

Case study 8

A DEUG level I philosophy course offered by the distance teaching centre at the University of Rheims

The course is taught by the centre of distance education at the University of Rheims ('centre de télé-enseignement universitaire' or CTU). The CTU Rheims is part of the inter-university federation of the distance-education centres of the east of France called FIT-Est (fédération universitaire d'est)¹.

FIT-Est is a group of distance teaching centres attached to a number of universities which have pulled resources together to provide distance-education courses. Each university provides facilities, administrative and technical support and assigns teaching staff to the centre. The federation is intended to increase economies of scale and, by specialising at each centre on a specific subject area, improve efficiency. The universities participating in this federation are: Dijon (French literature), Nancy (English), Rheims (philosophy and psychology), Strasbourg (German, sociology, and applied linguistics) and Besançon (arts, law, and mathematics).

Budgets of the distance teaching centres

However, there is no budget for course development besides the staff time assigned to the centre. This means that the output of the centre (in terms of teaching material produced) must be costed in teaching time. Therefore it is necessary to determine the cost per hour of a staff member.

The calculation of the salary per hour proceeds from the assumption that 2/3 of the working hours are considered as normal hours and 1/3 as complementary hours. (This is due to the fact that the ministry of education is financing 2/3 of teaching time through teaching positions and 1/3 through supplementary hours.) A lecturer receives £51 440 for 128 hours teaching. However, 1/3 of the salary is for research. Therefore the salary for teaching amounts to $\frac{2}{3} \times £51\,440 = £34\,293$. This would amount to £268 per hour. According to the above assumption only 2/3 of the hours are normal hours but 1/3 is paid as part-time salary of £41 each. If we weigh this accordingly we would get $(\frac{2}{3} \times £268) + (\frac{1}{3} \times £41) = £192$ as average per hour salary paid at the centre.

¹ This case study draws from Sandoss Ben Abid (1997) *Analyse coût-efficacité du centre de télé-enseignement universitaire de Bourgogne* Memoire de DEA, of IRÉDU Université du Bourgogne. The thesis studies the CTUs of the FIT-EST and was written under the supervision of Prof. F.Orivel. It was part of the co-operation of irédu and IRFOL. An interview allowed me to tailor the information collected to the needs of my research. I thank both Prof. Orivel and Sandoss Ben Abide for their co-operation.

The calculation of the salary per hour is essential since it is basically the lecturer time freed to work at the centre, which constitutes the development budget of the centre. The lecturer is the person developing the printed material as well as the audiocassettes. The convention for cost attribution is that one 'unité d'enseignement' is worth 36 hours, be it print or cassettes.

Resource media: inputs and costs

Table CS 8.1 shows the degree structure and the distribution of contact hours to degrees. Since 400 hours of staff time represent the total budget of the CTU for the DEUG 1 and this staff time is used to develop 11 teaching modules we can estimate the development cost of one module by the formula: $(400 \times \text{£}192)/11 = \text{£}76\,800/11 = \text{£}6\,982$.

Table CS 8.1: CTU Rheims/philosophy

Level	Contact hours	Student learning hours	Modules	Material provided
DEUG 1	400	600	11	9 print/1 audio ^a /1 print+audio
DEUG 2	400	600	11	9 print/1 audio/1 print+audio
Licence	375	563	7	6 print/1 print+audio
Maitrise	100	150	4	3 print/1 print+audio

Source: IRÉDU; Notes: a: the total audio input consists of five C60 cassettes.

The study material provided for DEUG 1 Philosophy consists of 11 teaching units or modules (unités d'enseignement), of which nine modules are delivered completely in print, one module in form of audio cassettes and one module as a combination of print and audio material.

Print

The nine modules contain about 160 pages each. We do not know the size of the print input, which goes with the mixed module. But since four C60 cassettes cover a module of 160 pages, one C60 cassette can be taken as equivalent of 40 pages, reducing the print input in the mixed module to 120 pages. The total amount of print input therefore is $(9 \times 160) + 120 = 1\,560$ pages. Standardising the print input in terms of unit equivalents of 50 pages each we have: $1\,560/50 = 31$ UE.

However, since we have nine print modules and one combining print with audio, multiplying with nine would be too small a factor and ten too big since the module comprises an audio element. I propose to add 0.75 as a weighing factor accounting for the print input of the print + audio module.

Therefore the total cost of the printed material therefore can be estimated as

$$9.75 \times \text{£}6\,982 = \text{£}68\,075$$

This means that the cost per unit equivalent (UE) is:

$$\text{Cost/UE (print)} = \text{£}2\,196$$

Audio Cassettes

The total input of audiocassettes amounted to five cassettes of one hour. The audio input covers 1.25 modules. The total cost of development of the audio material therefore is

$$1.25 \times \text{£}6\,982 = \text{£}8\,728$$

This means that the cost per unit equivalent audio is:

$$\text{Cost/UE (audio)} = \text{£}1\,746$$

Since we have 11 unités d'enseignement in DEUG 1, to each of them an average development budget of 400 hours/11 = 36 hours has to be attributed. Hence, the total cost per unité is

$$36 \times \text{£}192 = \text{£}6\,912$$

Production and distribution costs

The figures above cover more than the costs of development. They include production cost and support cost. However, as the course material consists of photocopied spiral binders most of the cost is for staff time and covered out of the budget described.

The unit cost of production for the study material was estimated to be £60 for production (print and audio) and £15 for distribution. Neglecting the cost of student support we have a variable cost per student of £75.

Student support

There are no standardised arrangements for student support. What support is given comes from the time budget already described. If teachers are more active in supporting students they must produce their module in a shorter time.

Cost analysis

The cost analysis estimates total direct course cost, average costs and the parameters of cost per student learning hour.

Total course costs

The total course costs have been calculated as $(400 \times \text{£}192) = \text{£}76\,800$

Average costs

Average costs are the total costs divided by the number of students. 100 students were enrolled. Since the course has no specified lifetime but is revised on a rolling basis, I assume a lifetime of five years and neglect any maintenance cost in between. In this case we get:

$$AC = \frac{\pounds 76\,800}{500} + \pounds 75 = \pounds 154 + \pounds 75 = \pounds 229$$

Cost per student learning hour

The overall number of student learning hours was taken to be 600. This estimate is based on the fact that in the conventional course we have 400 contact hours of teaching. The study time of students was estimated on the basis that two-thirds of the student learning time in the conventional system were contact hours. Consequently we get:

$$\text{Cost/SLH(course)} = \frac{\pounds 76\,800}{600} = \pounds 128$$

If we add the study time directly created by the media input we have 310 student learning hours from print and 5.25 from audio, i.e. 315.25. Hence:

$$\text{Cost/SLH(media)} = \frac{\pounds 76\,800}{315} = \pounds 244$$

The cost for 50 pages of print (1 UE) has been determined as £2 196/UE. Since one UE creates 10 hours of study, we have:

$$\text{Cost/SLH(print)} = \frac{\pounds 2\,196}{10} = \pounds 220$$

The cost per student learning time through audio media has already been calculated:

$$\text{Cost/SLH (audio)} = \pounds 8\,728/5 = \pounds 1\,746$$

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The close similarity between the costs per unit equivalent for audio and print reflects the fact that the cost driver is essentially the time of the author. Production costs, which generally impact strongly on cost per student learning hour for audio, are virtually ignored here as there is no specific budget for production.