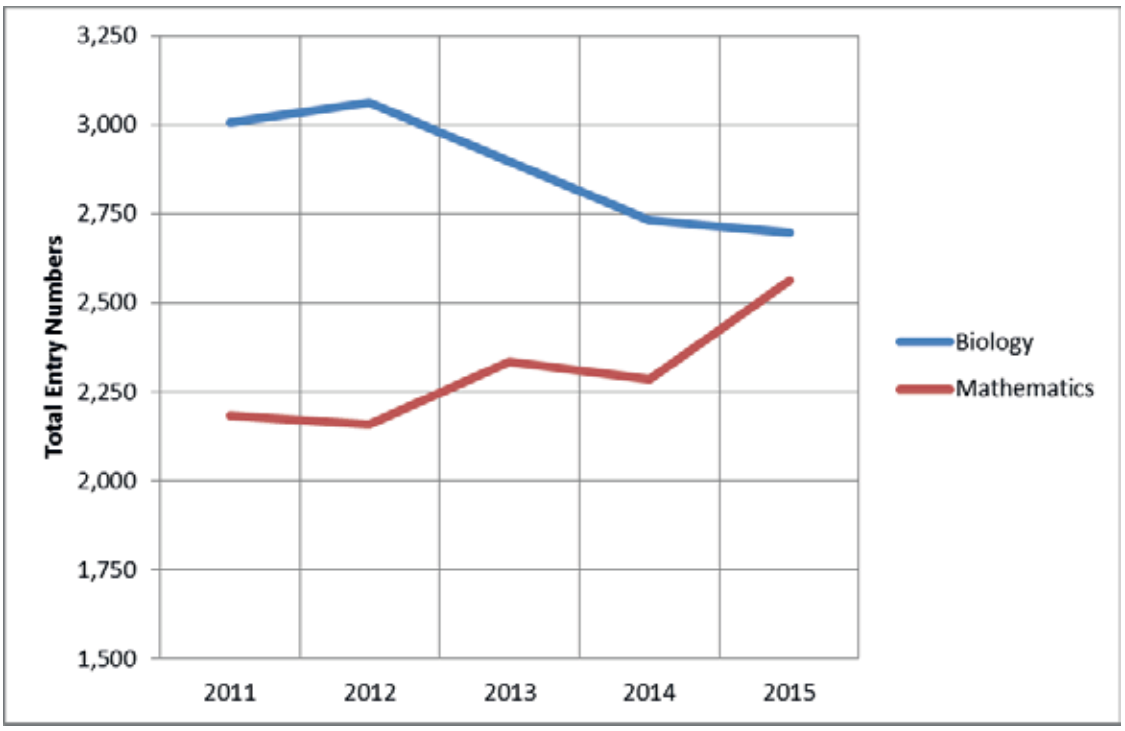


Figure 62: CCEA, A Level STEM Entries (Chemistry, Physics and ICT) in 2011–15

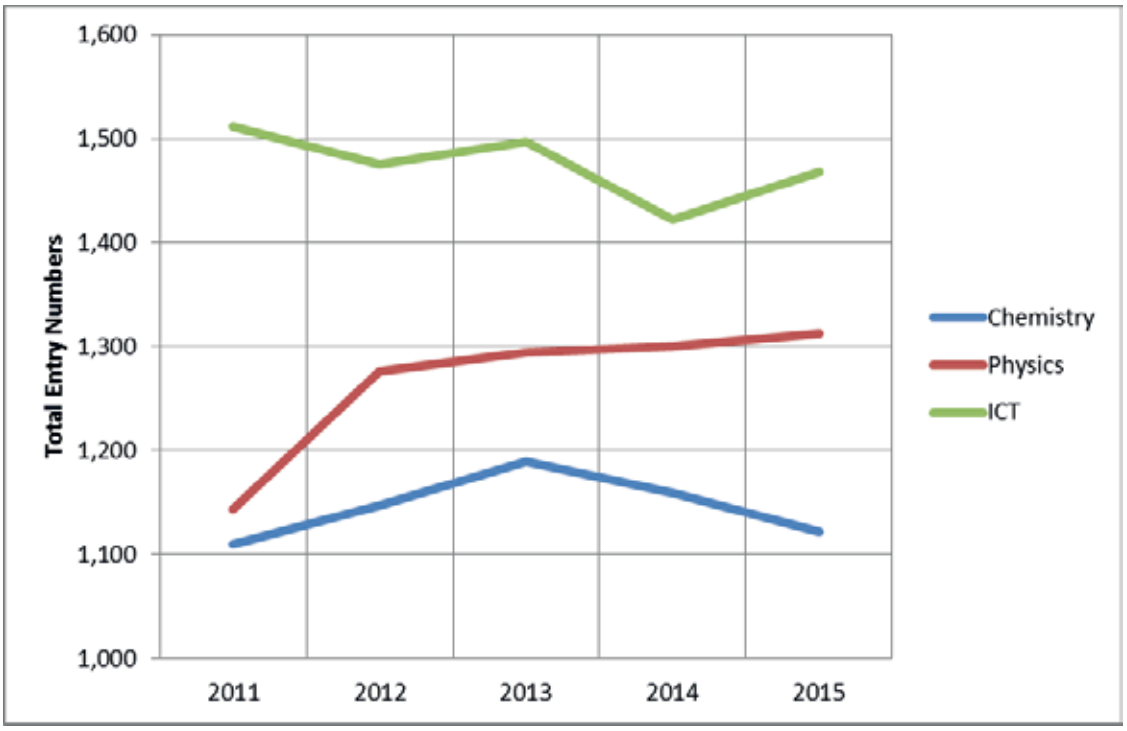
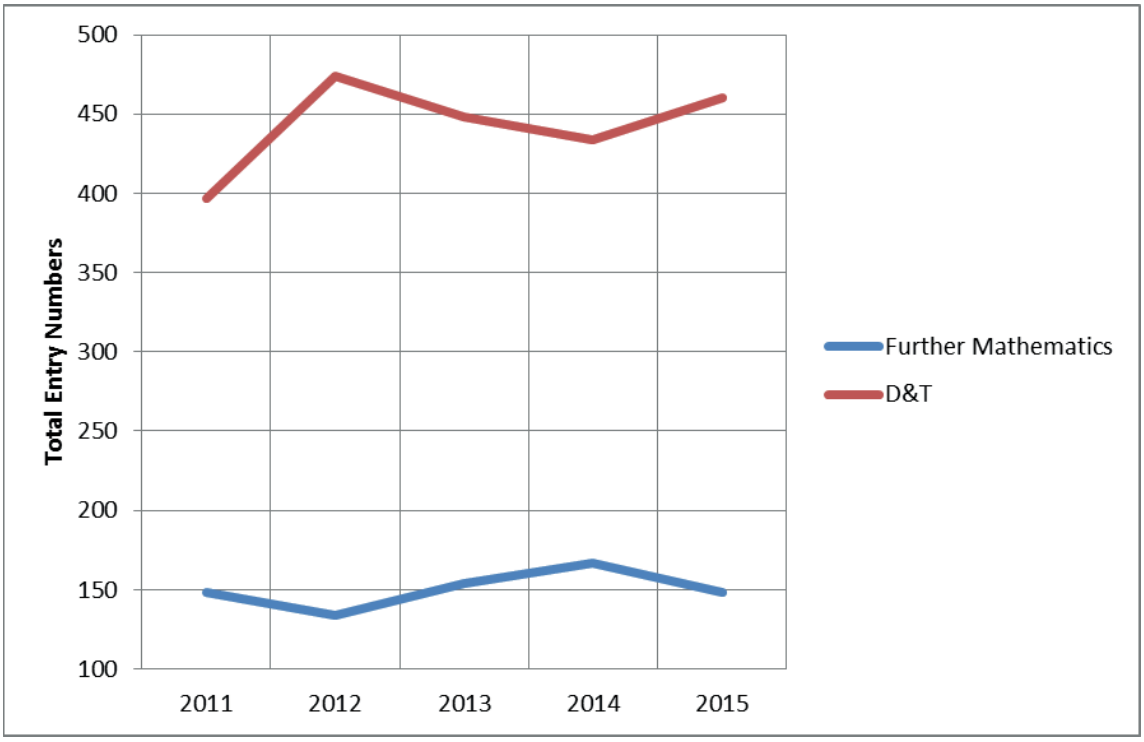


Figure 63: CCEA, A Level STEM Entries (Further Mathematics and Design & Technology) in 2011–15



STEM Subject Ranks:

Similar to AS Level, the top two most popular STEM subjects at A Level for overall entries are Biology and Mathematics. The overall average for CCEA candidates in A Level Biology is 2,879, while the equivalent overall average for N. Ireland candidates is 3,310. The overall average for CCEA candidates in A Level Mathematics is 2,304, while the equivalent overall average for N. Ireland candidates is 3,156. However, the third most popular subject for CCEA candidates is ICT with an overall average of 1,475 candidates, while the third most popular STEM subject for N. Ireland candidates is Chemistry with an overall average of 1,854. (Chemistry is ranked fifth most popular STEM subject with CCEA candidates).

The top three most popular STEM subjects for males at A Level are:

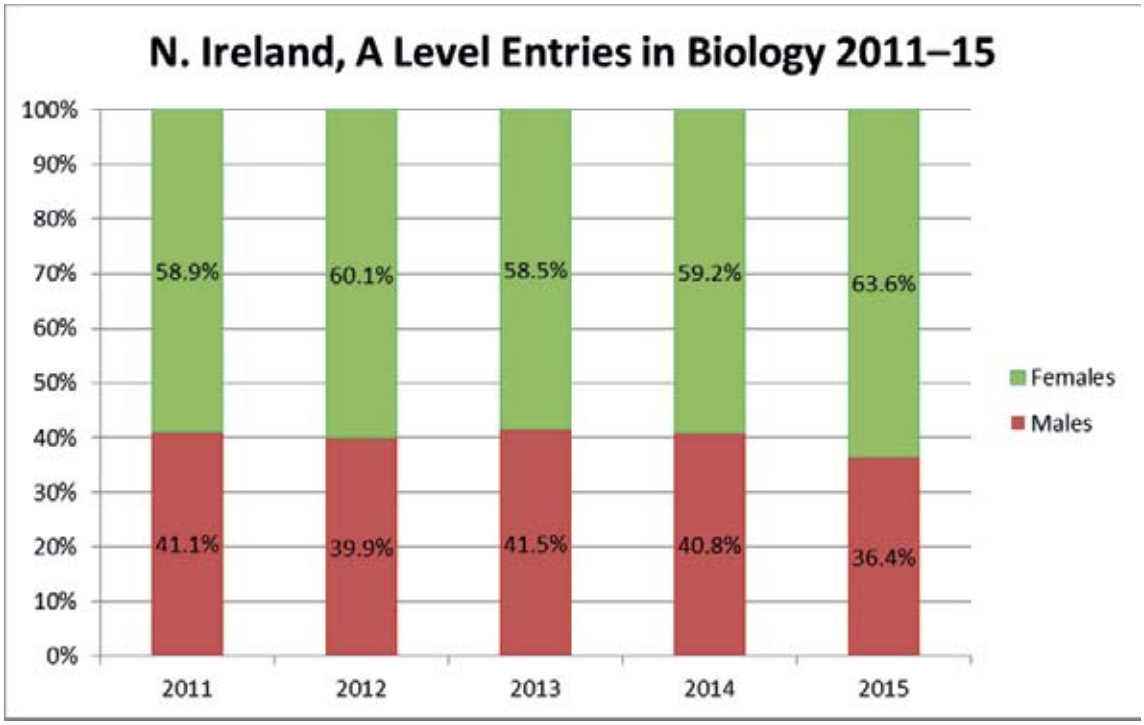
- Mathematics;
- Biology; and
- Physics.

This trend is characteristic of both the students who take these subjects with CCEA and for all N. Ireland students. In contrast, the third most popular A Level STEM subject for females is different for CCEA and N. Ireland candidates. ICT is the third most popular STEM subject for female CCEA candidates, while Chemistry is the third most popular STEM subject for females in N. Ireland.

Biology:

More females than males on average took Biology at A Level in the period 2011–15. The number of females who select to do A Level Biology is over 600 more than males for both CCEA only and N. Ireland candidates. The patterns of entry changes for males and females for CCEA and N. Ireland candidates are quite similar. There is a decrease by over 200 candidates in the period 2012–15 for males. A similar trend is observed for females in the period 2012–14. However, there is an increase of around 100 candidates for females in the academic year 2014–15.

Figure 64: N. Ireland, A Level Entries Biology by Gender 2011–15

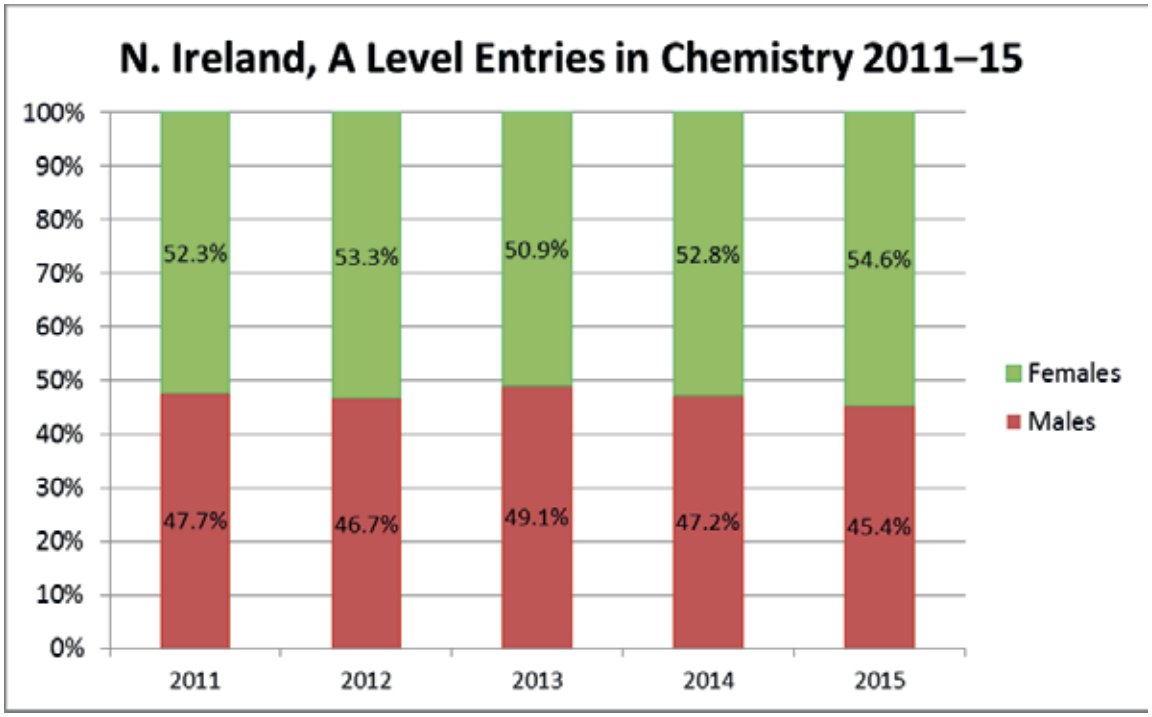


Chemistry:

More females on average (979) are selecting A Level Chemistry, considering the total population of N. Ireland students compared to males (876). However, the average entries for CCEA candidates in the period 2011–15 are very similar.

In the period 2011–13, there are increases in the entry numbers for males for CCEA (+40) and N. Ireland candidates (+77), which are followed by a decrease in numbers for males in the period 2013–15. The drop in N. Ireland entries (-105) is twice as much as that in CCEA entries (-48).

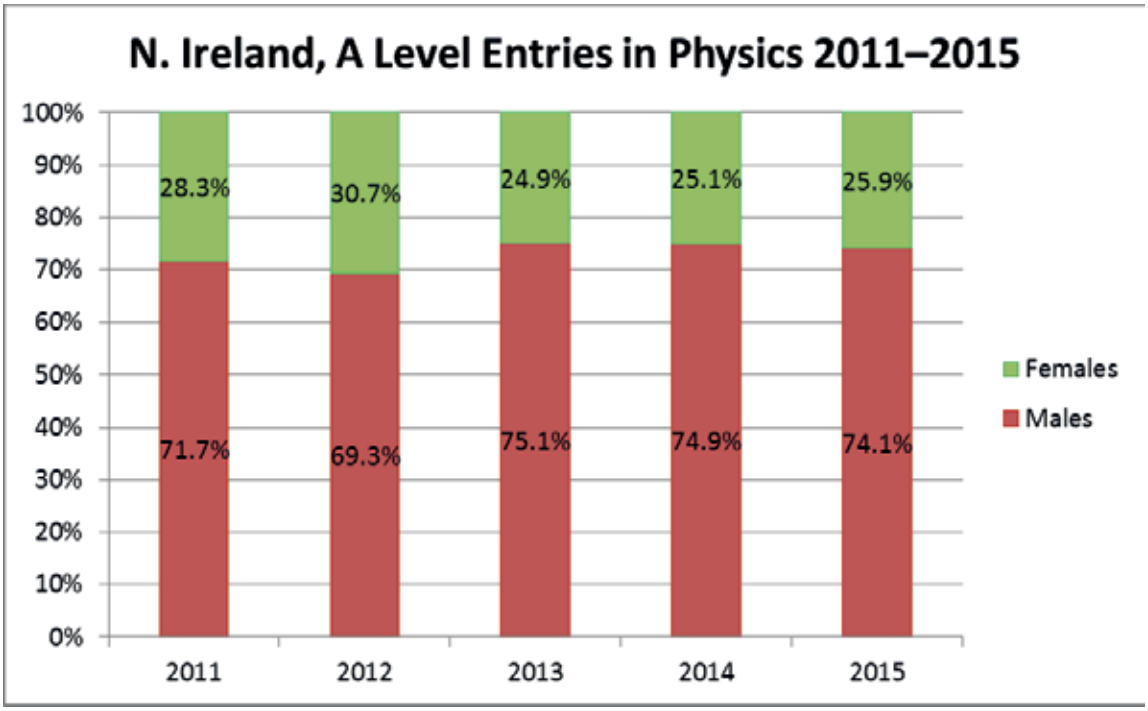
Figure 65: N. Ireland, A Level Entries in Chemistry by Gender 2011–15



Physics:

More males on average took Physics at A Level in the period 2011–15 than females. Males who take A Level Physics with CCEA show a gradual increase in entries by 166 in the five-year period, while the entries for males in N. Ireland mark an initial increase by 155 in the period 2011–13, followed by a decrease of 50 candidates in the next two years (2013–15). The pattern of movement of entries for females is almost identical for CCEA and N. Ireland candidates. There is an increase of 70 (CCEA) and 65 (N. Ireland) candidates in the period 2011–12, then a decrease by just over 80 candidates for both CCEA and N. Ireland and finally a slight increase in entries by 16 (CCEA) and 8 (N. Ireland) in the period 2014–15.

Figure 66: N. Ireland, A Level Entries in Physics by Gender 2011–15



Mathematics:

More males on average took Mathematics at A Level in the period 2011–15. The entries for males have not shown any specific trend except for rises and falls for both CCEA and N. Ireland candidates. However, the entry numbers for females who took Mathematics with CCEA show gradual increases throughout the period 2011–15, with the largest increase in the academic year 2014–15 (+155). N. Ireland female entries have increased by 78 in the period 2011–12, but they have also shown a decrease of 113 between 2012 and 2014. Nevertheless, it must be noted that, although CCEA female entries rose by 240 between 2011 and 2015, there were only slight increases (+23) in the period 2012–14.

ICT:

More males than females took ICT at A Level for the period 2011–15. Male entries in A Level ICT have shown increases for both CCEA and N. Ireland candidates except for the 2013–14 academic year, where entries dropped for both CCEA and N. Ireland candidates. However, female entries show a gradual decrease between 2011 and 2015 for both CCEA and N. Ireland candidates.

Design and Technology:

Approximately three times more males than females on average took Design and Technology at A Level for the period 2011–15 for both CCEA and N. Ireland candidates. There is also double the number of N. Ireland candidates selecting A Level Design and Technology than CCEA candidates. Interestingly CCEA male entries decreased over a five-year period while female entries are on the rise (except for 2012–13 when male entries increased and female entries decreased). In contrast, N. Ireland entries for males and females show many increases over the five-year period, but there is a substantial decrease for males between 2013 and 2014 and a smaller decrease for females between 2012 and 2013 and again in 2015.

Figure 67: N. Ireland, A Level Entries Design & Technology by Gender 2011–15

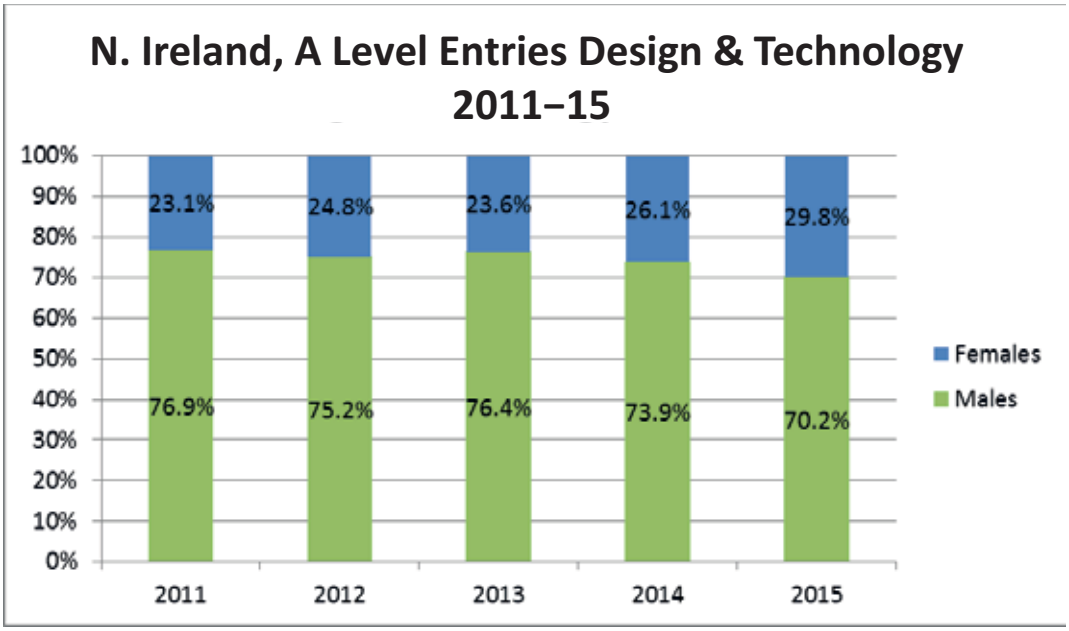
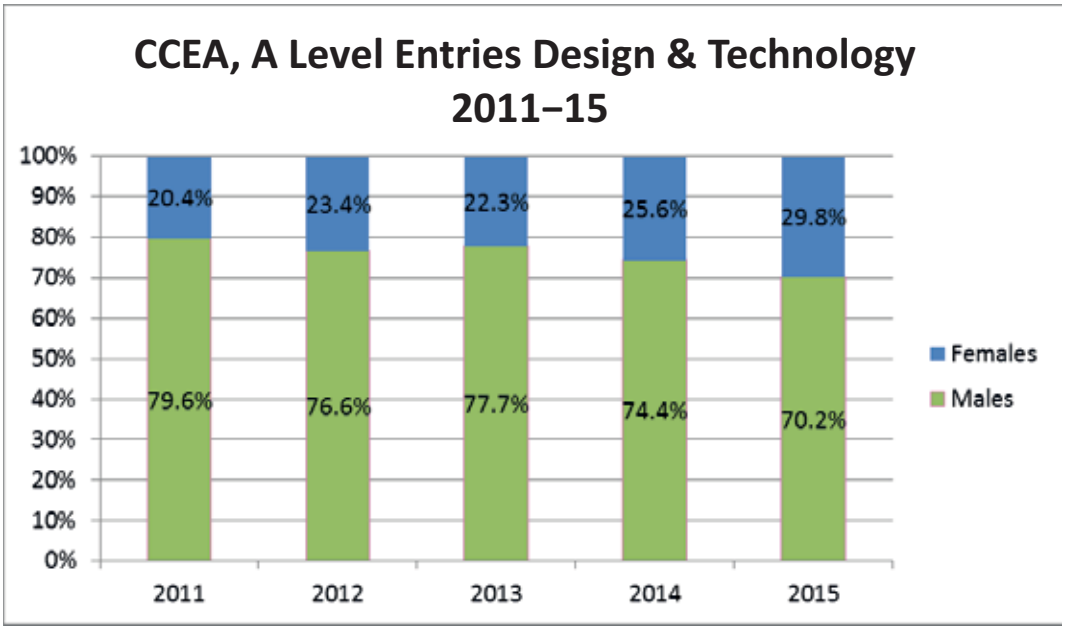


Figure 68: CCEA, A Level Entries Design & Technology by Gender 2011–15



GCE A Level Languages

Figure 69: N. Ireland, A Level Languages Entries (ALL) in 2011–15

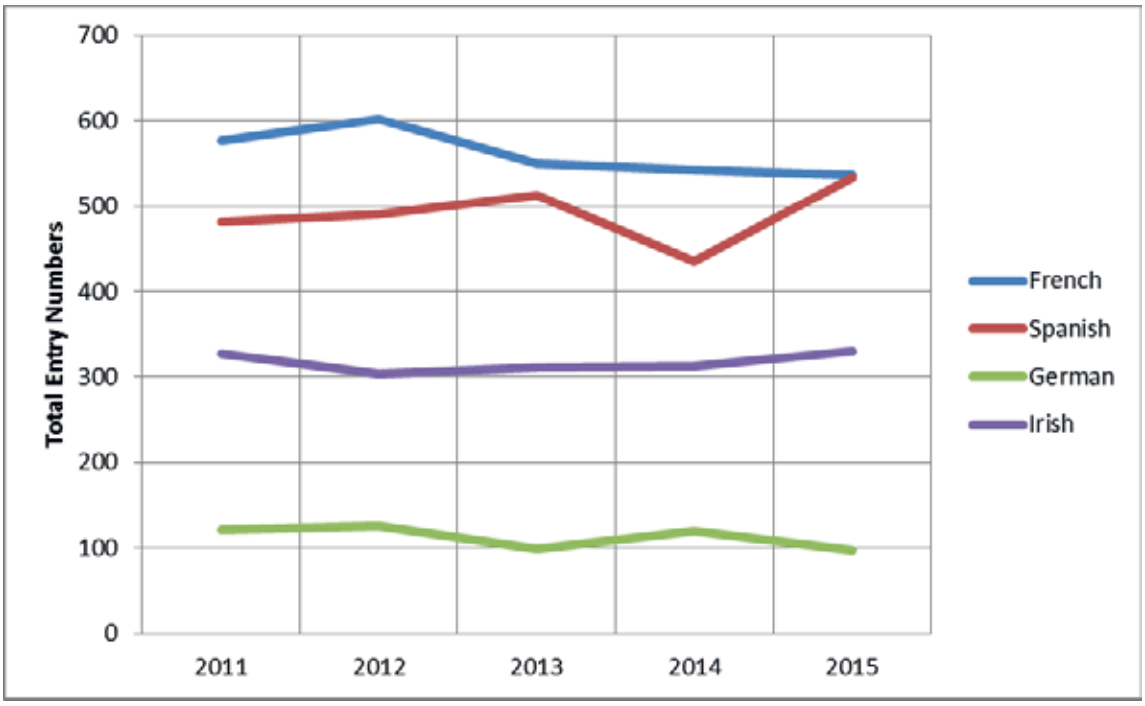


Figure 70: N. Ireland, A Level Languages Proportion in 2011–15

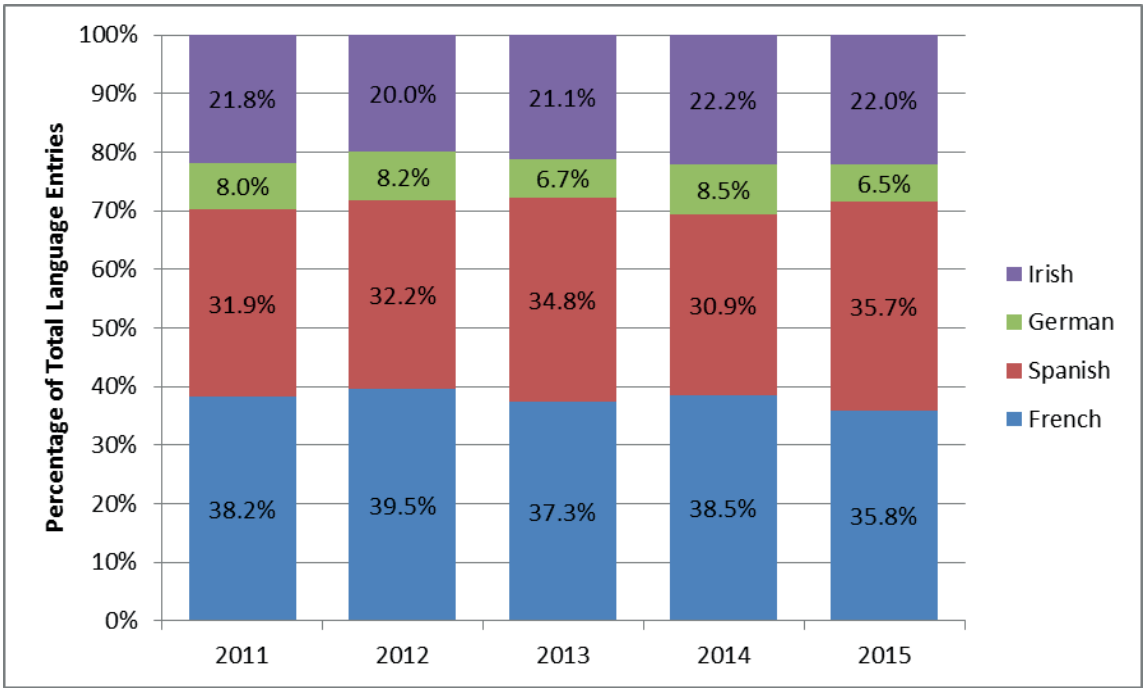


Figure 71: CCEA, A Level Languages Entries (ALL) in 2011–15

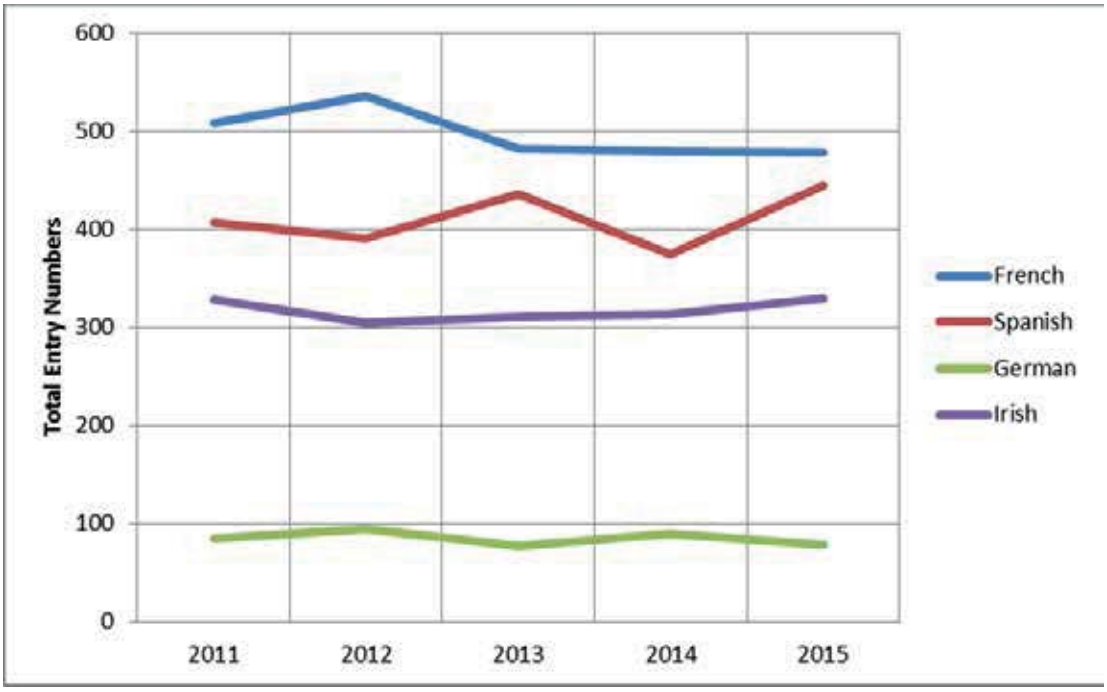
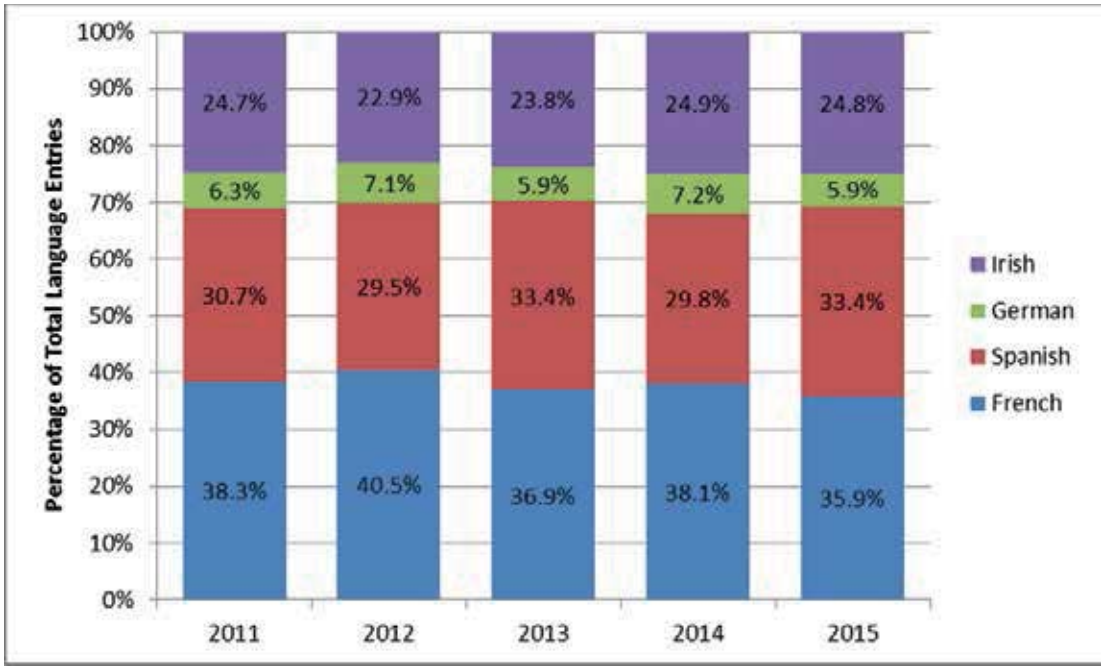


Figure 72: CCEA, A Level Languages Proportion in 2011–15



Languages Subject Ranking:

French:

There is an overall decrease in A Level French for both males and females for CCEA and N. Ireland candidates. The academic year 2011–12 has increases in A Level French uptake overall, but the next academic year (2012–13) sees more substantial drops in French entries. This trend is characteristic of both CCEA and N. Ireland candidates.

Spanish:

Unlike A Level French, there is an overall increase in the uptake of A Level Spanish for male and female entries for CCEA and N. Ireland candidates. More substantial increases are observed for two academic years: 2012–13 and 2014–15. Between 2014 and 2015, there is a rise in entries particularly for females. It is interesting to note that CCEA's increase in entries for A Level Spanish is almost entirely driven by an increase in females' entries (+61) compared to male increases (+9).

Irish:

The overall entries for A Level Irish have remained consistent during the period 2011 until 2015. However, there is a gradual decrease in males' entries (-37) while females' entries have risen (+39). On average, twice as many females than males select to pursue A Level Irish.

German:

There is an overall decrease in the uptake of A Level German. The decrease is slightly less for CCEA candidates (-6) than for N. Ireland candidates (-24). Female entries have decreased in two time periods: the academic year 2012–13 and 2014–15 for both CCEA and N. Ireland candidates. The increase and decrease for male entries are less pronounced.

Additional GCE A Level Subject Trends

Table 12: N. Ireland, A Level Subject Increases 2014–15

Subject	2014 Entry	2015 Entry	Increase (Nos.)	% Increase
Computing	106	168	62	58.5%
Design & Technology	939	1,022	83	8.8%
Geography	1,896	1,974	78	4.1%
History	2,260	2,301	41	1.8%
ICT	1,434	1,498	64	4.5%
Irish	313	330	17	5.4%
Mathematics	3,065	3,328	263	8.6%
Media/Film Studies	1,134	1,207	73	6.4%
Political Studies	868	1,016	148	17.1%
Psychology	538	575	37	6.9%
Religious Studies	2,275	2,401	126	5.5%
Spanish	436	534	98	22.5%

Figure 73: N. Ireland, A Level Subject Increases 2014–15

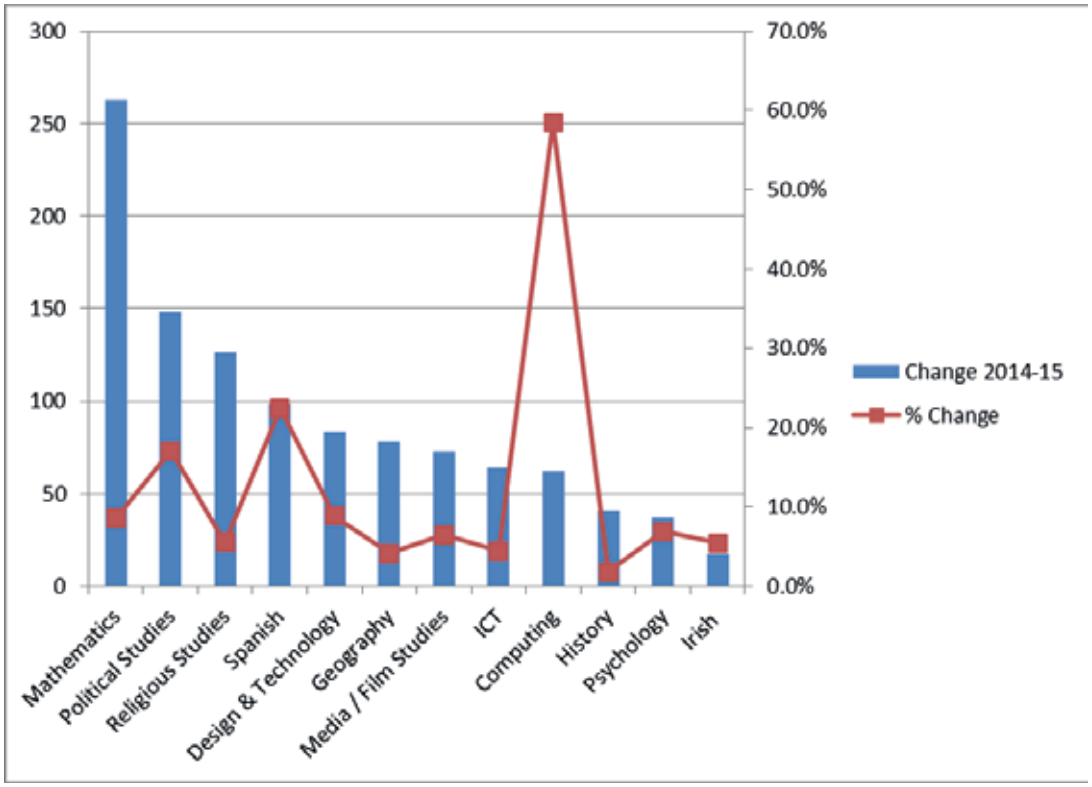


Table 12 and Figure 73 shows the change in A Level entries between 2014 and 2015 in N. Ireland. There was an increase in Political Studies of (17.1%), Design and Technology (8.8%), Mathematics (8.6%) and Religious Studies by 126 (5.5%).

The red line in Figure 73 shows the percentage change in entries from 2014–15. Mathematics may have had the largest increase in entries (+263) but computing had the largest **percentage** increase. Computing entries increased by 62, but this was a 58.5% increase in the subject entry (a rise from 106-168).

It is important to note that entries fluctuate over time, for example in 2014 Political Studies decreased by -20.4%, and in 2015 increased by 17.1%.

Spanish also decreased in 2014 by -5%, it has increased in 2015 by 22.5% (however, numbers are small: 436 in 2014 to 534 in 2015).

In 2015 Media/Film Studies increased by 6.4%, continuing a trend from 2013–14 of 5.7% increase.

Historically, the rise of this area can be seen in the difference between 2013 and 2014 entries. It was during this period that the entry in creative industry subjects showed the biggest increase. Changes in entries may have been reflecting the rise in local creative industries. As noted earlier, Creative Learning Centres were established in N. Ireland to enable schools to provide creative digital training and build sustainability in the school and youth sector (N.I Screen 2015).

Finally in 2014, Ulster University introduced new qualifications in Design for Interaction and Animation and Queens University Belfast increased their portfolio of Drama and Film Studies. During 2014, N. Ireland Film and TV studios and the Titanic Studio also announced a £14 million extension of two new studios. The investment in creative television and film industries continues and is projected to remain or increase in future years. These developments may impact on future subject choices for students.

6 Projected Increased Entries 2015/16–2019/20

Using population projections, the mean percentage change in N. Ireland entries over the previous years, and economic forecasts, the following forecasted entry increases for N. Ireland have been calculated.

It is estimated that in the future N. Ireland Gross Value Added (GVA) growth will be provided by the private sector with the largest contributions from wholesale and retail trade, manufacturing with specific mention of ICT and professional, scientific and technical sectors. According to forecasts, each of these sectors is expected to grow faster than the total economy, with information and communications the strongest growing (average 5.5% per year).

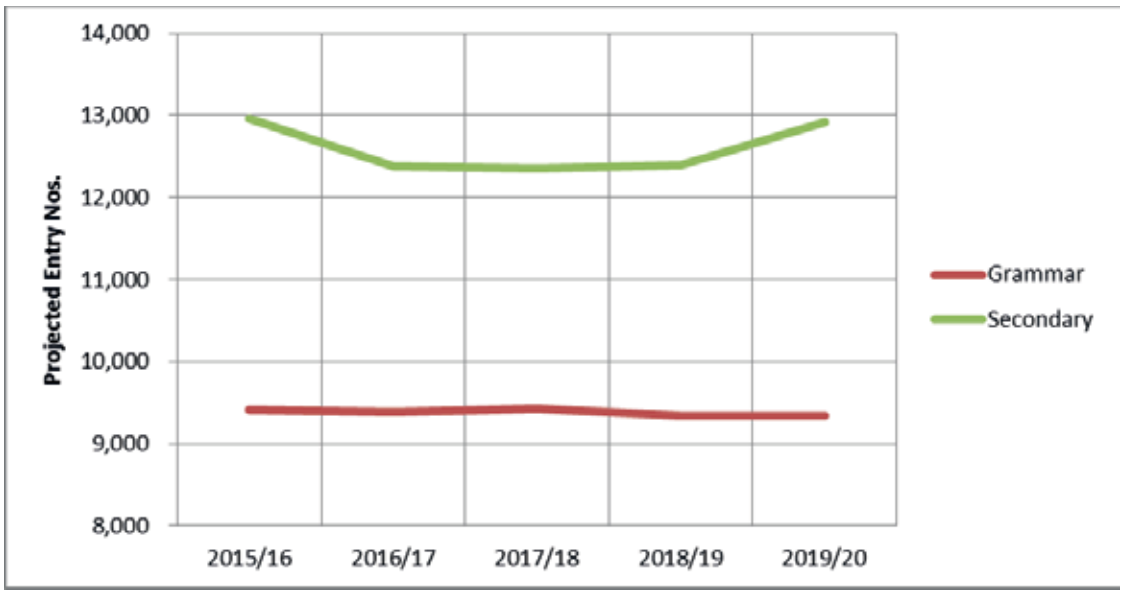
The economic forecast suggests there will be notable growth in ICT and Business sectors and this may impact future students' choice of GCSE, AS and A Level. As mentioned previously, there has been significant investment in N. Ireland film and TV productions and with HMRC Tax Relief of 10–25% for productions, the trend is likely to continue.

Using this information and that previously mentioned, it is speculated that STEM subjects, Film Studies, and Business Studies will show growth in the coming years. This information is indicative of subject choice and does not speculate on which subjects will have decreasing entries over the next 5 years to accommodate the increases in these areas.

Overall population projections for the period 2015/16– 2019/20 show a relatively stable statutory post-primary population with a slight decrease of -0.5% in the GCSE (Year 12) population. The projected populations for AS Level (Year 13) and A Level (Year 14) show a decrease of -5%.

GCSE

Figure 74: GCSE Projected Population



These assumptions do not account for the possible impact of potential changes to the nature of admissions within the post-primary sector.

Figure 75: GCSE Projected STEM Entries (ICT)

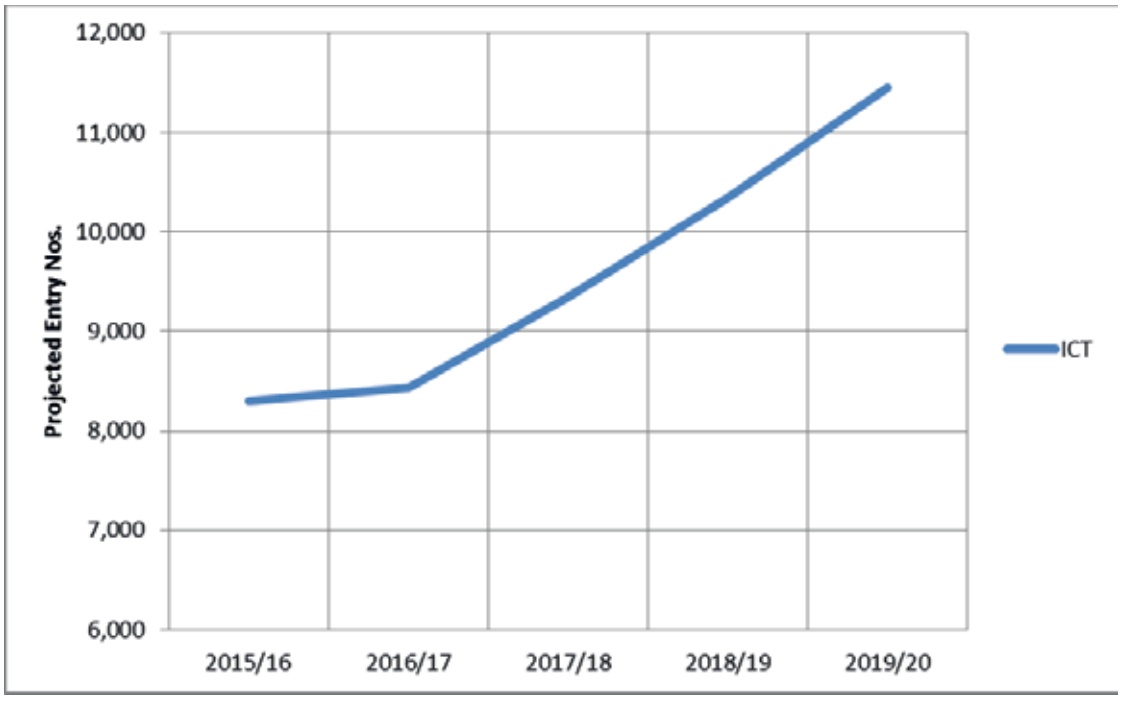


Figure 76: GCSE Projected STEM Entries (Biology, Chemistry, Physics and Design & Technology)

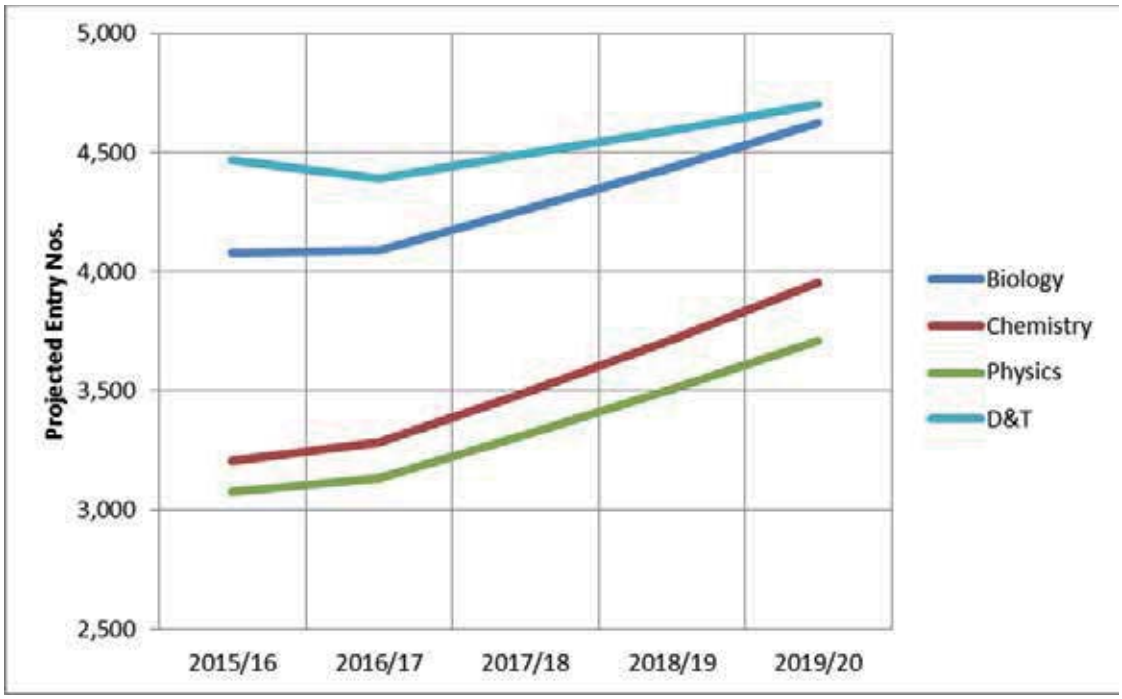


Figure 77: GCSE Projected Business Studies Entries

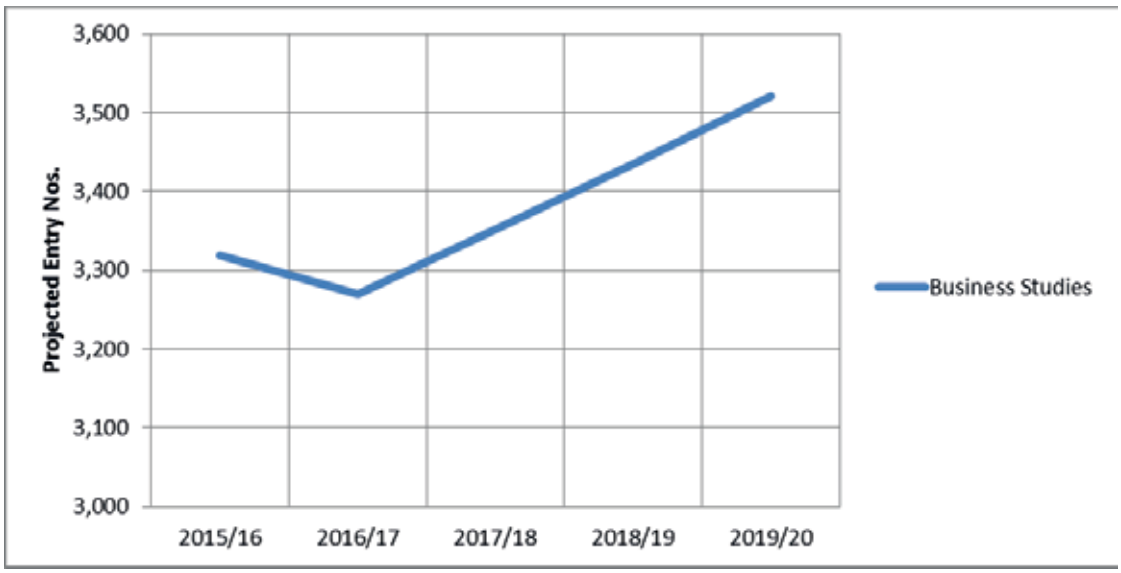
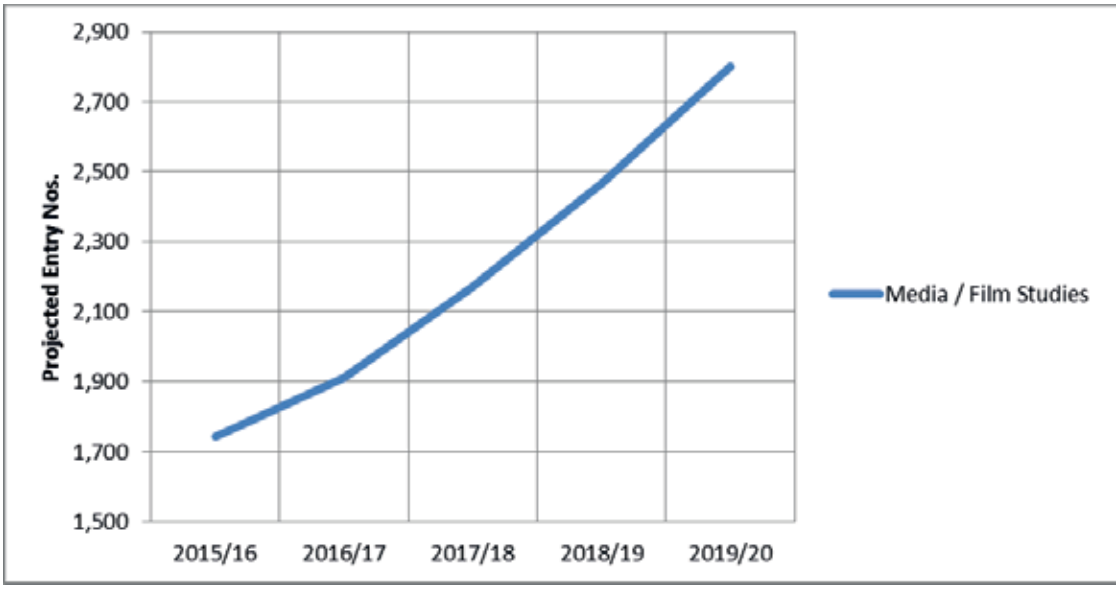


Figure 78: GCSE Projected Media/Film Studies Entries



GCE AS Level

Figure 79: GCE AS Projected Population

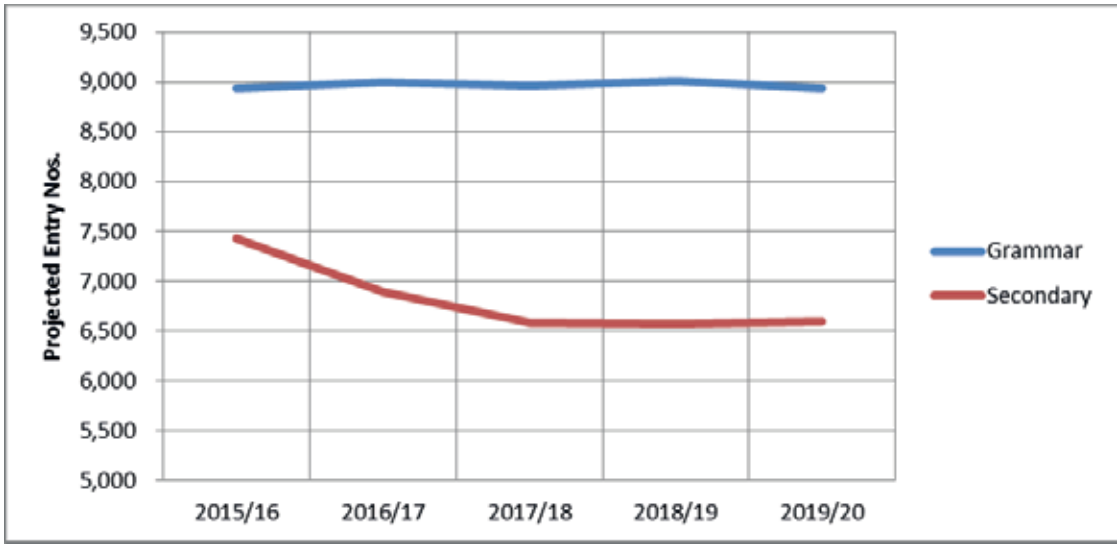


Figure 80: GCE AS Projected STEM Entries (Biology and Mathematics)

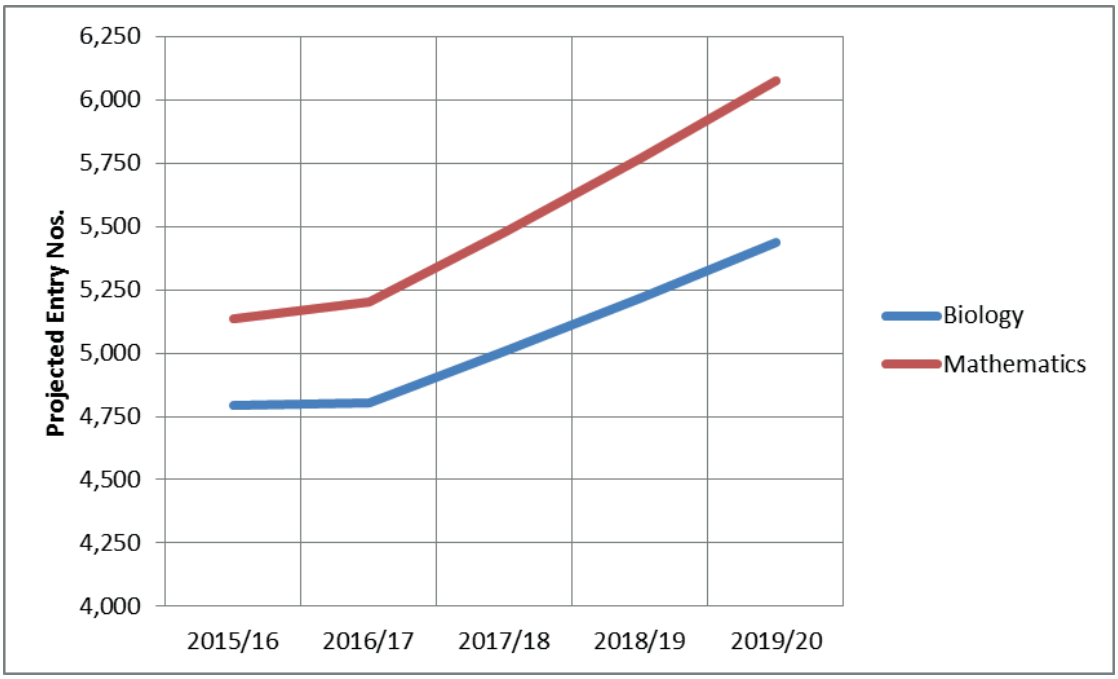


Figure 81: GCE AS Projected STEM Entries (Chemistry, Physics and ICT)

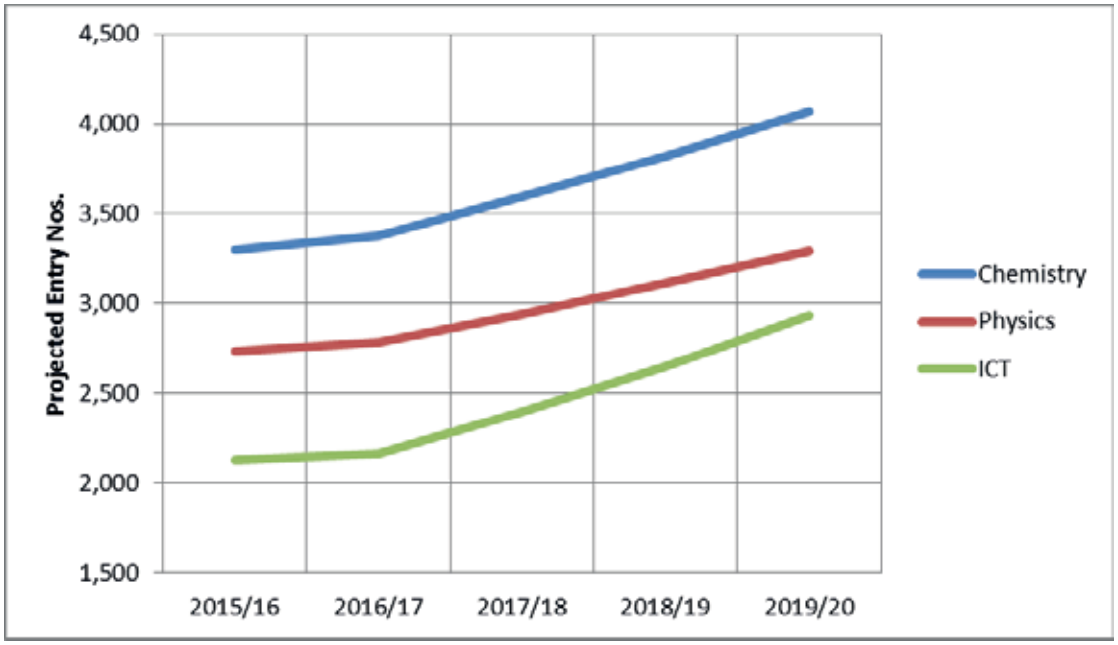


Figure 82: GCE AS Projected STEM Entries (Further Mathematics and Design & Technology)

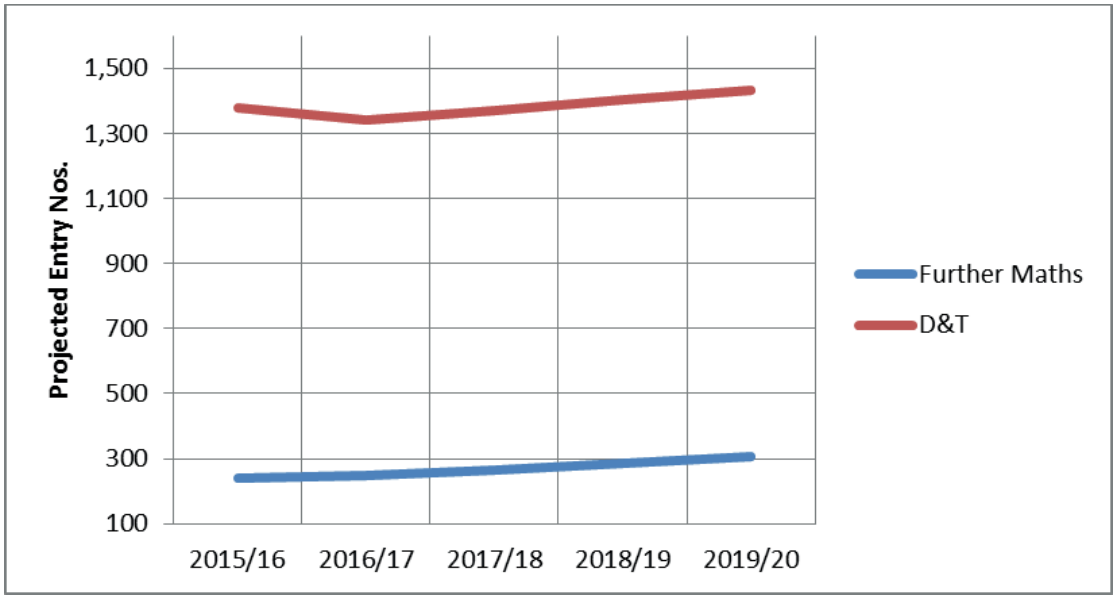


Figure 83: GCE AS Projected Business Studies Entries

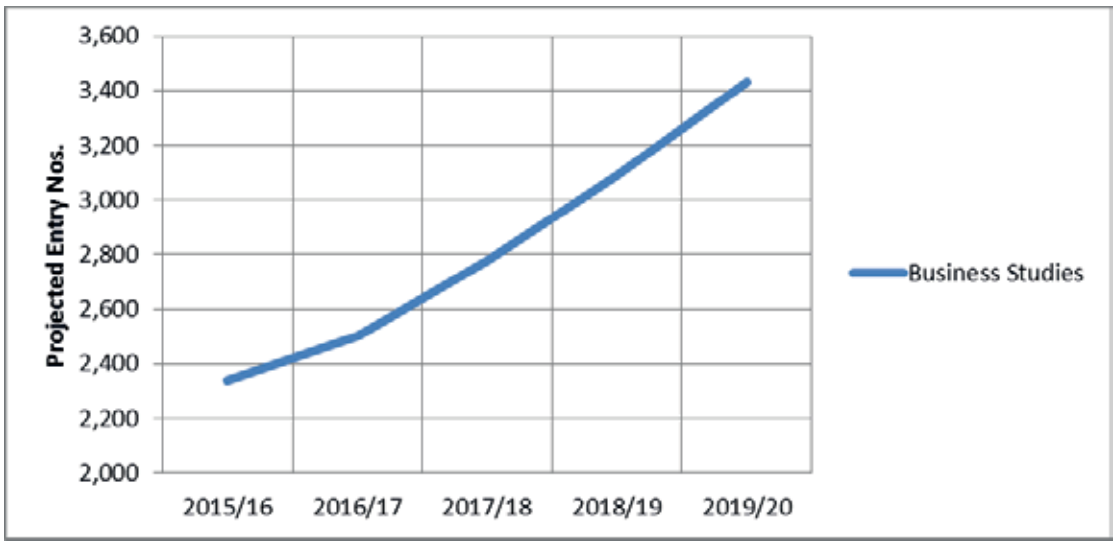
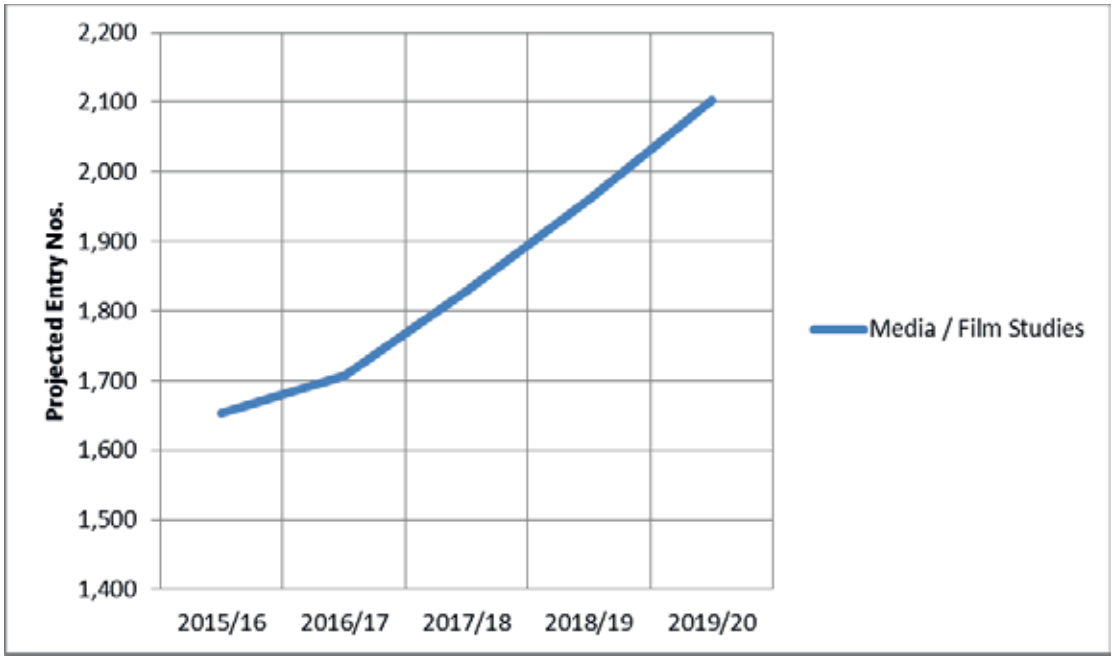


Figure 84: GCE AS Projected Media/Film Studies Entries



GCE A Level

Figure 85: GCE A Level Projected Population

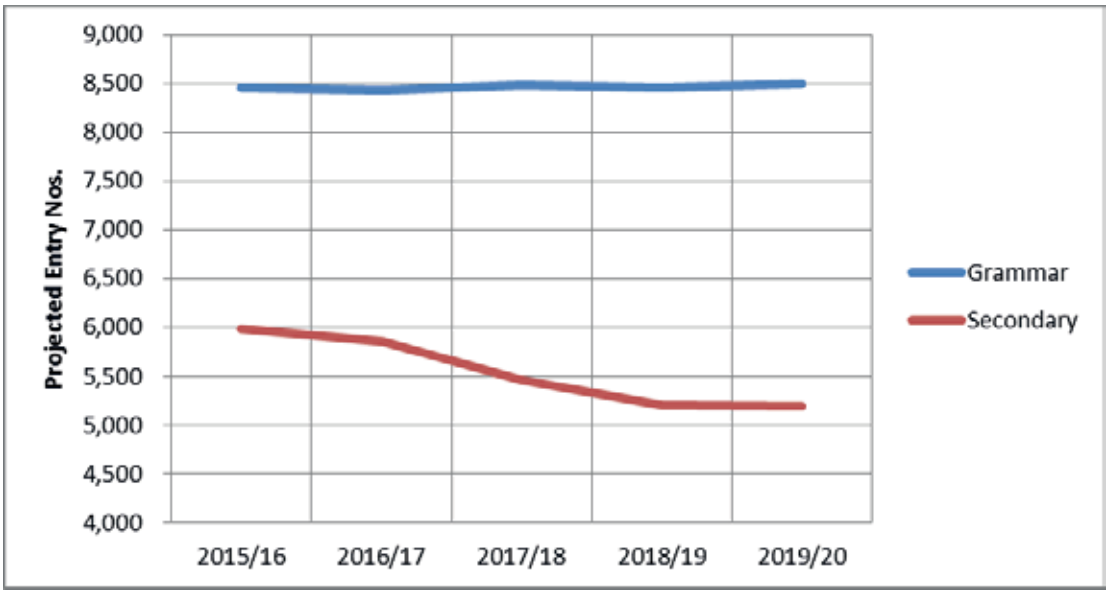


Figure 86: GCE A Level Projected STEM Entries (Biology and Mathematics)

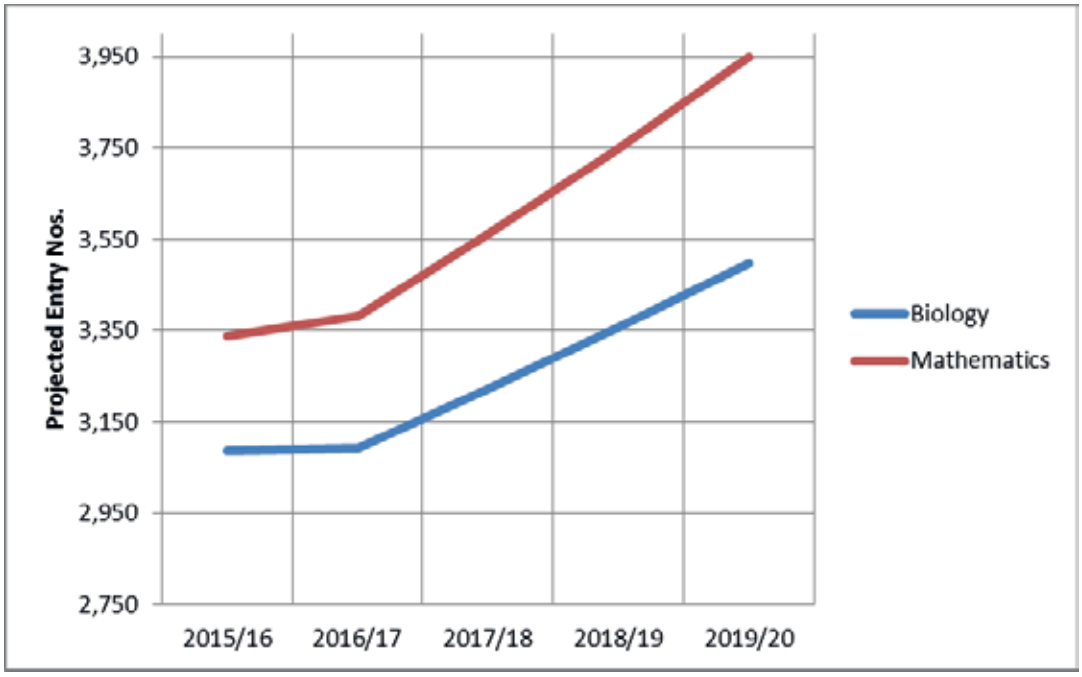


Figure 87: GCE A Level Projected STEM Entries (Chemistry, Physics and ICT)

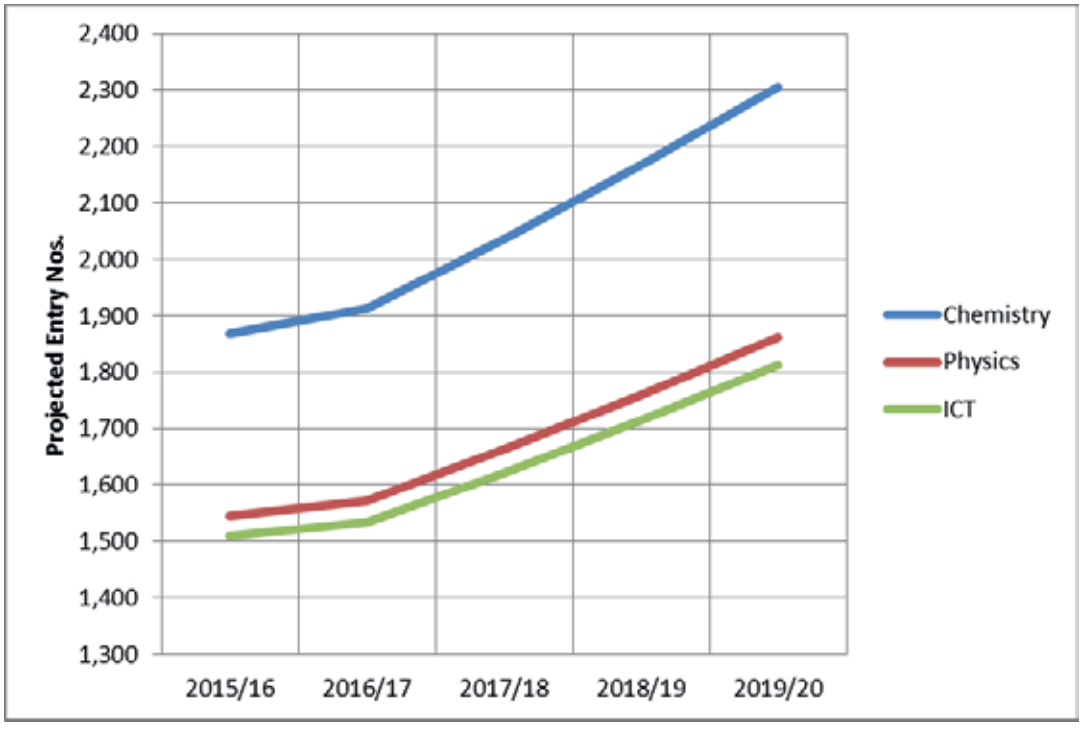


Figure 88: GCE A Level Projected STEM Entries (Further Mathematics and Design & Technology)

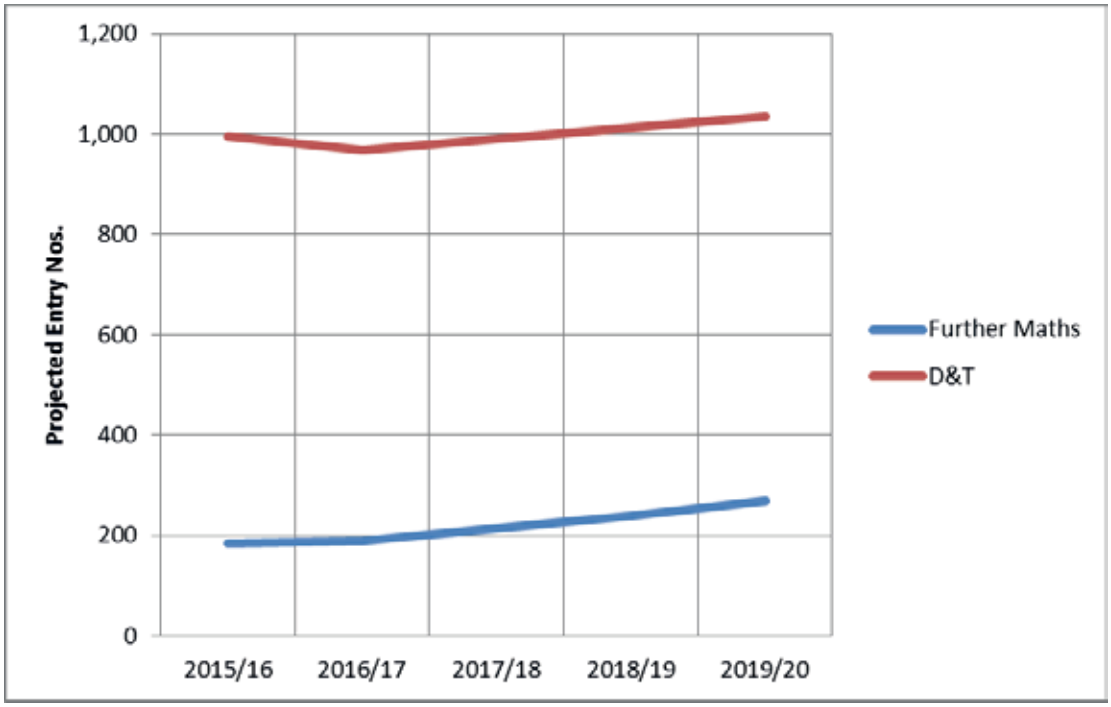


Figure 89: GCE A Level Projected Business Studies Entries

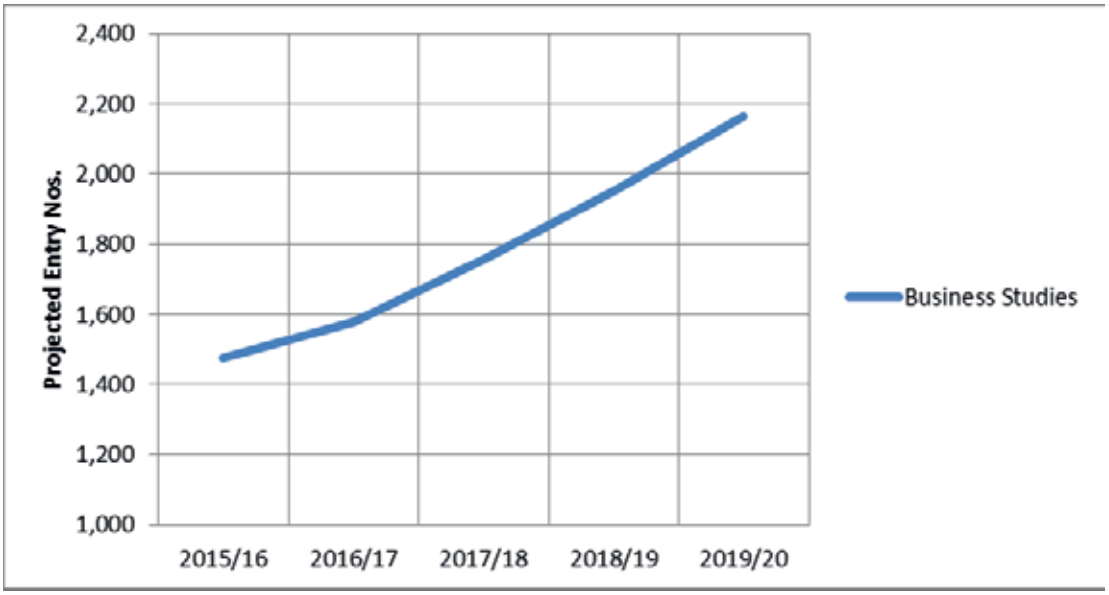
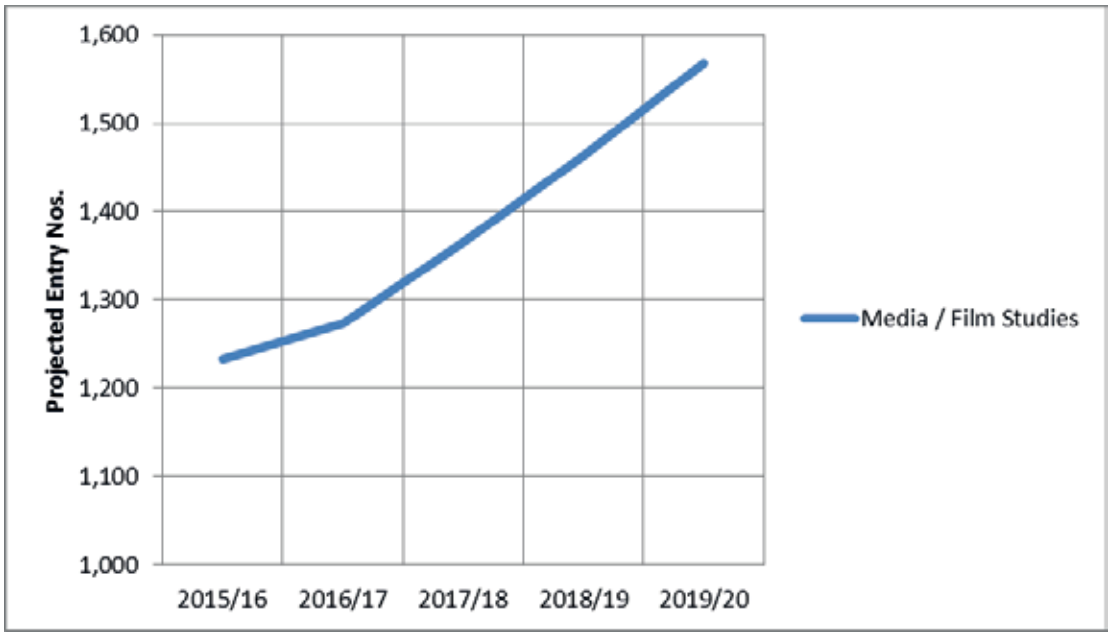


Figure 90: GCE A Level Projected Media/Film Entries



Sources

1. JCQ data was used to generate figures for N. Ireland candidates
   Link: www.jcq.org.uk/examination-results
2. CCEA data was used to generate figures for CCEA candidates
   Link: http://ccea.org.uk/more/research_statistics/qualifications/results
3. School Population Data: DE
4. Economic Forecast Data: BBC News

For further information or copies about this report, please contact:

CCEA Research and Statistics Unit
29 Clarendon Road
Clarendon Dock, Belfast BT1 3BG,
or alternatively email
research@ccea.org.uk

COUNCIL FOR THE **CURRICULUM, EXAMINATIONS** AND **ASSESSMENT**
29 Clarendon Road, Clarendon Dock, Belfast BT1 3BG
Tel: +44(0)28 9026 1200 Fax: +44(0)28 9026 1234
Email: info@ccea.org.uk Web: www.ccea.org.uk

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