IMPACT OF ORGANISATIONAL ASPECTS ON DROP-OUT IN E-LEARNING AND DISTANCE EDUCATION - REPORT OF EXPERIENCES

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1. Drop-out

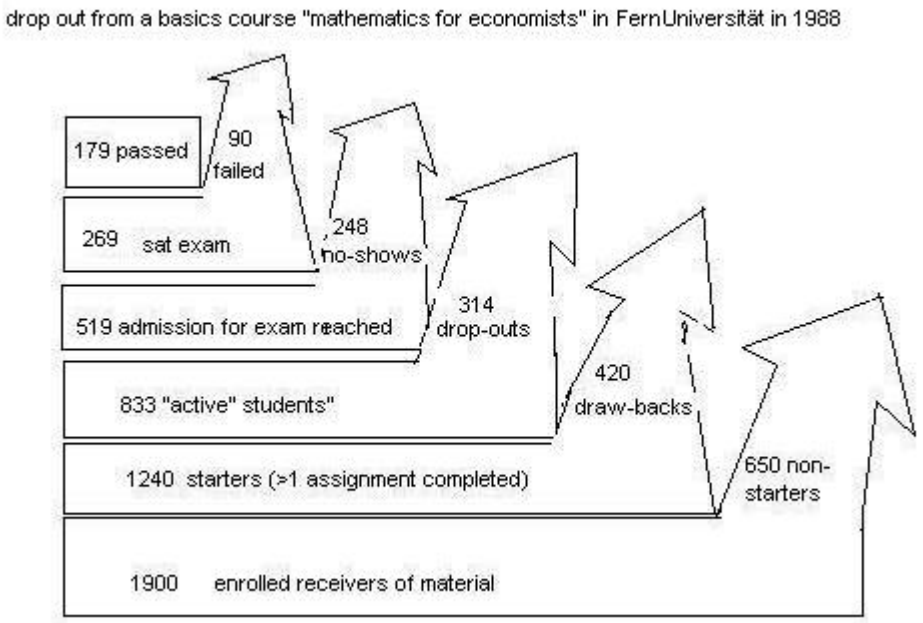
The topic I have to deal with is the influence of organisational aspects on drop-out in e-learning and in distance education. The assumption is, that there will be a similar didactic development in e-learning, if e-learning will play a role in the educational system comparable to the role institutions of distance education have played. According to our understanding mass distribution of teaching is not the organisational- didactical structure for distance education per se. More and more institutions seem to forget about the didactical structure of distance education in propagating the replicability of teaching in the hope that learning happens to a larger group of witnesses.

So even the FernUniversität one of the classical DE institutions - is proud of a prep-conference for course exams where hundreds of witnesses learned about the difficulties of some students with some topics in preparing for the course exam. (press release of FernUni, September 2003) As it was in classical distance education it is also in e-learning scenarios: we can trust that the topic of multiplication, of "making education cheaper", will show up with constant periodicity.

In 1988 we studied at FernUniversität the learning biographies of students in a compulsory regular course (mathematics for economists). The figures read like this:

Non-starters : of the 1900 enrolled students 650 stopped reacting after they received the material.
Draw-backs: of the 1240 "starters" (at least one assignment turned in) 420 stopped after that
drop-outs: of the 833 "active students" (more assignments) 314 dropped out or failed
no-shows: of the 519 "admitted students" (all prerequisites to sit the exam) 248 did not show up
failures : of the 269 students sitting the exam 90 failed and 179 passed

(figures reported have been inconsistent since 1988: due to some missing values)



As a matter of fact, we can see already by the grouping of the cohort that organisational aspects do have an effect on the definition of drop-out. We grouped the students according to whether they turned in assignments, whether they kept turning in assignments, whether they reached a number of assignments necessary to be accepted to sit the written exam and whether they showed up actually sitting the exam. So the main organisational aspects to define the groups was "turning in assignments" and "sitting the exam".

1.1 Drop out in general

There have been many studies on drop-out behaviour (Kraft-Dittmar, Fritsch & Schuemer, 1997) most of which come to results like "that the invested time and the individual workload could not match the necessary input for course retention". Categories for drop-out definition rely on models of Tinto (1975) and Bajtlsmit (1988). There are discussions on factors (Brown, 1996) categorized as internal vs. external; but I propose to just look at the organisational setup of any course: Probably the phenomenon turns out to be less on the side of the student "dropping out" than on the side of the organisation, not finding enough students to comply with their predefined and often rigorous organisational structure.

Success-rates of 10 to 15% of the originally enrolled cohort are not very seldom in the difficult courses of FernUniversität: the course curriculum is not different from most normal university course curricula. Prerequisite knowledge is explicitly stated but not tested, not even in a short self-test. And then there are fixed dates when assignments are due, help is offered but does it come at the right time? So it seems that the invitation to learn most of the times reaches a wider public than the target group the course was designed for. We then should answer the question whether it is a phenomenon of drop-out or "throw-out". In distance education we know of different hurdles that have to be overcome before students may start to study- it may start with unprecise information packages, go on with non-reactivity of the institution towards enquiries and end up in formal enrolling but not caring for the individual student and by that letting them drop out. We are, at the FernUniversität, where I work, not so much different from other institutions of higher education: applicants first have to pass the test of filling in all the forms that are necessary to enrol and pay their fees.

So when we see in another course of the FernUniversität (Sonderpädagogik) a success rate of 85% over several years we must look for explanations. The course now under consideration was a course in special education for teachers working already in schools for the handicapped but not yet having had a special training for their job. The curriculum was specialized but esteemed similar to the one in normal universities for on-campus-students being trained in special education.

The description of this enrolled group gives the hints for most differences in comparing them with normal students. This course was meant for training on the job. The course design does not differ much from all the other courses but the cohort was homogenuous: all had been school teachers (they knew how to learn) , all had been in-service, regionally put together into regional study groups (many of them knew each other: either they came from the same school or neighbouring schools), so there was a certain infrastructure among them, and, I think the most important feature is that their work was not aside from their study, what they learned today could be practised tomorrow, evaluated by practice and colleagues, and what they undertook was officially recognized by the authorities in that they received a reduction of workload to a certain amount.

1.2. Prevent drop out

All these characteristics seem to have favoured the results. So if distance education or in future the so called e-learning meets the following structures in recruiting students, drop-out seems to become a phenomenon of history:

- students should be used to systematic learning
- in a course there should be a homogenous student body
- there should be at least the offer of regionally organised seminars
- there must be regular assessment

- the curriculum should be job related as close as possible
- acceptance by the employer is favourable

If these characteristics are given, you can expect a high ratio of success. (http://www.fernuni-hagen.de/ZIFF/contrast.htm)

Being engaged in a Socrates project (http://www.fernuni-hagen.de/ZIFF/sssel.htm) about student support services I have been asked to enrich the meeting of tutors in an interstate project of continuing education for teachers of economics (http://www.oekonomische-bildung-online.de/).

There I talked about the role of tutors as facilitators and about the definition of drop out. Before my presentation I had the privilege to learn about the project and its different organisational aspects in each of the states where it is offered. So when I learned about the target group I became curious whether the success rates in this project could be prognosed according to an organisationally similar project at the FernUniversität.

I offered an online questionnaire designed according to categories for description of the scope of student support services in e-learning. (http://www.fernuni-hagen.de/ZIFF/frgbtutor.htm)

From the presentations during the tutor-seminar I found that there are major differences how the project (with all in all more than 70 course units and some 360 participating teachers) seems to be accepted by the respective state where it is offered:

In most states students (i.e. teachers in continuing education) can participate only after a screening process done by the ministry of education or its subsidiary institutions, after application and with the possibility to downsize the teaching workload between nil and 4 hours weekly. In all cases the program is offered in a kind of dual mode process: it is distance education or e-learning with up to 14 days on site for face to face learning. Especially in the small states monthly or even bi-weekly meetings are offered or organized by the students themselves.

The use of a certificate for the future is not clear in all cases: some ministries cannot afford to promise that the subject "economics" will make it into the school system of that state, others know that they desperately need these teachers soon.

So given the experiences with drop-out as stated above I tried to find out which of the didactical elements of this project seem to be important to the tutors and with which elements they are content.

Certainly the construction of the questionnaire representing the categories of student support services can be criticized - and indeed was in the group meeting - but the results are by no means trivial. First let's have a look at the questionnaire. (http://www.fernuni-hagen.de/ZIFF/frgbtutor.htm)

(The questionnaire is in German.) The philosophy of presenting to the tutors one item and expecting two categories of answers (importance and satisfaction) tried to make clear what connections we are interested in. Sometimes, when filling in a questionnaire students don't know what the goal of the question is, what will be done with the data, how these data are going to be processed: indeed, many research questionnaires go deep into hypotheses and the evaluation shows new relations between variables. There is a direct interest from our side only in the differences of how *important* something is to them and how *satisfied* they are with this aspect already. The aspect of importance certainly can be answered by everyone, the aspect of satisfaction only by those, who do have experience. Goal is to discuss a construct of "need for action".

One of the aspects of continuing education for in service training of teachers becomes clear in the answering behaviour of the tutors: These tutors are also teachers in the public school system and suffer from lack of time. Only half of the target group to which the URL of the questionnaire had been mailed, answered (N=20)- but for such questionnaires the return rate is good enough, because it is not the representativity of results we are interested in but the tendencies of this expert group in e-learning in this special project.

2.Categories for inspection

We took the categories from a grid, presented as the list of major aspects of student support in e-learning. One aspect of e-learning is very different from distance education: techniques of working with the computer in a strange surrounding of a new platform: you have to practise and get used to new behaviour according to the rules of the platform. In this case the platform was Lotus Learning Space introduced by the ZEF in Oldenburg, and from most groups of the 10 states where the project is offered, we could hear that the technical support to work with this platform has been excellent. This is indeed worth mentioning because many e-learning projects, using platforms seem to have difficulties in adopting behaviour of the students to the needs of the system. It is remarkable that on the contrary the platform used here, Lotus Learning Space, has been said to adopt its behaviour to the needs of the students.

2.1 The questionnaire: Judgement of Tutor-Tasks

The following items are to be judged according to two dimensions: the judgement of importance in general and of satisfaction according to experience; both dimensions have been offered with three answer possibilities; (-,0,+) so in calculating we took the range from -1 to +1.In the following interpretation some of the results will be marked as being quite interesting. The evaluation will take a look at the mean values of each item: small difference between these values indicate the less problematic issues - importance and satisfaction close together. Whenever there are larger differences of the sort importance higher and satisfaction low (with more than 0.50 deviance of the mean values), we may think of an issue of necessary action.

2.1.1. Introductory phase

0,74	the project has a clear-cut "***identity***"	0,39

The "identity of the project" is valued as quite important but tutors differ only a little bit into the direction that they are not equally satisfied with it: should there be done something?

0,79	modules are interrelated ***modules***	0,21

The interrelatedness of the modules is an issue where the tutors apparently do see necessary action

0,76	students know precisely what is going to happen ***preview***	0,12

also concerning a kind of "preview" about what is going to happen throughout the project should be paid attention to

0.84	all people involved know exactly their ***roles***	0,26

with the implication of their roles some uncertainty prevails.

0,95	There are clear structures for **support**	0,89

*The **clear structures for student support**, though, is an example for an unproblematic issue: importance high and satisfaction high, this is one of the best results: deviation in satisfaction from importance is minimal.*

0,89	individual technical ***prerequisites*** are known	0,32

Individual technical prerequisites for the students is an issue, where necessary action needs to be taken -

0,11	there are lists of necessary ***prior knowledge***	0,00

it is strange, that tutors neither find it very important to have such a list, nor do they seem to be very content with the situation

0,74	there is support for ***weaker students*** not used to learning	0,06

Apparently help for weaker students, who are not used to learn also is an important issue: Remembering that "students" in this project are teachers, no wonder that this aspect, quite important for normal distance education and e-learning scenarios, is not so heavily at stake- but also here we note quite a difference between importance and satisfaction!

0,83	there is pre-enrolment ***counselling***	0,39

There is also a difference between importance of introductory counselling and satisfaction with it in this project.

-0,29	every tutor has his/her own ***homepage***	0,27

The homepage of each tutor is clearly unimportant- towards the end of the questionnaire again the similar question is stated by more than 50% as being "unimportant" , so it is no wonder that the tutors are satisfied with the situation as it is, since every participant in this project is already present with enough information in the project platform itself (which I learned in the seminar).

2.1.2. Tutorial tasks during the learning process

0,89	accept every participant as ***individual*** person	0,82

Unanimously tutors think that it is important to accept each individual as a person and are quite satisfied with this aspect in this project. Probably the wording of the item has been not very inviting for differences, since this aspect seems to be generally accepted by a humanistic approach towards teaching. Such an item might be evaluated as an empty formula because there is no precision given with it.

0,44	retrieve ***all info*** about each learner	-0,11

Unlike with the next items here we can see a clearer decision towards less importance and satisfaction with the situation - is it really important to reach the learners biography at all times?

0,79	install ***groups*** in the web	0,47
0,89	look after regularity in communication	-0,05
0,89	respect different working habits	0,11
0.95	provide help by timetable structures	0,42
0,67	include regular and obligatory discussions in the course room	-0,11

Not so content - compared to their own statement of importance, are the tutors with five aspects: there still is something to be done in installing group work, looking after regularity and also respecting different working habits! Also providing help by clear timetable structures rating is not so high in contentness.

Obligatory presence in the course room would be valued higher than tutors are satisfied with, although there are some of them who do not judge it as being important -. this is probably due to the insight into the everyday situation of the addressees - teachers, who are overloaded by their job all the time!.

0,37	Dis-encourage "***lurking***"	-0,11

The situation what to do with "lurkers" is quite clear in this project: There are some tutors who do not bother about this kind of behaviour in e-learning, so most of them seem to be satisfied with the situation as it is.

0,95	enable personal **e-mails** for problems	0,74

To offer e-mail when problems arise also is one of the core issues in e-learning- so no wonder that the tuor think af this aspect with high rating in importance and high rating in satisfaction.

0,83	offer ***help*** with shortcomings in the basic prerequisites of the course	0,06

To help students with deficits in prior knowledge is quite important and tutors are almost neutral in being satisfied with it: Do we find here one of the hidden issues for necessary action?

0,68	integrate ***resources*** like databases and search machines	0,39
0,44	include regular ***assignments*** for self-testing	0,11

Integrating resources like search machines and inclusing regular assignments are two items where "necessary action" cannot be interpreted.

-0,44	provide ***drill programs*** with automatic correction	-0,31
0,26	state clear ***assessments***	0,19
0,89	motivate the passive participants	0,00

Three more comments on the didactic part: There is a clear negative vote on the inclusion of drill programs and a neutral one on assessments and a clear positive one on the task to motivate students, in this aspect some action really seems to be necessary.

2.1.3. Own Situation

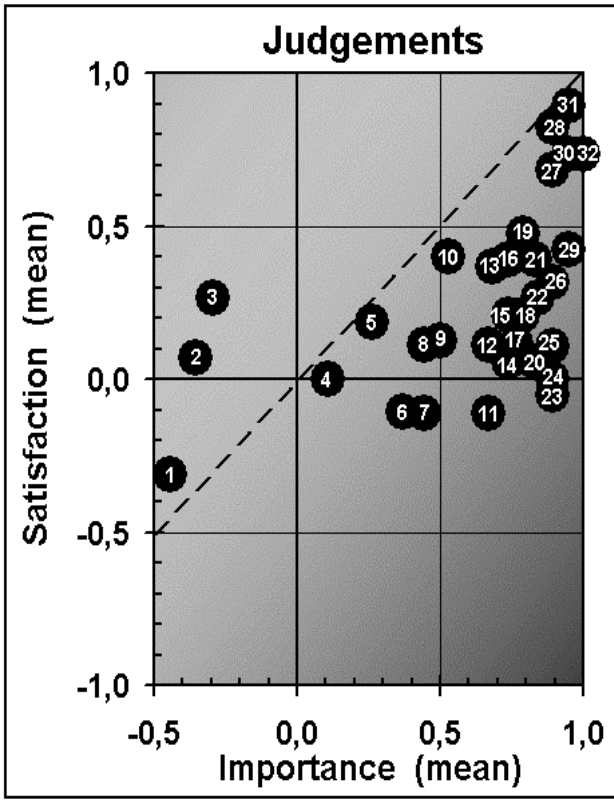
1,00	my own ***introduction*** into the project	0,74

I should not be omitted to mention that the own introduction into the project has been almost perfect: In this aspect , rated as being very important, the participants voted at a very high rate that they are satisfied with their experience. Congratulations to the project management team!

2.1.4. personal data - gender and year of birth as well as the ZIP code of the tutors address had been included. All results with percentages and mean values included can be looked at: **http://www.fernuni-hagen.de/ZIFF/frgbtutor-prozente.htm**

3. Judgements of importance and satisfaction

There are some aspects of this questionnaire which have to be commented upon: it is clear that in questionnaires to measure satisfaction, where people are asked to evaluate, there is a tendency towards the positive view - as being the own perception of what interviewees think the researchers want to hear. This leads to a distortion of the results which can be said is systematic: in the graphical display of the mean values of the items we clearly can see this tendency towards the "positive + positive" quarter. But the differences still are differentiated enough so that interpretation has been possible.



		importance	satisfaction
1	drill programs	-0,44	-0,31
2	own homepage	-0,35	0,07
3	tutor's homepage	-0,29	0,27
4	prior knowledge	0,11	0,00
5	assessments	0,26	0,19
6	prevent 'lurking'	0,37	-0,11
7	learner-info retrieval	0,44	-0,11
8	self-assignments	0,44	0,11
9	experience	0,50	0,13
10	different opinion	0,53	0,40
11	obligatory WWW-discussions	0,67	-0,11
12	own technical resources	0,67	0,11
13	integrate WWW-resources	0,68	0,37
14	weaker students support	0,74	0,06
15	contract	0,74	0,21
16	project identity	0,74	0,39

		importance	satisfaction
17	clear agenda	0,76	0,12
18	interrelated modules	0,79	0,21
19	WWW learning groups	0,79	0,47
20	offer help	0,83	0,06
21	pre-enrolment counselling	0,83	0,39
22	clear roles	0,84	0,26
23	regular communication	0,89	-0,05
24	motivate	0,89	0,00
25	distinctive working style	0,89	0,11
26	technical prerequisites	0,89	0,32
27	knowledge	0,89	0,68
28	distinctive learners	0,89	0,82
29	timetable structures	0,95	0,42
30	personal emails	0,95	0,74
31	support structures	0,95	0,89
32	own introduction	1,00	0,74

The numbers of the items are in the order of least important (1) to most important (32).

4. Consequences

While in the times of classical distance education the communication with the student took place mostly via the written assignments to be turned in regularly at a fixed point of time - the drop out study referred to above took these assignments as a criterion - we found in the example from the FernUniversität course (Sonderpädagogik) that the organisational aspects had a strong impact on the retention rate. In the project ÖBO we find similar organisational situations - participants are used to learning, they should be used to systematic learning, we find a homogenuous body of participants, regional face to face meetings, regular assessment, fairly job-related content and acceptance by the employer. *So a similar prognosis of retention rate would expect over 80%.* Are in e-learning some specifically different situations to observe? What do the tutors in this e-learning project think is most important?

Organisational aspects of e-learning is a field of didactic research where still much knowledge has to be created! From the list above we do know that these tutors feel that their own preparation for the project has been perfect. We also know that the following organisational aspects have to be observed: support structures, e-mail possibilities, timetable structures and retrievable information about each student.

When we look at the biggest differences of mean values between importance and satisfaction, we also know that regularity of contact is the critical issue. To motivate the students seems not yet to work well enough; to offer individual help seems to be difficult. From the viewpoint of the tutors the crucial elements - in the sense of a construct "urgently needed action" - are: more help and motivation and organisationally speaking: *regularity of communication*. Time will show whether our prognosis of retention rate will hold true and where it will deviate from the hypothesis of influence of organisational aspects for drop-out.

Special thanks go to Dr. Georg Stroehlein of ZIFF who made it possible that the structure of these results of the online questionnaire sent to the participants a week before, could already be presented during the seminar in Potsdam with the tutors on Sept. 30th 2003.

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