

Cooperative Learning in adult education - Follow-up evaluation of the adult education project 'The cooperative classroom'

By Bjarne Wahlgren and Tinne Geiger, Copenhagen, November 2011

Contact: National Centre of Competence Development (NCK), <http://ncfk.dpu.dk>, Aarhus University, Tuborgvej 164, DK-2400 Copenhagen NV, Denmark

Introduction

In 2009/2010 the National Centre for Competence Development (NCK) completed an evaluation of the project "The cooperative classroom". The project consisted of four Adult Education Centres in the Capital Region, which tested the pedagogical method Cooperative Learning (CL), as part of an effort directed towards an enhanced completion rate.

In the overall picture, the effect on dropout, absenteeism and exam performance in school year 2009/2010 was limited. But there was noted a number of positive effects, including on students experience of cooperation and on teachers' competence development and their satisfaction with the method ([Wahlgren, 2010](#)).

The evaluation - hereinafter called the Evaluation 2010 - found that there were significant differences between the four Adult Education Centres and between different teams, which led to the assumption that the culture of each Adult Education Centre in collaboration with teacher qualifications and learner means influence the effect of CL.

After completion of the project, the use of CL has continued and been developed in varying degrees in the four Adult Education Centres. During and after the evaluation of the initial project VUC-teachers expressed that it takes time to acquire CL. It was therefore suggested that the effect of CL would increase with increasing experience with the method.

Against this background it was decided to examine the results from the continued use of CL in the academic year 2010/2011. The follow-up study should provide answers to two questions:

- Can one establish differences in the effect after second year compared with the first year?
- Can one establish differences in the effect of CL while conducted by teachers experienced with the approach compared with teachers without experience with the use of CL?

The extent of the use of CL is different in the four Adult Education Centres. In two of the centres, the entire group of teachers is basically involved (more or less). In two remaining centres, a smaller part of the teacher group uses the approach. Therefore two different sets of data have been used in the present follow-up study of the effects of CL in the academic year 2010/2011. At the two Adult Education Centres where virtually all the teaching staff is involved, we have compared experienced CL-users and less experienced teachers. At the two Adult Education Centres where a small part of the teaching staff uses CL, we have compared CL-users and non-CL-users. In three of the four centres data makes it possible to compare the effect in 2009/2010 with the effect in 2010/2011.

The results from the four Adult Education Centres are presented below and the results are summarized in the conclusion.

VUC Vestegnen

At VUC Vestegnen all teachers have been in contact with the CL method in the academic year 2010/2011. At staff meetings at the institution there have been presentations of CL and the teachers have applied different structures in their own teaching. Several teachers have also attended courses in CL during 2010/2011. CL is quite prevalent at VUC Vestegnen and it is the management's impression that many teachers use the approach to a greater or a lesser extent. A small group of teachers have used the method in two academic years.

At VUC Vestegnen data has been collected on dropout, absenteeism and exam results for the three most recent academic years for HF (total) and AVU respectively. For the academic year 2010/2011 teacher groups are further categorized by whether they have experience with CL from 2009/2010 or not.

Table 1.1 Dropout, absence and grades 2008-2011, a total of AVU and HF ¹

	Dropout ²	Absence ^{3, 4}	Oral characters	Written characters
AVU				
2008/2009	13%		6.3	3.7
2009/2010	8%	35%	5.7	3.3
2010/2011	14%	34%	6.1	4.3
HF				
2008/2009	29%		6.2	3.9
2009/2010	29%	29%	6.1	4.3
2010/2011	25%	32%	6.2	3.9

Neither at the AVU or at HF a unique development can be established concerning the figures for the total teacher groups with regard to dropout, absenteeism and grades over the three years examined. The academic year 2010/2011 is not better than the previous two years. A change at the institutional level after the introduction of CL in the classroom cannot be established.

¹ The figures for distance teaching are not included in the total numbers, while they are included in the assessment of CL-experienced versus non-experienced classes. Together with uncertainty in the registration of classes with two teachers, this can explain the differences between the 'total-figures' and the 'categorised figures'.

² Due to technical limitations, only single subjects and not HF-classes are included in the calculation of absenteeism at the HF-level.

³ Due to technical difficulties it has not been possible to get the figures for absence in the academic year 2008/2009.

⁴ Absenteeism is only calculated for students who have completed the course.

Table 1.2 Dropout, absence and grades 2010/2011 categorized by the teacher's experience with CL and the level

	Dropout ⁵	Absence ⁶	Oral characters	Written characters
AVU				
Experience from 2009/2010	18%	38%	6.4	5.2
Not experience from 2009/2010	13%	33%	6.0	4.2
HF				
Experience from 2009/2010	25%	26%	6.7	3.1
Not experience from 2009/2010	25%	32%	6.1	4.1

Categorising the teachers by whether or not they have experience with CL from 2009/2010, it is not possible to say something unambiguous.

At AVU it immediately appears that experience with CL has a positive effect on grades, while both oral and written grades are higher in classes taught by teachers with CL experience from 2009/2010 than for classes taught by teachers without CL experience. Conversely, there cannot be established a positive effect on dropout and absenteeism. As was shown in the 2010 evaluation the use of CL in itself is not sufficient to reduce dropout and absenteeism at AVU.

At HF the figures show a different pattern. There is virtually no difference in dropout. On the other hand absenteeism is lower on team taught by teachers with CL experience than on teams taught by teachers without CL experience. The oral characters are slightly higher on the teams that are taught by a teacher with CL experience than on the teams that are taught by a teacher without. Conversely, the written characters are highest on teams that are taught by a teacher without CL experience.

VUC Sjælland

At VUC Sjælland the CL method has been widespread among many teachers in 2010/2011. At AVU all teachers has been trained in CL before the academic year started, although with a few exceptions including newly hired teachers. Thus, teachers in 226 out of 295 AVU teams have knowledge of CL.

At HF the CL method has also been widespread since 2010, though not to the same extent as at AVU. In 53 out of 167 HF teams, the teacher has knowledge of the CL.

At VUC Sjælland data on dropout rates and exam results has been collected for the three most recent academic years for the total HF and total AVU respectively. Data for 2010/2011 is further categorised by whether the teacher has experience with CL or not.

⁵ Due to technical limitations, only single subjects and not HF-classes are included in the calculation of absenteeism at the HF-level.

⁶ Absenteeism is only calculated for students who have completed the course.

Table 2.1 Dropout and grades 2008-2011, a total of AVU and HF

	Dropout	Absence ⁷	Oral characters	Written characters
AVU				
2008/2009	11%		6.4	4.2
2009/2010	10%		6.3	4.4
2010/2011	12%		6.4	4.9
HF				
2008/2009	32%		6.2	5.5
2009/2010	32%		6.0	4.9
2010/2011	26%		6.1	5.2

At AVU neither dropout nor characters change substantially over the three years. At HF a steady decline in dropout can be noted, while the trend in grades is not clear. The figures indicate a difference between AVU and HF, where CL tends to have an effect at the HF level. It is also worth noting that the negative impact that the evaluation of the first year's experience indicated the use of CL to have on the written characters, is not found in the new figures - neither at AVU or HF.

Table 2.2 Dropout, absence and grades 2010/2011, categorised by the teacher's experience with CL and the level

	Dropout	Absence	Oral characters	Written characters
AVU				
Experience from 2009/2010	22%	28%	6.6	5.0
All teachers	12%		6.4	4.9
HF				
Experience from 2009/2010	18%	20%	6.2	5.5
All teachers	26%		6.1	5.2

At AVU the dropout among the teams with a CL-experienced teacher is significantly higher than the overall dropout rate, but both oral and written characters are slightly higher on the team with a CL-experienced teacher than the overall characters at AVU. At HF the tendency seems to be positive for both dropout rate and characters. Neither at the AVU nor HF, there are significant differences in grades.

VUC Lyngby

At VUC Lyngby the extent and use of CL is restricted to a group of teachers, as some teachers use CL and others do not. There has not been major change in prevalence from 2009/2010 to 2010/2011. It is therefore less relevant to compare the two years for the effects on the institutional level.

⁷ Due to technical difficulties it has not been possible to get the figures for absence.

At VUC Lyngby it has been possible to match the population of teams on AVU and HF respectively, which have been taught with the use of CL, with a comparable population of teams who have not been taught by CL. The two populations are matched according to whether they are single team or a class, and by subject and level.

Information has been gathered on dropout, absenteeism and exam results for the CL teams and control teams.

Table 3.1 Dropout, absence and grades 2010/2011, matched teams, AVU and HF

	Dropout	Absence	Oral characters	Written characters
AVU				
CL team	39%	20%	5.1	4.0
Control Hold	45%	21%	5.8	2.2
HF				
CL team	36%	15%	6.8	6.2
Control Hold	31%	13%	6.8	4.8

At AVU CL has a positive effect on dropout, absenteeism and written characters. Particularly dropout is significantly lower in the CL group than the control group and the written characters are markedly higher.

On HF both dropout and absenteeism are higher on CL teams than control teams. The written characters are higher in the CL group than the control group.

When compared with figures from VUC Lyngby in the evaluation 2010 it is noteworthy that there is an almost identical pattern, although with the difference that the written characters now are relatively enhanced on CL teams.

For VUC Lyngby, one can conclude that CL seems to have a positive effect on dropout and absenteeism at AVU, but not in HF. The previously reported negative effect on the written characters seems to have been eliminated.

VUF

At VUF there is a differentiated use of CL – it is first and foremost used on HF. Some teachers use CL, others not. It is therefore possible to compare the CL team with a control group. On HF comparable populations are matched according to team type (single team or class) and subject. There has been collected data on dropout, absenteeism and grades for the last two academic years for CL teams and control teams.

At VUF there is furthermore collected data on dropout, absenteeism and grades for the last three academic years for the entire HF population.

Table 4.1 Dropout, absence and grades 2009-2011, HF

	Dropout	Absence	Oral characters	Written characters
2008/2009	41%	26%	6.6	5.7
2009/2010	50%	22%	6.8	5.8
2010/2011	45%	21%	6.8	6.0

Figures for the total HF population show a tendency to 'improvement' over the three years (especially if one ignores the larger dropout in 2009/2010).

Table 4.2 Dropout, absence and grades 2009/2010, matched teams, HF

	Dropout	Absence	Oral characters	Written characters ⁸
2009/2010				
CL team	44%	25%	8.5	5.6
Control Hold	38%	24%	6.9	5.0
2010/2011				
CL team	32%	24%	6.0	
Control Hold	49%	21%	8.0	

While the dropout in 2009/2010 was significantly higher in the CL group than the control group, the situation in 2010/2011 was vice versa. The control teams have a significantly higher dropout rate than the CL teams. The case is reverse concerning the oral grades, which in the academic year 2009/2010 were significantly higher in the CL group than the control group, while control teams in 2010/2011 achieved significantly higher oral grades than the CL teams.

Summary

Data has been collected on four Adult Education Centres for the academic year 2010/2011 in order to measure the effect of the use of Cooperative Learning (CL) in adult teaching. The data covers dropout, absenteeism and oral and written characters.

With regard to characters there seems to be a positive effect of CL. CL teams score slightly higher than the control groups, and experienced CL teachers score slightly higher than non-experienced CL teachers. There is particularly a positive effect regarding the written characters, and especially compared to the results from the evaluation 2010 where CL seemed to result in lower written characters. The effect on oral characters is less clear.

It was expected that a more widespread introduction of CL at the institution would have a positive effect on the overall result at the institutional level. This cannot be established based on the given figures.

⁸ The subjects taught by CL in 2010/2011 concluded with oral examines only, and consequently there are no written characters.

It was expected that teachers who had experience with the use of CL would have lower dropout rates and less absenteeism. This cannot be established based on the given figures.

There seems to be a limited effect of CL when applied widely. The figures give no reason to conclude that the use of CL generally decreases dropout or absenteeism or heightens the character level. Other factors play a major role. The figures in this evaluation thus indicate the same direction as the results from the evaluation 2010 of the experience of the first year.

The effect that is observed in some instances is not sufficient to have a systematic impact as an overall pattern. CL is not a 'panacea' which alone can reduce dropout rates and absenteeism and improve the professional level, as this is measured by grades.

In some educational contexts and on some teams the use of CL seems to imply significantly better results. In other contexts there was no effect or a direct negative effect. It can be assumed that it is the use of CL in combination with other factors, such as the teachers' social competence, which is decisive.

In the evaluation 2010 a number of positive effects of CL on students' collaborative skills and teachers' satisfaction with their own skills and the application of the CL method were established. This is not examined in this follow-up evaluation, but there is no evidence that these effects are still not achieved.

It is therefore recommended to work further with the implementation of this method, although used differently and in interaction with other educational activities.

References

Wahlgren, B. (2010). *Cooperative Learning i voksenundervisningen - læring og lærerkompetencer. Evaluering af VUC-projektet 'Det samarbejdsdende klasserum'*. København: Nationalt Center for Kompetenceudvikling.