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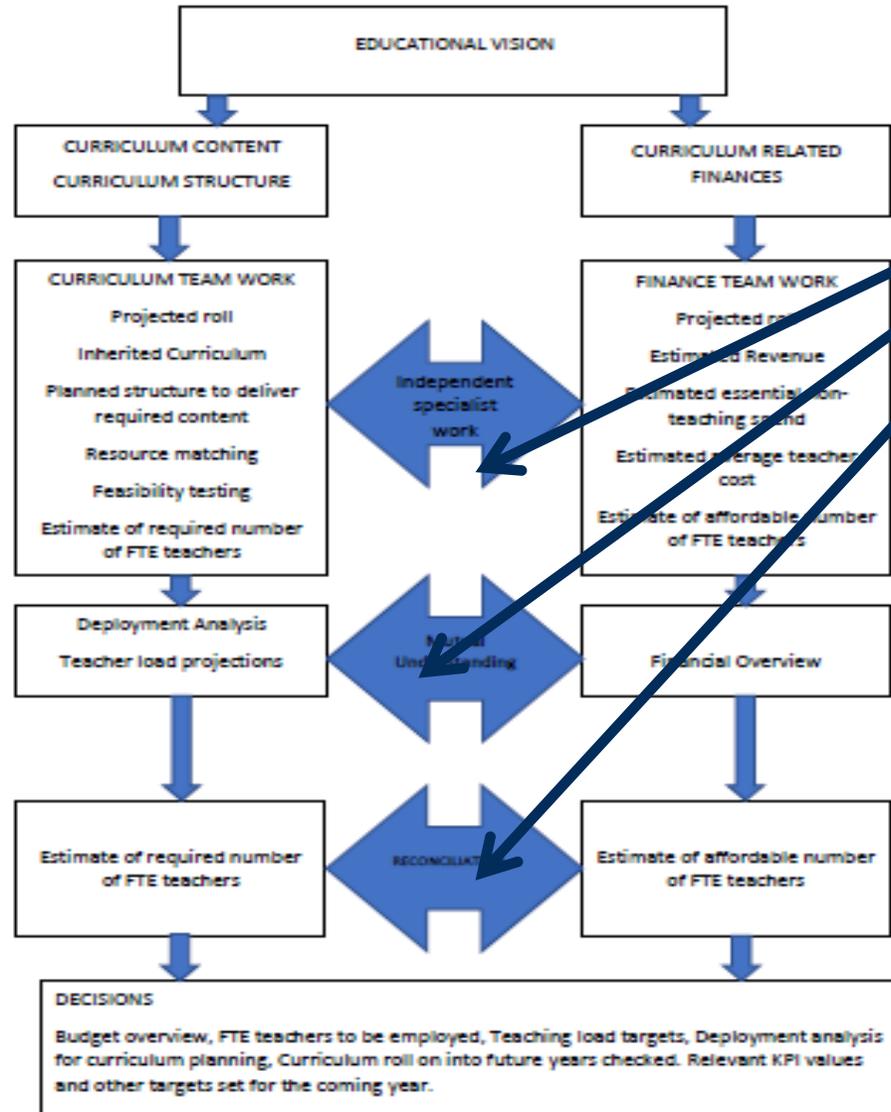
Webinar Two – The equation of life : Application in a Secondary School



The ICFP Flow has two strands.

This side describes the process of estimating the number of FTE teachers the school needs for its curriculum plan

The result enables the school to move forward with relevant KPI values and targets



The critical thing is that the teams involved in the two strands can communicate with each other and arrive at a reconciled result!

This side describes the process of estimating the number of FTE teachers the school can afford in a balanced budget

Sam Ellis May 2019 (samellis@tiscali.co.uk)

The two sides can be summarised in a spreadsheet.

- The finance side (left side of flowchart) has data inputs on lines 3,4,5 and 6
- The 'Equation of life quantities' are on lines 9, 10 and 11 and the results are on lines 16 and 17

	A	B
1	Financial Data	Value
2		
3	Total expected revenue	£5,000,000
4	Best estimate of average teacher cost (salary plus on costs per FTE)	£50,000
5	Best estimate of the total of all revenue expenditure except for that on teachers	£2,000,000
6	Estimated pupil roll for the start of the academic year in question	1,000
7	'Equation of life' quantities	Value
8		
9	Average teacher cost	£50,000
10	Proportion of revenue available for teacher cost	0.60
11	Per pupil revenue	5000
12	Average class size (this is actually the pupil to teacher ratio in the timetable)	21.37
13	Teacher contact ratio	0.78
14	'Equation of life' calculation results and the 'bottom line'	Value
15		
16	Affordable PTR in a balanced budget	16.67
17	Affordable number of teachers following from this value	60.00

To get the Affordable number of teachers on line 17, divide line 6 by line 16.

The two sides can be summarised in a spreadsheet.

- The curriculum side (right side of flowchart) has data inputs in a separate deployment section which we look at later.
- The results from the deployment are on lines 12 and 13 and the bottom line is on lines 18 and 19
- The overall result is shown on lines 20 and 21.

7	'Equation of life' quantities	Value
8		
9	Average teacher cost	£50,000
10	Proportion of revenue available for teacher cost	0.60
11	Per pupil revenue	5000
12	Average class size (this is actually the pupil to teacher ratio in the timetable)	21.37
13	Teacher contact ratio	0.78
14		
15	'Equation of life' calculation results and the 'bottom line'	Value
16	Affordable PTR in a balanced budget	16.67
17	Affordable number of teachers following from this value	60.00
18	Required PTR using teacher contact ratio and average class size	16.61
19	Required number of teacher following from this value	60.20
20	Equivalent number of FTE teachers difference (overspend shows negative)	-0.20
21	Bottom line (in year balance if required number of teacher are appointed)	-£10,000

In this example either the finance side need adjusting to give more teachers or the curriculum side needs adjusting to require fewer or some shift in both sides to reach a compromise is required. We call this 'reconciliation'

To plan the curriculum side you need two things.

- First thing: A teacher deployment analysis
 - This sets out the teacher time required on the timetable to operate different areas of the curriculum. In a secondary school this is normally the year groups and allocations to whole school teaching activity such as learning support and intervention activity. (Benchmark result = Average Class Size)
- Second thing: A teaching load analysis
 - This sets out how much different teachers teach as opposed to time spent on PPA and Management or other non contact activity. (Benchmark result = contact ratio)
- Combining the results of these two things gives the number of teachers you need for the curriculum
- In terms of the 'Equation of life' the benchmark results provide a curriculum need PTR

This is the deployment analysis part of the spreadsheet.

	A	B	C	D	E	F	G	H	I	J	K
22	Teaching staff deployment plan										
23											
24	Timetable cycle length in periods	25									
25		Pupil Roll	Teacher period (tp) allocation	Summary notes						FTE employed (shown to 2dp but not rounded)	
26	Year 7	160	154	6 groups for 23 periods, 8 groups for 2 periods						7.92	
27	Year 8	160	154	6 groups for 23 periods, 8 groups for 2 periods						7.92	
28	Year 9	160	154	6 groups for 23 periods, 8 groups for 2 periods						7.92	
29	Year 10	160	184	7 groups for 16 periods, 8 option for 9 periods						9.47	
30	Year 11	160	184	7 groups for 16 periods, 8 option for 9 periods						9.47	
31	Year 12	110	140	5 choice blocks. 4 periods per block, 7 subjects per block						7.20	
32	Year 13	90	140	5 choice blocks. 4 periods per block, 7 subjects per block						7.20	
33	Curriculum areas with teacher period allocations where pupils are already included above										
34	Learning Support	n/a	25	Full SENCO teaching load plus other teaching staff in support						1.29	
35	Intervention	n/a	25	One to One and other team teaching intervention activity						1.29	
36	Other	n/a	10	Held in reserve for scheduling flexibility, eventually for Intervention						0.51	
37	Totals	1,000	1,170							60.20	
38											
39	Average Class Size resulting from this deployment	21.37	This is the pupil to teacher ratio in the timetable								

This is the teaching load analysis section

	A	B	C	D	E	F	G	H	I	J	K
40	Teacher contact detail (summary of teaching load plans)										
41											
42	Leadership and management roles with less than a full teaching load	Total FTE per line	Total teaching load allocation per line				Note				
43	Headteacher	1.0	0				Head does not teach				
44	Deputy Headteacher	2.0	16				8 tp per Deputy head				
45	Assistant headteacher	3.0	36				12 tp per Assistant head				
46	Head of large curriculum area	5.0	90				18 tp per FTE				
47	Head of small curriculum area	12.8	268				21 per FTE but one 0.8 FTE provides 16				
48	Pastoral leader	6.0	98				KS3 and KS4 leaders provide 16tp, KS5 provides 18				
49	SENCO	1.0	16				All allocated to Learning Support line above				
50	Other	0.0	0				Note				
51	Other	0.0	0				Note				
52	Other	0.0	0				Note				
53	Other	0.0	0				Note				
54	Totals	30.8	524								
55	Teaching load for one FTE teacher with no reduction for management time	1	22				Note				
56											
57	Quantity	Value	Comment								
58	Total tp required by deployment plan	1,170	This is the sum of the allocated teacher periods copied from the foot of the Deployment table								
59	Total tp provided by planned management structure staff above	524	This is copied from the table above								
60	Teacher periods required from teachers with no management time allocation	646	This is the difference between the previous two values								
61	Number of FTE teachers required with no management time allocation	29.4	This value is rounded up to the nearest 0.1 FTE								
62	FTE total for all teachers in the planned management structure	30.8	Copied from the table above								
63	Total FTE required	60.2	The sum of the previous two values								
64	Resulting average teacher load	19.4	Shown to one decimal place but not rounded (the total tp divided by the FTE value)								
65	Resulting teacher contact ratio	0.78	Shown to two decimal places but not rounded (The average load divided by the timetable cycle)								

All these things have two purposes

- 1) They can be pulled together in a simple summary with quantities that can be benchmarked
- 2) The finance information is in a simple form that can be discussed with non finance staff and the curriculum information is in a simple form that can be discussed with non curriculum staff
- The key point being that this is not only a basis for strategic planning it is also a method of facilitating meaningful team work and progress.

The bottom line is then shown in the section between the finance and curriculum areas

7	'Equation of life' quantities	
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- In this case the school needs to take a view of the deficit and plan accordingly

There are always choices

- Adjust the curriculum or the finance parameters or both to achieve an in year balance of zero
 - Adjust the parameters to show an in year positive balance
 - Adjust the parameters to show an in year deficit.
-
- In the last case it is probably wise to work out how such a deficit will eventually be recovered and if running with a deficit for the year in question is a wise move.

Questions

- What curriculum do we want to deliver ? FTE required?
- What curriculum must we deliver? FTE required?
- What curriculum can we afford to deliver? FTE required?
- In a balanced in-year budget

Curriculum FTE = Affordable FTE (school specific)

Curriculum PTR = Affordable PTR (can be benchmarked)

Making informed choices

- Agree on a set of success criteria
 - Sustainable curriculum
 - Access to adequate resources
 - Sufficient support staff
 - Buildings that are safe, warm and dry

Available resources Gov.uk

- [A 7 step guide to ICFP](#)
- [Basic principles of ICFP](#)
- [School and academy financial management and assurance](#)

Final note

- The worksheet provided is a template for any user to adapt and modify
- It is not intended as a final fully checked product so care must be taken to check carefully for errors before use.
- In the case of email support for the sheet please contact sam.ellis@ascl.org.uk
- For all other support in the funding and ICFP area or in relation to this webinar please contact ASCL directly



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