



CHAPTER V

EMPIRICAL RESULTS

5.1. Cost Calculation

The chapter is concerned with comparing the operational cost of Competency Based Training (CBT) and Conventional Training (CT), based on the provider's perspective. The data was gathered from budget requests prepared and total expenditures for training activities. These budget requests and cost expenditures included a detailed breakdown of all cost categories such as transportation, accommodation, honoraria (for committees and trainers), meals, training materials, rent for classrooms and equipment.

Operational costs included in the analyses are:

- Honorarium for the trainers
- Honorarium for participants
- Materials
- Transportation
- Facilitators
- Committee
- Food and accommodation
- Communication and report costs
- Rent for classrooms and equipment
- Miscellaneous

Cost analyses focuses on the total number of health workers trained based on their role in the workplace. With both training the trainee gets the appropriate follow-up and support in their workplace. Unit cost data only included the trainees who were specifically targeted and completed the training cycle for both programs. In comparing the cost between the two programs one must not only count for the number of trainees but also that account of the difference in the methods and implementation between CBT and CT as set below in Table 5.1. Chapter 3 section 3.2 details the difference in the design and methodology between CBT and CT. These differences will affect the various operational

costs. Table 5.1 outlines the difference aspects of CBT that would result in an increase in the operational costs compared with CT.

Table 5.1: Principal Differences between CBT and CT that Affect Cost Expenditure

Competency Based Training Method	Conventional Training Method
<ul style="list-style-type: none"> • Module sequence designed locally to achieve competency according to competency standard of role in workplace • Trainers work as team – all trainers participate with responsibilities during all the training process, attend throughout the course • Methods used: role play, lecture, group discussion • Sandwich system (needs time and support materials practice of new skill in work place) • Ratio: 1 trainer for 3 or 4 trainees, and maximal of trainees 15 for each class. • Duration of training in the class is 8 days 	<ul style="list-style-type: none"> • Module developed nationally introduces concept and some times new policy • Trainers come and go, work as individuals taking different sessions, • Methods used: presentation or lecture and some discussion. • No practicum in the field • No support material • No consideration of ratio between trainers and trainees, sometimes class size of 30 trainees to one trainer. • Duration of training is 3 days

5.1.1. The Cost Calculation of Current Condition¹

As noted above, an attempt has been made to include all the costs of both the CBT and CT. In addition, the cost units for CBT includes expenditure for training need assessment (TNA), assessment of trainee post training and cost of supporting materials used by the trainees on return to their workplace with “sandwich” system. Operational costs include the travel cost for programmers or trainers to conduct assessment in the

¹ Current condition – refers to the real situation of cost expenditure or in other words the actual expenditure

workplace before and after training. Based on this the cost for a CBT program is higher than Conventional Training, see the Table 5.2

Table 5.2: Total Cost for CBT and CT in Current Condition

(In units of Rupiah)

Cost items	CBT		CT	
	Total cost (Rp)	% of total cost	Total cost (Rp)	% of total cost
Resource persons honorarium	76,545,000	9.227	4,500,000	4.104
Participant honorarium	5,580,000	0.885	900,000	0.765
Material	33,750,500	4.715	8,472,500	5.800
Participants transportation	222,820,500	25.036	35,980,500	22.963
Resource persons transportation	125,831,000	13.736	22,605,000	12.740
Committee transportation	14,857,000	1.687	2,290,000	1.566
Food Board	172,065,500	19.708	25,290,000	8.484
FC / Report	22,507,500	2.540	1,410,000	0.963
Class Room / equipment (rent)	66,550,000	7.560	7,500,000	5.134
Assessment TNA	45,000,000	5.113	31,750,000	12.840
Assessment post Training	86,190,000	9.793	53,530,000	24.840
Total cost	871,697,000	100	194,228,000	100

Source: From Appendix B and appendix C

The above Table reveals the total cost as per “current condition” for CBT compared with the CT program. The total cost for CBT is Rp.871,697,000 and Rp.194,228.000 for CT.

To assist in overall health budget calculations, it is important to know the unit cost for CBT and CT. The unit cost being the cost for one person to attend training whether CBT or CT. This is calculated by dividing each budget item by the total number attending the training. The following table (Table 5.3) shows the unit cost for each item of the training budget for 216 midwives who attended the CBT program and 172 who attended the CT Program.

Table 5.3: Unit Cost for CBT and CT Per Budget Item in Current Condition

(In units of Rupiah)

Cost items	CBT		CT	
	Unit cost (Rp)	% of unit cost	Unit cost (Rp)	% of unit cost
Resource persons honorarium	354,375	8.78	26,164	2.32
Participant honorarium	25,834	0.64	5,233	0.47
Material	156,253	3.87	49,258	4.38
Participants transportation	1,031,576	25.56	209,189	18.5
Resource persons transportation	582,550	14.44	131,424	11.6
Committee transportation	68,782	1.71	13,315	1.19
Food Board	796,599	19.75	147,035	13.0
FC / Report	104,201	2.53	8,197	0.77
Class Room / equipment (rent)	308,101	7.65	43,604	3.86
Assessment TNA	208,333	5.17	184,593	16.35
Assessment post Training	399,027	9.89	311,220	27.56
Overall Unit cost per participant	4,035,634	100	1,129,232	100

Source: From Appendix B and appendix C

From Table 5.3 it can be seen that the overall unit cost is calculated by adding the

individual budget items (having been divided by 216 for CBT and 172 for CT). The overall unit cost for one midwife to attend the CBT program is Rp.4,035,634 while for one midwife to attend the conventional training program is Rp.1,129,232

Table 5.4 summarizes the previous table with the overall unit cost for one midwife to participate in the CBT program compared with the CT program. The average cost or unit cost for Competency Based Training was higher than that of Conventional Training - Rp.4,035,634 and Rp.1,129,232 for CBT and CT consecutively.

Table 5.4: Comparing Total Cost and Unit Cost of CBT and CT in Current Condition

(In units of Rupiah)

Training programs	Numbers of trainees	Total cost	Unit cost (Average cost) of training per midwife
Competency Based Training (CBT)	216	871,697,000	4,035,634
Conventional Training (CT)	172	194,228,000	1,129,232

Source: From Appendix B and appendix C

Table 5.4 indicates that with a CBT program the unit cost per midwife is higher than CT. This is due to the fact that the CBT program covered more training days, because the sandwich system (see Chapter 3) was used. This involves a practicum plus practicum material and the trainee travels more than once to the training location. Also contributing to the increased cost of CBT is the ratio of trainers to trainees is higher in CBT than CT. CBT using a ratio of trainers to trainees as 1 : 3.

5.1.2. The Cost Calculation under Controlling the Distance

In carrying out cost effectiveness analyses (CEA) between the two training programs it is necessary to ensure that factors such as geographical location are the same and distance traveled by trainees are similar so the basic unit cost of transportation is the

same. Taking this condition into accounts, in CBT transportation costs are higher because the trainees travel more than once to the training location, because the “sandwich” system (see chapter three) is used.

Table 5.5: Total Cost for CBT and CT under Controlling for the Distance

(In units of Rupiah)

Cost Items	CBT		CT	
	Total cost (Rp)	% of total cost	Total cost (Rp)	% of total cost
Resource persons honorarium	76,545,000	10.485	4,500,000	4.104
Participant honorarium	5,580,000	0.764	900,000	0.765
Material	33,750,500	4.623	8,472,500	5.800
<i>Participants transportation</i>	<i>90,369,544</i>	<i>11.118</i>	<i>35,980,500</i>	<i>22.963</i>
Resource persons transportation	125,831,000	17.236	22,605,000	12.740
Committee transportation	14,857,000	2.035	2,290,000	1.566
Food Board	172,065,500	23.569	25,290,000	8.484
FC / Report	22,507,500	3.083	1,410,000	0.963
Class Room / equipment (rent)	66,550,000	9.116	7,500,000	5.134
Assessment TNA	45,000,000	6.164	31,750,000	12.840
Assessment post Training	86,190,000	11.061	53,530,000	24.840
Total cost	739,246,044	100	194,228,000	100

Source: From Appendix B and appendix C

A previous table (Table 5.2) showed that the transport costs (in current condition) for CBT and CT were Rp. 222,820,500 and Rp. 35,980,500 respectively. Table 5.5 demonstrates that the travel cost, when controlling for distance, for CBT is Rp.

90,369,544, which is still higher than CT at Rp. 35,980,500. The Table also shows that while controlling for distance the overall total cost for CBT was still higher than CT – that is Rp. 739,246,044 for CBT and Rp.194,228,000 for CT.

To continue with this form of analyses, the next table (5.6) takes the data from Table 5.3 dealing with unit cost per budget cost items and overall unit cost and controls for distance. The results are as follows:

Table 5.6: Unit Cost for CBT and CT Per Budget Item under Controlling the Distance

(In units of Rupiah)

Cost items	CBT		CT	
	Unit cost (Rp)	% of unit cost	Unit cost (Rp)	% of unit cost
Resource persons honorarium	354,375	10.35	26,164	2.32
Participant honorarium	25,834	0.75	5,233	0.47
Material	156,253	4.57	49,258	4.38
Participants transportation	418,377	12.25	209,189	18.5
Resource persons transportation	582,550	17.02	131,424	11.6
Committee transportation	68,782	2.01	13,315	1.19
Food Board	796,599	23.27	147,035	13.0
FC / Report	104,201	3.04	8,197	0.77
Class Room / equipment (rent)	308,101	9.01	43,604	3.86
Assessment TNA	208,333	6.08	184,593	16.35
Assessment post Training	399,027	11.65	311,220	27.56
Overall Unit cost per participant	3,422,435	100	1,129,232	100

Source: From Appendix B and appendix C

From the above table it can be seen that the unit cost (calculated by adding the individual

cost items) for CBT is still higher compared to CT, that is Rp.3,422,435 and Rp.1,129,232 respectively. From the cost items it can be seen that for CBT food and board at Rp.796,599 or 23.27% is more costly than CT Rp.147,035 or 13%. The researcher was unable to trace the reasons for this.

Finally, Table 5.7 below is a summary of the unit cost, based on the cost data controlling for distance in the previous table. Here the unit cost (obtained by dividing the costs by the number of participants) for one midwife to participate in the CBT program compared with one midwife participating in the CT program is presented.

As indicated by the table, the average cost or unit cost for Competency Based Training was higher than that of Conventional Training - Rp.3,422,435 and Rp.1,129,232 for CBT and CT consecutively.

Table 5.7: Total Cost and Unit Cost of CBT and CT under Controlling the Distance

(In units of Rupiah)

Training programs	Numbers of trainees	Total cost	Unit cost (Average cost) of training per midwife
Competency Based Training (CBT)	216	739,246,044	3,422,435
Conventional Training (CT)	172	194,228,000	1,129,232

Source: From Appendix B and appendix C

Table 5.7 indicates that with a CBT program the unit cost per midwife is higher than CT. This is due to fact that CBT covered more training days, involved more trainers who worked in teams with a the ratio of trainers to trainees as 1 : 3. In addition, in implementation, CBT used the sandwich system which utilises practicum material and the trainees travel more than once to the training location.

In the delivery of CBT training for this package the “Sandwich” system was used (as referred to in Chapter 3).

The sandwich technique involved three phases:

- (1) In phase one of the training, which was done in classroom and usually required four to five days (four days were estimated enough, following a review of the package), participants learned techniques and skills. The trainer-trainee ratio was 1:3.
- (2) In phase two of the training, participants returned to their workplace to implement the new techniques and skills they learned from phase one. The second phase lasted for approximately four to six weeks.
- (3) In phase three, participants returned to the classroom to present the results of their field experiences. There were comments from other participants and trainers as well as recommendations for improvement. Following the presentations of the results by participants was additional material presented by the trainers. This phase lasted for four days.

Thus, classroom training was held for approximately eight days. The sandwich technique combined both theoretical orientation and practical experiences to build the competency and capacity of the midwife (health worker). It had the advantage of using the trainee's own practical experience in the workplace as a training tool.

On the other hand, the conventional training was a different system in the following aspects. Firstly, the duration was four days only. Secondly, it was theoretical oriented –conducted solely in the classroom. Thirdly, the number of trainees was relatively bigger while the training was often handled by only one trainer. Fourthly, in terms of material presentation, the method was similar to lecture without role-plays, and practicum.

Not only does the sandwich system increase the cost but CBT also includes the post training follow-up assessment for trainees at their work places.

5.2. Characteristics of the Midwives

In training the characteristics of the trainee (learner) may have an impact on the output of the training program. For example if the trainee has a lower level of

professional training this may affect their ability to learn, unless the training program is adapted to characteristics of the trainee. Other characteristics that may effect the trainee's motivation to learn and apply the new learning and skills in their workplace is work status (Antrac,1996). This section will describe the different characteristics of the trainees involved with the two training programs.

5.2.1. Type of Workers (Status)

The trainees consisted of two types of employment categories or status: non-permanent or contract-based midwives (PTT) and permanent civil servants midwife (PNS). Those who were non-permanent employees were contracted workers and were employed by the government for a three year contract, but the contract might be extended if needed. On average, the status of workers involved in both training programs was different. For CBT in Buton permanent civil servant status was only 51.9%, while in Muna where convention training was used, civil servant status was much higher at 75.0 % as shown in Table 5.8.

Table 5.8: Comparison of Percentages Type of Workers between CBT and CT

Training programs	Numbers of midwife	Type of workers (Status)	
		Civil servant midwife (PNS)	Contracted midwife (PTT)
Competency Based Training (CBT)	216	112 (51.9%)	104 (48.1%)
Conventional Training (CT)	172	129 (75.0%)	43 (25.0%)

Sources: Appendix D (table D.2)

Status of employment can affect the trainees' motivation to implementation new skills. For example if the trainee does not have permanent status, there is the chance that they may or may not apply the new skills. Having uncertain work status may motivate them to change their practice based on training to improve their chances of obtaining permanent civil servant status. In Muna, three quarters of the trainees had permanent employment status, so one could argue they had more reason to apply the new skills, or on the contrary because they have job security they may feel there is little need to change their usual practice. Training programs have to find ways to motivate their trainees. CBT training methodology tries to address motivation through active learning and field practice (see table 5.1). The result shown in section 5.3 demonstrates that conventional training did not motivate the trainees to apply the new skills.

5.2.2. Age

The average age of the midwives who participated in the Competency Based Training program was older than those attending Conventional Training. If viewed from each district, the average age midwife of a CBT was 35.6 years. The range for CBT at Buton district was 28-47 years old, while in CT program at Muna district was 26-40 years old, with an average of 31.1 years old as shown in Table 5.9.

Table 5.9: Comparison of Average Age of Midwives Participating in CBT and CT.

Training programs	Numbers of Midwife	Average of Age (years)
Competency Based Training (CBT)	216	35.6
Conventional Training (CT)	172	31.1

Sources: Appendix D (tableD.4) and (table D.5)

Age can be an important factor in the uptake of new skills. In some cases the older the person the more difficult it is for them to change the way they work. But in the sample the average age difference is only 4.5 years which may or may not make a difference.

5.2.3. Education Level

In the past there were two ways to become a midwife in Indonesia. The entire contracted midwives (PTT) graduated from SPK (Basic Nursing Training College) and then completed D1 (Diploma 1) in midwifery. The entrance level for SPK is only year 10 of high school. This is the case for the PTT midwives of Buton and Muna. The education level of civil servant midwife (PNS) is less clear. It is only in that last few years that an educational pathway has been developed for midwives, now all midwives must be trained to D3 level. Entrance to D3 requires year 12 of high school or previous midwifery training. A recent government ruling now requires all civil servant midwives to have D3 (Diploma 3). The level of professional education can be a factor in the training outcome.

Table 5.10: Comparison of Education Level between CBT and CT Midwives

Training programs	Numbers of Midwife	Education Level	
		D1 (Diploma 1)	D3 (Diploma 3)
Competency Based Training (CBT)	216	148 (68.5%)	68 (31.5%)
Conventional Training (CT)	172	159 (92.4%)	13 (7.6%)

Sources: Appendix D (table D.1)

From the data table it is seen that both training programs having higher levels of D1 trained midwives with CT having the higher percentage (92.4%). While CBT has a

higher percentage of D3 midwives compared with CT. Given that CBT had the greater number of D3 graduates as trainees one would expect that this would positively influence the output as CBT is a more complex learning style. The fact that CT had the greater percentage of D1 trainees could be a negative influence on the output.

5.2.4. Working Experience (Years)

The length of working experience can be factor that affects the training output. Those that have work for longer period of time may find it more difficult to change their practice, compared with those who have not work for as long. The data shows that Buton midwives had some extra years of experience in the higher range, while for the lower range both districts were similar. The length of experience by the midwives from Buton district was 10 years and 1 month, ranging between 4 years and 2 months to 19 years and 3 months. Meanwhile, the younger midwives for CT program ranged from 4 years and 3 months to 15 years and 1 month as shown in Table 5.11.

Table 5.11: Comparison of Working Experience between CBT and CT Midwives

Training programs	Numbers of Midwife	Average of working experience (Years)
Competency Based Training (CBT)	216	10.1
Conventional Training (CT)	172	8.1

Sources: Appendix D (table D.4) and (table D.5)

Given that difference in the average number of working years was only 2 years between CBT and CT one could say that this is may not have a much influence on the two training programs output.

5.3. Measurement of Effectiveness

To measure effectiveness of the CBT and CT you need to look total number trained and the number assessed as competent post training for CBT and CT. But also to compare the level of competency before training (baseline measured at time of training needs assessment) so that you can see what is the level of improvement made by each the training programs. This is show in table 5.12

Table 5.12: Comparison of Competence Assessment Results Before and After CBT and CT Program.

Training program	Numbers of Midwife	Number of competent midwife			
		Before training		After training	
		Competent (%)	Not competent (%)	Competent (%)	Not Competent (%)
Competency Based Training (CBT)	216	None (0%)	216 (100%)	130 (60.2 %)	86 (39.8 %)
Conventional Training (CT)	172	None (0%)	172 (100%)	23 (13.4 %)	149 (86.6%)

Sources: Appendix D (table D.3)

When looking at the results in Table 5.9, both training programs started with the same baseline – 100% not competent before training. But when comparing the output or number competent post training for CBT and CT, it is seen that the output of CBT is much greater than CT – 60.2% competent compared with 13.4% competent post training. CBT results in a greater number of trainees being competent post training, when assessed in their workplace. CBT produces trainees who can apply the competency standard to their role once they have been trained through CBT. But those trained in the conventional way were still not working according to the competency standard.

Also in order to measure the effectiveness of competency based training compared with conventional training, the number target number for training set by programmers and the actual number of trainees attending needs to be known. Then, this data is compared with the output data of the number of midwives assessed as competent (according to competency standard) post training. Table 5.13 below compares the following data from the two training programs :

The input = number of midwives attending training

The target = expected percentage to be competent post first round of training

The output = actual number of midwives assessed as competent post training according to competency standard

Effectiveness = calculated as $\text{Output} / \text{target} \times 100\%$

Table 5.13: The Effectiveness of CBT and CT Programs ².

Training programs	Input (Number of trainees)	Target Competent	Actual Output competent	Effectiveness
Competency Based Training (CBT)	216	140 (65%)	130	92.8. %
Conventional Training (CT)	172	129 (75%)	23	17.8 %

Sources: Appendix D (table D.3)

The table shows that the input or number of trainees for CBT was 216 while the CT program had 172. In terms of the target the programmer, using the baseline from TNA, set the desired target percentage of competency to be achieved post first round of

² To explain the calculations for this table the example of CBT is given:

Input: 216 (trainees)

Output: 130 (competent)

Target : 140 from 65%

Effectiveness: $130 / 140 \times 100\% = 92.8 \%$

training according to Strategy plan provincial and district Health Office. For CBT this was 65% (140) and the CT program target was 75% to be competent or 129. (*Source: Strategy Plan Department of Health Province/ District / Municipality 2000*).

Output from the intervention of the first round was 130 competent for CBT while only 23 were competent through the conventional training. Therefore, when comparing effectiveness of the two training programs, CBT is more effective than CT because the result was much higher than the target that is 92.8% while for CT the result was lower 17.8% than the target.

5.4. Cost-effectiveness Measurement in Current Condition

In this section the discussion of cost effectiveness measurement is based on comparing the data of the costs of CBT and CT as recorded in Table 5.2, plus the effectiveness data regarding output from Table 5.13. The data from these two tables are combined to form table 5.14 as follows.

Table 5.14: Cost-effectiveness of CBT and CT Based on Target and Actual Output Using “Current Condition” Total Cost

Training programs	Total cost ³ (Rp)	Input (Number of trainees)	Target Output as Competent	Actual Output as competent	Effectiveness	Cost- effectiveness (Rp) ⁴
Competency Based Training (CBT)	871,697,000	216	140 (65%)	130	92.8%	939,328,663
Conventional Training (CT)	194,228,000	172	129 (75%)	23	17.8%	1,091,168,539

Sources: Appendix B and appendix D (table D.3)

From the data contained in table 5.2 it can be seen that the total cost for CBT program

³ Using “current condition” costs from Table 5.2

⁴ The cost effectiveness is calculated as follows:-

Cost effectiveness = calculated as Total cost/ effectiveness

Cost Effectiveness : Rp.871,697,000 / 92.8% =Rp. 939,328,663

was Rp.871,697,000 while CT was Rp.194,228,000. The input of total midwives that followed the CBT program was 216, while for CT it was 172. It is important to know that the target percentage to achieve competency was set by the programmer responsible (Strategy Plan Department of Health). The target percentage of midwives competent post the first round of CBT training was 65% (140). This is reasonable given the baseline TNA showed 0% midwives were competent. For CT it was set at 75% (129). Output (those assessed as competent) for the CBT program was 130 while CT was 23. The cost effectiveness for CBT was Rp.939,328,663 while the CT cost was Rp.1,091,168,539. Therefore it can be said that the effectiveness of CBT is higher than the CT program that is 92.8 % compared with 17.8 %. And cost effectiveness for CBT is lower than the CT program because the cost for CBT was Rp. 939,328,663 while CT was Rp.1,091,168,539.

Moreover, cost effectiveness can be further lowered when calculations and analyses are made based on a supposed target of 100% attained as competent post training for both training programs. This is shown in Table 5.15.

Table 5.15: Cost-effectiveness of CBT and CT Based on “Supposed” Target of 100% and Actual Output Using “Current Condition” Total Cost

Training Programs	Total Cost (Rp)	Input (Number of Trainees)	Target Output Competent	Actual Output Competent	Effectiveness	Cost- effectiveness (Rp)
Competency Based Training (CBT)	871,697,000	216	216 (100%)	130	60.2%	1,448,001,661
Conventional Training (CT)	194,228,000	172	172 (100%)	23	13.4 %	1,449,462,686

Sources: Appendix B and appendix D (table D.3)

Using the same cost data from Table 5.14 (CBT Rp.871,697,000 and CT Rp.194,228,000) but focusing on a supposed target of 100% to be competent from the input of 216 midwives for CBT and 172 for CT when calculating effectiveness. It is seen

that the cost effectiveness is further lowered, that is CBT Rp.1,448,001,661 and CT Rp.1,449,462,686.

Based on this data it could be said that cost effectiveness from the two analyses indicates that CBT is more cost effective than CT.

5.5 Cost-effectiveness Measurement – Controlling for Distance

Based on previous data from the cost calculation controlling for distance in Table 5.3 and data from Table 5.10 and comparing them with the cost effectiveness data from Table 5.9 we have Table 5.16

Table 5.16: Cost-effectiveness of CBT and CT Based on Target and Actual Output Using “Controlling for Distance” Total Cost

Training programs	Total cost (Rp)	Input (Number of trainees)	Target Output Competent	Actual Output Competent	Effectiveness	Cost- effectiveness (Rp)
Competency Based Training (CBT)	739,246,044	216	140 (65%)	130	92.8%	796,601,340
Conventional Training (CT)	194,228,000	172	129 (75%)	23	17.8%	1,091,168,539

Sources: Appendix B and appendix D (table D.3)

Table 5.16 shows the total cost of the CBT program when controlling for distance is Rp.739,246,044 while the total cost of the CT is Rp.194,228,000. Based on this it can be seen that the cost effectiveness of CBT is lower or more effective in comparison with CT, that is for CBT Rp. 796,601,340 while CT is Rp. 1,091,168,539

Input of the total number of midwives that followed the training for both programs was CBT = 216 and CT= 172. Remembering that the target already set by the programmer responsible (Strategy Plan Department of Health) for the first round of CBT was 65% (140) and for CT it was 75% (129). Output for the CBT program was 130 while CT was 23. The effectiveness for CBT was 92.8% while the CT was 17.8 %.

To further the evidence that CBT is more cost effective than CT, one can suppose a target output of 100% competent using the cost data in controlling for distance. This is shown in Table 5.17.

Table 5.17: Cost-effectiveness of CBT and CT Based on “Supposed” Target of 100% and Actual Output Based on “Controlling for Distance” Total Cost

Training programs	Total Cost (Rp)	Input (number of trainees)	Target Output Competent	Actual Output Competent	Effectiveness	Cost-effectiveness (Rp)
Competency Based Training (CBT)	739,246,044	216	216 (100%)	130	60.2%	1,227,983,461
Conventional Training (CT)	194,228,000	172	172 (100%)	23	13.4 %	1,449,462,686

Sources: Appendix B and appendix D (table D.3)

The above Table indicates that the total cost of CBT is much higher compared to CT – that is CBT Rp.739,246,044 and CT Rp.194,228,000 with the target of 100% from input of 216 midwives for CBT and 172 for CT. The output of the two programs in terms of total numbers competent post training, after assessment, is CBT 130 and CT 23. Therefore cost effectiveness is far lower for CBT compared with CT, that is CBT Rp.1,227,983,461 and CT Rp.1,449,462,686. This shows that CBT is more cost effective than CT.

Tables 5.14 to 5.17 have tried to demonstrate that although the cost of training in CBT is higher than CT, when calculating cost effectiveness the evidence reveals that CBT is more effective in terms of output and cost effective than CT.