COUNCIL OF EUROPE
CONSEIL DE L'EUROPE

Strasbourg 23 April 1975 DECS/Rech (75) 24

COUNCIL FOR CULTURAL CO-OPERATION

COMMITTEE FOR EDUCATIONAL RESEARCH

EDUCATIONAL RESEARCH SYMPOSIUM ON
STRATEGIES FOR RESEARCH AND
DEVELOPMENT IN HIGHER EDUCATION

Göteborg, Sweden, 7-12 September 1975

Innovations in teaching and learning strategies and the organisation of the university in the German-speaking countries

Background paper prepared by Ludwig Huber
Hamburg University

39.531
04.6

INNOVATIONS IN TEACHING AND LEARNING STRATEGIES AND THE ORGANIZATION OF THE UNIVERSITY IN THE GERMAN SPEAKING COUNTRIES

Preamble

The review will not cover the situation in the German Democratic Republic (DDR), partly because the political, economical, and ideological framework is different from the other German speaking countries - so that a separate paper would be needed - , partly because of my lack of information beyond that given by official sources (cf. periodical "Das Hochschulwesen" and series "Hochschulpädagogische Schriftenreihe"). The review will rather concentrate on the scene in the Federal Republic; the developments in Austria and Switzerland in general are similar.

The title and task proposed to me suggest that I might not deal much with the theoretical relevance of German studies on teaching and learning strategies as compared to international research in this field. Indeed, as ENTWISTLE (1975) has given a very helpful and well structured overview on the present state of the art and as research on two classes of teaching and learning strategies, individualized instruction and grop work, will be dealt with as such in separate papers, I shall concentrate upon the practical relevance of innovations in teaching and learning strategies in relation to the organizational framework; whereever suitable I'll also refer to a second question posed to me, whether there are research based theories underlying these changes. This implies the following steps:

- What are the problems the German higher education is facing presently, that would have to be solved by research and innovations in the organizational structure or in teaching and learning strategies or (probably) both? (1.)
- How do innovations in the organization of university influence teaching and learning strategies? (2.)
- What are the most prominent innovations in teaching and learning strategies and how do they affect the organization of university?(3.
- How much does research on innovations in teaching and learning strategies contribute to the solution of present general problems mentioned at the beginning? (4.)

1. The background: present problems of German higher education

Only some remarks shall be made to present trends and tendencies in the reorganization of the higher education system:

1.1 First issue: how to cope with steadily growing numbers of students wanting a place at the university.

Whether this demand is due to objective economical needs of more highly qualified labour or to career strategies on the side of the subjects concerned (cf. BOURDIEU et al., 1973, on "stratégies de reconversion"), mediated through growing postponement of selection during secondary school, the numbers are there and pose first of all a quantitative problem to the higher education system. Quite correspondingly the German authorities have reacted to it by mostly quantitative measures, i.e.:

- on the one hand expansion (new universities, more staff), and
- on the other hand, as financial ressources were running short and the most urging economical demand seemed to be met, by restricting and 'canalizing' access and curriculum.

This latter strategy involved measures unknown so far in the tradition of German universities:

- Numerus clausus for "crowded" universities and disciplines. While in earlier times the leaving certificate of the Gymnasium, the "Abitur" (or "Matura") guaranteed its holder free access to whatever university or discipline he wanted, now for roughly a half of the disciplines and some universities school achievement as indicated by notes must be well above average in order to be admitted. (There are still no university entrance examens, although the Abitur is recognized to be of very low diagnostic and predictive value).
- Limitation of time of study. While traditionally students could stay at university as long as they wanted and could afford, now a regular or maximum length shall be defined for each course of study beyond which students can no longer be registered (according to draft of a new federal law - "Hochschulrahmengesetz" - not yet passed finally) or their grants will be withdrawn or cut down (already practice).
- Extension of examinations over the whole course of study. While formerly in most disciplines students had to show up for examens only at the end (for the "State examen", the "diploma", the "Master's degree") and, at most, after the first half of their studies ("Diplom-Vorprüfung", "Zwischenprüfung"), these new forms of "continuous control", although originally a "progressive" claim of the student reformers themselves, have now become an instrument securing or enforcing a higher working discipline and increasing occasions to selection or self-elimination.

Measures like these, selecting, directing and accelerating the flow of student masses into and out of study courses, have been defended

against due criticism or protest by more or less exclusively referring to economical necessity (shortage of financial ressources; feared oversupply of academic labour) and to political values of "meritocracy" and "equality of chances"(in the sense that by confining thus some traditional privileges of relatively few students places may be found for some more). It has not be argued, at least not officially, that teaching and learning is improved by such restrictive measures (unless perhaps by the third one). Nevertheless, whether admitted or not, they might have considerable impact upon teaching and learning, strengthening certain elements (achievement, anxiety, competition, orientation to syllabus, in short: stress) and weakening others (problem orientation, creativity, extracurricular activities). This means that such measures, although very important educationally, are, if at all, based on research in the field of economy of education (Bildungsökonomie) and sociology of education (Bildungssoziologie) (cf. e.g. KRAFFT et al., 1971; WIDMAIER et al., 1971; ALEX et al.,1974; HEINDIMEYER et al., 1973; for critical reviews see NUTHMANN, 1974; STRAUMANN, 1974). The measures do obviously not take into account the arguments of pedagogues which whether derived from experience and speculative thinking (as mostly) or empirical research (very seldom) speak for the most part against them (cf. BECKER, 1973). Nor is research on this educational impact wanted or stimulated by the authorities. It must also be noted that efforts to raise the capacity of higher education institutions by means of increasing the efficiency of teaching and learning trough educational technology are made or supported rather half-heartedly as far as state authorities are concerned. I shall come back to this German phenomenon later on with some conjectures as to its reasons (besides the obvious obstacles in "federalism").

1.2 Nevertheless, forcing unhidden restriction and selection upon subjects who have good reasons to assume that,in a more and more bureaucratic system, chances of reaching higher status and salaries are closely related to academic degree or diploma, who are formally entitled to study and, moreover, can appeal to democratic values like "equality of opportunities", may have damaging effects upon their loyalty to the present political system and thus for the political "climate" in general. Therefore, secondly, indirect, less obtrusive methods of directing and controlling, such as attractive alternatives to higher

education (cf. SAUTER, 1974, bibl.), guidance and counselling (cf. HUBER, 1974, bibl.), and self-elimination had to be looked for. It is partly for this reason that the plans for a Gesamthochschule have been worked out (cf. DAHRENDORF, 1967) and - in some aspects and places[1] - realised, i.e. for a comprehensive university combining with a university the technical colleges (Fachhochschulen) and teacher colleges (Pädagogische Hochschulen) of the respective region, which have tradtionally been of lower status and separated from the university. The 3-years type of studies characteristic for these institutions would thus be upgraded as academic (university-level) and even transferred to disciplines knowing so far only "full" courses of study (medicine, law) taking 4 years at minimum and, usually, more. There would be a greater variety of eventual degrees (lower ones most of all)[2], more "branches" (differentiation) in each course of study, allowing for more mobility and more choices and thus also for self-elimination.

Other purposes of such plans are to economize administration by concentration in a single institution, to lower the costs for the teaching staff[3] and, as far as curricula are concerned, to extend a more vocational or "practical" orientation, characteristic for the colleges so far, into university teaching, up to now still more theoretically oriented.

Again the leading assumptions and motives, it can be concluded, are not educational in kind, but directed much more to other functions of universities for the reprodu ction of the social system (selection and legitimation) and modified with regard to economical and organizational problems. Nevertheless, the potential educational challenges implied are far from trifling, most of all what concerns curriculum reform in respect to new frames of study courses, new types of students coming in and new learning experiences (vocational practice, internship etc.). But although there is much rumor about this side of the reform (which has been attractive and sort of "integrative" for some progressive minds potentially critical of the system), theories or arguments from educational research on or experiences with innovations in teaching and learning strategies did certainly not play an important or decisive role in these attempts to reorganize university.

---

1) Kassel, Duisburg, Essen, Paderborn, Siegen, Wuppertal, Bamberg; regional cooperation around the universities of Karlsruhe, Stuttgart, Konstanz, Ulm; integrated planning in Hamburg

2)&3) see next page

1.3 A third issue of university reform during the last decade: the structure of the university on the departmental level and, closely related the distribution of power within the university. The old "Fakultäten" (faculties), bundles of disciplines which essentially still reflected the medieval tradition had grown out of hand with external expansion of higher education and internal differentiation of science; a solution was urged in the moment when not only full professors but also other representatives of academic and non-academic staff and students claimed seats and votes in academic bodies and commissions and when, in addition, colleges with their members were to be integrated (as in Gesamthochschulen). It is obvious (and can be seen from examples as Sussex or Green Bay/Wisc.), that a number of varied compositions of disciplines could be thought of that would be very meaningful to interdisciplinary teaching and learning (as it would be for cooperation in research or professional practice), and not a few people have worked hard on designing and proposing very sophisticated structures different for research and for teaching functions (BUNDESASSISTENTEN-KONFERENZ, 1970 b; v. HENTIG, 1972; GESAMTHOCHSCHULE KASSEL, 1972). But after a decade of political and legislative battles and academic struggles about the new "Fachbereiche" (departments) it turns out quite clearly that the traditional boundaries of disciplines have been kept quite neatly or even strengthened[1)], other regards certainly having played a greater part than educational ones.

As to student participation (the so-called "democratization" of the universities): although there has been research indicating beneficial impact of "democratization" on motivation for learning and attitude to the university, it has been a question evidently of the strength of the student movement in the university concerned and of the political party in power, to which extent students have been granted rights of participation.

---

2) (from p. 4): by integration of the colleges the college faculty, less qualified (from the university point of view) and in any case less payed and used to higher teaching loads, would have to take over teaching to all junior students.

3) As is the trend e.g. in Great Britain (see BECHER, 1975) and France since the loi d'orientation (see e.g. MAJAULT, 1973).

1) (from p.5): The Faculty (now department) of Law, Medicine, and Economy remain untouched in most universities. Natural and engineering sciences have been split up, each major discipline forming a Fachbereich. Only the huge philosophical faculty has come to know differently composed bundles of disciplines in each place, the principle of division being sometimes similarities in objects and methods or sometimes common duties in teaching or otherwise simply personal liking or disliking of professors holding a chair at that time.

1.4 Overlooking these measures of reform once more one is bound to summarize that decisions regarding the extent, distribution and quality of learning opportunities, the general organization of the university structure and the decision making processes are not or are only to a very low degree related to research-based theories on educational processes and are probably not motivated by care about optimal learning settings and opportunities. Such thoughts and motives, if mentioned at all, apparently do not belong to the "instrumental" core but to the "expressive" (or ideological) halo of and measures taken to transform the higher education system (BECKER, 1973). On the other side the impact upon both teaching and learning strategies is tremendous, confining the field for meaningful educational innovations much more than is usually realized by teachers and students enthusiastic for reform.

2. The impact of organizational reform on teaching and learning strategies

2.1 Obviously this is a complex relationship difficult to tackle by conventional designs of educational or psychological research. What regards outcomes of the new measures of controlling and directing student masses: as the Numerus Clausus has been introduced for most disciplines only recently, effects have not yet been examined by empirical research. There is echo from everywhere, fairly unanimous, that the Numerus clausus, as based only on average of notes in the Abitur, is distorting study motivations as students are kept out of disciplines and occupations they originally wanted or are led to those they did not want at all or to which they attend as a sort of waiting room until their proper subject might be open: if you lance educational innovations to students of chemistry assuming that they are working in order to become chemists while in fact they are only sort of hibernating until spring opens the doors to Medicine, these innovation are doomed to failure. On the other side, as to Medicine, where the Numerus clausus has been practiced since about ten years and only students with highest scores are admitted, a study by E.&U.SCHOTT (1974) has shown that study motivation as well as personality variables (following Eysenck's dimensions) of freshmen have changed in favour of an "instrumental" attitude to study and an orientation to external rewards or to standards of natural sciences rather than of Medicine.

2.2 There cannot be expected so far any research on educational impact of anythihg like Gesamthochschule - if it can ever be controlled - given the stage of developments (mostly still planning). Only as far as integration of teacher training colleges (Pädagogische Hochschulen in the universities, already carried out in Hamburg, Bremen, Oldenburg, Osnabrück and in all Hessen universities, can be taken as a forerunner, it can already be noted, that the tradtional orientation (scientific/theoretical) and working style (academic "freedom" and individual competition) of universities are soon getting the better again of the assumed practical merits of the other institutions - most of all by means of recruitment policy. As inspite of other claims all social incentives work into this direction the same might be feared for the Fachhobhschulen once they are integrated. (Already now half or more of their graduates transfer to university). Therefore innovations as e.g. introducing new learning experiences with regard to professional and/or practical problems and their institutional or social context are, it seems, less likely to happen than was hoped before.

2.3 Departmental reorganization has mostly followed rather conventional patterns and thus not as such produced stimuli to new teaching and learning strategies. Even the new universities Konstanz, Bielefeld, Kassel, Oldenburg, Osnabrück and Essen (not to mention the less ambitious foundations in Augsburg, Bochum, Regensburg etc.) are less original in design than e.g. Sussex. Most of them have, it is true, come along with one or two new interdisciplinary curricula as a sort of brand, but so did quite a few traditional institutions. Besides such curricular innovations some institutions, mostly new ones, are experimenting with modular units or unit-course-programs (see below 3.22).

Only in the new university of Bremen and those partly following its pattern (Kassel, Oldenburg) efforts have been made to build up the organization around a thoroughly new principle shaping both teaching and research: project-oriented studies (see 3.23/3.3). Experiences from traditionally organized universities do indeed indicate that such attempts will remain islands without some change in the context too.

As to "democratisation" or, more precisely, participation of students etc., an investigation using interviews with staff and students out of 250 departments in 11 subject fields of all German unversities has shown, that "intrinsic motivation" (motivation to study and solve problem on its own or in a small group irrespectively of examens or similar sanctions) and also independent learning were higher and the efficiency of the teaching system measured by this criterium was increased where students' rights of participation and therefore influence were greater and the degree of standardisation of learning processes and achievements expected were lower. (PORTELE, 1970; FORSCHUNGSGRUPPE HOCHSCHULKAPAZITÄT, 1973, esp. p. 19, 22, 36 ff.). Hints to this effect can also be found in a study by KEIL/PIONTKOWSKI (1973): although not based on "objective" data about the organizational structure of departments but on an inquiry into the educational ("hochschuldidaktische") aims and concepts of teachers and their impact upon student learning and attitudes it proves that high estimation of control and order among the teaching staff of a department does less allow for a student "subculture" or activity related to scientific tasks and problems (instead of serving only compensatory functions as to personal needs) (l.c., esp. 193 ff., 220 ff.).

Obtained about 1969/1971, i.e. still during the first flush of more student and junior staff participation in university self-governement, with the student movement still being very active, these results may not be stable against changes of context and society in time. They indicate, however, that changes in organizational structure of universities and, most of all, departments could improve learning an teaching itself, if at all they were aimed at such goals and would be based on research.

3. Innovations in teaching and learning strategies and their relations to university and department organization

3.1 Some preliminary remarks are necessary to this chapter:

3.1.1 As to the standard of German research on teaching and learning in higher education: nothing has to be added to the general description given for the United States (TRENT/COHN, 1973) or Great Britain (BECHER, 1975); the situation in Germany (Fed.Rep.) might, in this respect, be even worse, as there is no uninterrupted tradition of "stiff" empirical research in educational psychology and sociology and, instead, a traditionally dominant preference for fundamental discussions of philosophical, theoretical, or ideological issues. If one takes, following to an internationally growing awareness of this problem (ENTWISTLE, 1974) as a standard, that experimental designs must be sufficiently complex to take account of personality- (or student-type- etc.) treatment-interaction, there is almost no German research work to be reported before MEISTER (1974), HECKMANN (1974), KEIL/PIONTKOWSKI (ongoing project). There are few studies at least using simple pretest/posttest- and/or experimental-/control-group-comparisons; the bulk consists, if not only of programs or pamphlets, of reports on "attempts" or "experiments", successful or failed, accompanied by some sort of analysis or assessment which may range from bold personal judgement by the initiator(s) to an informal evaluation using an achievement test, participant observation, or questionnaires as to the attitudes of participants.

3.1.2 But nobody is to be blamed for this a priori: There are indeed good reasons for scepticism against those conventional designs as to validity, relevance, and transferability of their results so often contradictory; there might also be in some cases thoughtful analysis of or sound sensibility for many variables in the whole context influencing teaching-learning-processes which usually are not sufficiently controlled by simple designs constructing or introducing extraordinary circumstances; there is , very pragmatically the lack of scientists both qualified for such research and at the same time willing

to work in this field and to lend their services to cooperating laymen from the various departments. Thus, under an innovation point of view, the picture looks different. If these initiators had not started on their own, there would be little change; and modest apparatus and design while they exclude much of a generalisation of results in theory, demonstrate on the other side by themselves whether an innovation is feasible or not with ressources and conditions only slightly removed from normal ones.

3.1.3 A more serious shortcoming of this approach to developement ist, to my opinion, the fact, that the gap between such experiments usually limited in scope and/or time and a thorough change of the institutional context on one side and a relevant and really lasting impact on the student on the other side is likely to be overlooked or neglected. I shall come back to an assessment in terms of institutionalisation and socialisation at the end (see below 4.). For the moment it follows I think from these remarks that I shall not endeavour to give detailed abstracts of all the studies to be mentioned but rather try to accentuate some underlying trends.

3.2 I intend to group the material along the following classification

- innovations on curricular level (new or revided curricula) - 3.2.1
- innovations regarding the structure or organisation of studies in time and space (modular units etc.) - 3.2.2
- innovations modifying the learning situation itself- 3.2.3

3.2.1 Innovations on curricular level

Most of what can be called new or revided curricula ("Studiengänge und -abschlüsse") is due to institutional changes as mentioned above (2.) and correspondingly not motivated by or based on great thinking or curricular research as to aims and contents: the trend of upgrading

the polytechnical schools (Höhere Fachschulen) to colleges (Fachhochschulen) and in the framework of preparing Gesamthochschulen new diplomas, courses, new lists of content and requirements and even sometimes a different mixture of learning situations had to be designed. Generally spoken this means the introduction of vocationally oriented and more or less short cycle higher education.

There are also in the German speaking countries as in other countries some completely new curricula enriching the old spectrum of classical courses: Informational sciences (Informatik), Regional planing or Urban Design (Raum-, Stadtplanung), Administrative sciences (Verwaltungswissenschaften), Engineering and Economy combined (Wirtschaftsingenieur), Educational sciences (made independent from Teacher Education in order to train for counselling, adult education, social work etc.: Diplom-Pädagoge). More or less interdisciplinary and problem-oriented they may respond to new social needs, new problem-areas of Western industrial societies. The original or progressive features of such new courses are inversely related to their relevance in terms of numbers of students involved. But given the bureaucratic weight of diplomas in the German countries and the difficulties of bringing about consensus between university and the respective ministry(ies) and often between all universities and the "Länder" necessary for acknowledgement of a new diploma, many more curricular innovations of this sort are rather realised as new braches or sections under the umbrella of courses and diplomas already existing.

It is therefore in the form of "modernisation" or "revision" of existing curricula that most of curricular innovations take place. Examples of this are new models for the study of law until 1981 only on an experimental basis mixing theoretical (university) and practical (professional) phases of training so far separated into a single whole[1] and similarly for teacher education (in very few cases: Bremen, Oldenburg); a new program for the study of

1) At Augsburg, Bielefeld, Bremen, Hannover, Konstanz

medicine (neue Approbationsordnung), accentuating the role of sociology, psychology, and practical experience. There are also some minor changes introducing

- subjects like e.g. "The Engineer/Natural Scientist etc. in modern society/in its occupational position and context" or, more generally, social theory (or philosophy of science) in the curricula of scientists etc.;
- mathematics, statistics, methods of empirical research into the curricula of humanities and, most of all, teacher education;
- the replacement of old and medieval languages by modern linguistics in courses of philology and literature etc.

On the whole one can observe that curricular innovations like these try

- to increase flexibility and mobility of highly qualified manpower by accentuating more formalized, abstract thinking and methodological training, and
- to strengthen an early orientation of students towards their future profession and to practice in general (instead of purely scientific values); the intention behind this second aim might be early adjustment and conformism as indicated in some documents from employers (e.g. Bundesvereinigung der Arbeitgeberverbände 1973) and state authorities, or critical thinking and readiness to strive for social change as claimed by reformers within the university.

Much of curricular innovations of this kind touches only parts of the curriculum, particularly the first terms or years of study (some documents in: KLÜVER (ed), 1973/1974): Again basic courses on social problems and on history and functions of the respective discipline, first "explorations" (interviews, observations) in the respective professional field and, in addition, counselling, tutorials and intensive small group work are more frequently developped for this phase than for any other period of study.

In addition to the underlying trends mentioned before, these innovative activities respond to particular problems freshmen have in bridging the gap between school work and university and in finding a hold somewhere in the anony-

mous mass institution the university has become. Besides, the junior teaching staff usually in charge of much of the basic courses, seems to be more inclined to initiate or support some innovative developments than the full professors. While both, particular needs and more favorable conditions, are good reasons for more frequent activities in this field there is the danger, often not realised in evaluating reports, that unchanged examens and traditional seminars later on will neutralize much of what perhaps has been achieved during the first year.

3.2.2 Innovations regarding the structure of studies in time and space.

Concentrating a course or seminar into a compact period of say two or three weeks of full time work instead of having it scattered over the term in piece of two or four hours a week was of course an idea which appealed very much to "reformers", technocrats or not, in German universities, too. Attempts have been made in the field of modern languages and of law (cf. UNIVERSITÄT BIELEFELD, 1969) and experiences have been reported e.g. for theology (BARTSCH et al., 1973), educational sciences (RUMPF, 1971), agronomies (RIEMENSCHNEIDER, 1975). While the educational results as such were promising, the organisational difficulties met by this approach are particularly illuminative for resistance to innovations: Wherever the rest of the courses were given following the usual pattern, the concentrated courses could not function, and neither would professors easily adjust to the special demand on cooperative planning and work nor students to the necessary radical change in their time-schedule. Thus, in traditional institutions this form has been kept out at the periphery: introductory periods ("Orientierungseinheiten") most of all in the first term (as an example: Arbeitsgemeinschaft Hamburg, 1974), excursions, so called intensive courses mostly during vacations (especially

foreign language courses and laboratory work in the sciences); or it has been reduced to a seminar of 2 to 4 full days (often weekends) thrown in somewhen in a "normal" course.

It was therefore nothing but logical to plan a comprehensive system of higher education which would be built up completely of concentrated study units; these modules, complete in themselves and each credited with a certificate, could be chosen and combined freely by the individual student corresponding to his interest, particular conditions and practical needs. This so-called Baukasten-System (WEIZSÄCKER u.a., 1970) was designed also to allow for integration of independent- or tele-study-units as of problem-oriented research work (KEHLER, 1973) and for a close linkage between university and adult permanent education. The plan thus showed rather modern characteristics, very unfamiliar to German university tradition, and was consequently attacked by conservatives and progressives alike as technocratic and by administrators as unfeasible. So far the scheme has not been implemented; some efforts only are being made in the new Gesamthochschule Essen.

Similar has been the fate of independent- or tele-study. The story is perhaps to long and complicated to tell here. There were of course plans and programs for both, a national unversity of the air (Fernsehuniversität: HOLZAMER/VOGEL, 1969) and/or a nationwide compound system of courses to be sustained by the broadcasting and television corporations and, possibly, universities together (FERNSTUDIUM IM MEDIENVERBUND, 1970). But on the side of the universities the political and educational ideas and attitudes could not have been more hostile against program centered and technically based innovations in teaching than just in these years 1968-70, the peak of the anti-authoritarian movement; and what protests from this side could not achieve; was done by continuing disagreement between the federal states and their respective radio

corporations. Thus only fragments have been realised:

- the DIFF (Deutsches Institut für Fernstudium), founded for the purpose of in-service training especially of teachers, continued this work and at the same time assisted or cooperated in all the following activities (e.g. DOHMEN/PETERS (eds.), 1971),
- several courses on various subject matters have been produced (with the help of individual authors partly from universities) and trasmitted by the radio-corporations. Although legally and intentionally addressed to adults in occupation, very often teachers, they attracted quite a number of university teachers and students and were sometimes inserted and certified as study units. Notably the "Funkkolleg" (broadcasted course of the Quadriga (a coalition of 4 broadcasting corporations of Hessen, Saar and Baden-Württemberg) developped on a high level of scholarly competence and methodical sophistication on subjects as social science, educational science, linguistics, mathematics reached high numbers of participants (e.g. in the course II on educational science 15 000 subscribed for the written material, of these cooperated regularly in sending in their assignments; 70 - 80% of these passed the final tests (KADELBACH, in: KLAFKI, 1970, p.23; cf. KADELBACH/REDEL (eds.), 1972; however, they did not win over a great many people so far alienated from education. The last versions combined moreover broadcasted lectures and colloquia, written reading material and homework and a sort of tutorial or discussion groups organized locally; in that respect they came up to the demand, that tele-study should be multimedial ("Fernstudium im Medienverbund").
- The Stiftung Volkswagenwerk invested 1970 - 1972 ca. 10 Mio DM in sponsoring developmental research in this field by groups within the university, again supported or advised by the DIFF. The strategy responded to claims and demands from within the universities, that the development of tele-study should be decentralised in oder to avoid uniform central courses, that courses should be developped by university people themselves, in oder to facilitate implementation, and that only units (not complete courses) should be produced in order to allow varying arrangements and free space for social learning situations. Some forty projects have been funded; as many of them are not yet terminated, it is too early for an evaluation. It seems, however, that while the claims mentioned were not unjustified, the risks lying in lack of competence, of technical know-how, of continuity and coordination of work have been underestimated (for a preliminary report see WISSENSCHAFTLICHER BEIRAT 1974).

- The foundation, then, of a real "Fernuniversität" in Hagen (Nordrhein-Westfalen), supposed to register students from autumn '75 onwards, seems a logical conclusion (RAU, 1974). But although the plan imitates many treats of the British open university, there are three differences probably decisive: it is, so far, an affair of only ohne of the Länder of the Federal republic; it is meant to serve only students having passed the Abitur (and prevented from studying at another university only by the Numerus Clausus) and in only some disciplines (not even the most crowded ones), and it is not financed and organized on that large scale necessary for a real success as an open university for the Fed. Republic.

3.2.3 Innovations modifying the learning situation.

The traditional picture of university teaching in German speaking countries showed the public lecture, delivered in more or less huge auditoria by full or at least senior professors, as a sort of backbone to which were added the necessary exercises, drills or trainings (in foreign languages, mathematics, practical laboratory work, law books or whatever) and, more in the humanities than in natural or engineering sciences, the seminar, involving the more advanced students into research-like work or at least in already rather elaborated contributions and discussions. Old and new critism, based on empirical results and/or political and educational reasoning, culminated with the student movement in the late sixties. The general trend of innovations since then has been to the group work centered end of the dimension made up by ENTWISTLE (1975), the program centered approach being rather neglected in our countries:

- The computer has not won much territory in university teaching in the German-speaking countries . In experiments it has been used as guiding practical laboratory work e.g. in Biology, Chemistry, Mathematics, Linguistics etc. (cf. several contributions in GOOS (ed), 1974) or mathematic courses for engineers (GEORGI, ongoing project) and, in numerous instances, not to be mentioned here, for evaluation of tests.
- Programmed instruction and exercise-books are offered instead of conventional text books and manuals for some subjects in natural and engineering sciences, economy, law (fundamentals) and social sciences (methods, statistics). Generally they have not replaced the respektive lectures, courses or training groups, but are used in

addition only (Bibliography: PÄDAGOGISCHES ZENTRUM)

- Fully programmed and controlled instruction being rather expensive and not sufficiently flexible for such purposes, some thinking and a bit of research has recently been invested upon how to write textbooks more clearly and understandably (HOFER, 1972; SCHULZ v. THUN et al., 1972) or how to guide home work by a programmed sequence of questions and tasks (Leitprogramme von WELTER, 1974), and more than before textbooks are produced which are enriched with guidelines for reading, study questions, and control exercises, a form new to the German tradition of textbooks, designed rather as scientific publications regardless of the students prior conditions than as teaching aids. The use of hand-outs and "scripta", giving the lecture text also in written, has certainly been extended, although it is by no means a general practice already.

- More individual designs of the whole course of study as provided for in schemes like the KELLER-Plan or, more ambitious, the university without walls have not been implemented so far. As the German speaking universities do not know (for undergraduates) the Anglosaxon tutorial system individually attaching students to teachers for regular tuition or supervision, the starting point for such an innovation is not given, and a higher degree of codification controlled by state administration prevents teachers and students from allowing too much deviation.

- Approaching the groupwork centered part of innovations one is justified to state that working in (not always) small groups has become a very common feature during these last 10 years. In different degrees, of course:

  - more so in humanities and social sciences than in natural and engineering sciences and law,

  - more so during the first half (the first 1 - 2 years) of study, where the traditional teaching system could not cope with growing numbers of students any more, than in the later years, where a more differentiated program and final examens impending enforce individual work.

  There are examples for all functions mentioned by FRANSSON (1975); the type the most frequently used in all disciplines is the group work added to course or seminar or, sometimes, a lecture as a means of repeating discussing or exercising what has been treated there; sometimes (especially in humanities and social sciences) groups instead of individuals are preparing the essays or papers to be contributed to the seminar and are thus eventually working quite problem-oriented; other groups may choose problems not sufficiently treated in the respective course most of all out of politics, social theory or theory and history of science; some are just

serving a compensatory or even therapeutical function in a more and more anonymous mass institution (Examples, experiences, reports are countless; see generally the publication list of AHD; besides: MEYER, 1972 a, b; 1973)

Research as conventionally designed usually tends to demonstrate that group work, while not superior in transmitting factual knowledge, does indeed fulfil these proper functions. GUHDE, 1970, p.6 ff.; MEISTER, 1974, p.46 ff. (overview); MATTL, W., 1973. But by a methodologically more sophisticated design MEISTER (l.c.), comparing a conventional seminar, a seminar carried through in small groups, and individual independent work, has again shown

- that none of these arrangements by itself produces better results as to knowledge, transfer or valuation of content,
- that only combinations of variables on the side of teaching could be related to different results (e.g. teachers and arrangements; explications of objectives and feed back of achievements; arrangements and feed back of results) and
- that some of the results were to be explained by personality-treatment-interactions (in this case: feed back of achievements and either high level of achievement motivation or high degree of uncertainty).

- Groups may be leaderless or at least organized without any official teacher by students themselves (more likely in the case of politically oriented groups or in groups preparing for examens) or tutorled. It is rare that tutors are members of junior or let alone senior staff, partly just for quantitive reasons. Thus student tutorials, mostly guided by senior students have become a particular feature of many of the German speaking universities; initiative and funds by the Volkswagenstiftung have again played an important role in this development (see final report by STIFTUNG VOLKSWAGENWERK, ed., 1970 - 1973). Difficulties are enormous as student tutors are poorly payed (if at all), are often insufficiently prepared (in subject matter as well as educationally) and trained (if at all) and sometimes even complicate the relationship between students and teachers (cf. HUBER, 1971; MEYER-ALTHOFF, ed., 1974). But they carry not a small part of the burden of teaching, tuition and counselling, notably of freshmen. Though not "dyadic" and less regulated they serve also some of the teaching functions of the learning cell introduced now to Switzerland through GOLDSCHMID (1974), and without them much of complementing, extracurricular or innovative activities would not be possible.
- Extension of group work has here as elsewhere increased sensitivity and demand for group dynamics, and in innumerable and most varying forms methods and arrangements taken from sensitivity trainings, group therapy, and "instrumental" group dynamics have been introduced into or offered along with university courses, most of all in teacher education (cf. e.g. ECKSTEIN/HRABOWSKI,

1973; VOPEL, 1972; a critical review by MEYER-ALTHOFF et al., 1975).

- Audiovisual aids can be and in fact are used in all of these learning situations. But so far they have not become the "leading medium" as intended earlier in more ambitious plans for telestudy or closed-circuit television (nowhere realised in the German speaking countries). Apart from serving purposes of demonstration (in natural and engineering sciences and medicine) and recording social processes for further analysis (in the social and educational sciences) they play a more and more important part as training devices (models and feed back) in e.g. foreign languages (cf. on the language laboratory and the development of language teaching centers: KRUMM) and (sometimes) training behaviour (cf. ZIFREUND, 1970 on micro-teaching; MEYER, 1974; critical : KUPFFER, 1974; LEBUHN, 1974).

  But, very characteristically for the general climate as to program centered approaches (to which these uses of AV-media belong), another use is much more favoured by students and also teachers, which might be called "reflexive": recording a group session and taking the record as starting point for analysis and discussion of social behaviour and processes (WAGNER, 1974).

Types of learning situations classified and decribed formally as I have done can be instrumentalized - as could be the types of structural reorganisation mentioned before (3.2.2) - for both old or new objectives and contents, for conservative, technocratic, or progressive aims and purposes (although the types of learning situations have certain affinities to and implications for certain aims).

There is one type of learning situation which comprised the whole range of considerations and activities: the so-called project-oriented study (POST). By definition this approach means

- collective work of a group of students and teachers, both sharing planning and responsibility (cooperation, self-organisation) which is
- as learning by research concerned with practical problems of social relevance situated in the field of the future occupation of the students involved, and therefore, necessarily
- interdiciplinary in approach.

It is for this comprehensiveness that all the main claims

of the student movement could flow into and culminate in the POST-model (cf. BECKER, et al.). Moreover the model had much plausibility aducationally (by its relations to project methods in school as to Humboldt's idea of the unity of teaching/learning and research) and psychologically (by its relations to theoretical models of problem-solvin and learning by discovery; cf. HUBER, 1971 b).

But even if there had already been convincing research instead of plausible arguments: what has been decisive for realisation was in all instances the strength of the student movement in each place and of the students' ability to obtain cooperation and support with some of their teachers in interaction with some conditions in the organisational framework (esp. Berlin, Frankfurt, Göttingen, Hamburg). As such battles almost necessarily end with a compromise the model was nowhere realised in that typical form both complete and pure that would have made possible a corresponding evaluative research: as a principle for organizing whole curricula of study, POST has only been accepted in the program for the newly founded university of Bremen (BERNDT (ed.), 1972) and, perhaps, Kassel; as a model covering at least some terms or some of the courses of, mostly, only a part of the student population it has won more ground in social than in natural sciences (Projektgruppe, 1974; Göttinger Kollektiv, 1973; Projekt Osdorfer Born, 1974).

Under the pressure of circumstances and hostile reactions it had to be cut down in many cases to various combinations of group work centered courses with a predominant orientation to practical or occupational problems (for a documentation see HERZ (ed.) 1975).

The resistance against this model again existed or grew quite independently of any results of evaluative research which could not be up to now and problably never will be carried out in a way and along criteria accepted by

people whose habits and vested interests speak against any such approach whatever the arguments for it. But the resistance POST has met is only a very outstanding example for the difficulties of innovations in unchanged organisational and institutional context, which I will now shortly summarize.

3.3 Resistance to change in the organisational and institutional context.

3.3.1 Some barriers are easy to identify. First: examens, or better: the whole system of achievement control. It is not, in our countries, at the disposal of university members, leave alone goodwilling reformers; but, essentially unchanged as it is, it exerts a major influence on students. Thus, as long as examens are organized as competitions for the best notes (with great importance for the career later on) and as results of group work (papers, essays, home work) are not accepted if they are not individually attributable cooperative group work remains a sort of alliance on time. Also, requirements as to obligatory content areas and courses, if trying to cover the field systematically, i.e. in breadth, do much to prevent a problem-oriented learning in depth as well as the formation of groups working continuously together over some terms at least.

Secondly: what examens are to students, that are the conditions and norms of a scientific career to their teachers. As in Great Britain (cf. BECHER, 1975) and probably elsewhre, criteria for selection to the top positions in university are drawn from and oriented to research; even where, as recently for some lower or medium positions, merits with regard to teaching are taken into account, one or two more spectacular concepts or experiments might get the better of continuous improvements; other criteria have still to be thought upon (cf. HUBER, 1975). Consequently, the number of staff members engaging in teaching innovations remains restricted to the enthusiastic or idealistic,

mostly among the junior members. But as the cooperation with colleagues or even students, necessary for most of the innovations, take an enormous amount of time and just these junior members are particularly hit by expanded teaching loads, just this group of innovators is likely to withdraw. (cf. Projekt Osdorfer Born, l.c.)

The "departmentalisation" is a third major obstacle to many of the innovations mentioned. Its strongest influence is perhaps again mediated through the normative control departments exert upon all their members caring for their academic career or reputation. But very trivial effects as incompatible timetables and contradictory demands upon students and the more sublime "territory battles" are also working against cooperative and problem-oriented approaches. As long as scientific work itself is far from being problem-oriented and interdisciplinary, there is little hope for lasting improvements of that kind in teaching and learning.

The same might be said for many other aspects, reaching from social sensitivity and cooperativeness as demanded by group work centered programs as such to responsiveness and involvement for social needs as being fundamental for project-oriented work: the students have disclosed some weaknfss not just of teaching and learning alone in calling for reform into these direktions .....

3.3.2 This list looks as if most of all or only innovations to the group work centered and, as it happens, problem-oriented end of the dimension would meet with organisational and institutional resistance. This is true to some extent and could be explained by some political reasoning. But, perhaps surprising, the balance sheet does not look much better for the program centered and technological approaches often referred to as being all too conform and technocratic.

Of course, conditions preventing the staff from cooperating or engaging in teaching innovations at all, are negative

for the even more time-taking development of programs and the like as well. Scarcity of funds provided for educational intitutions in general are particular limiting for developments requiring high investments at the beginning. But there are at least two further obstacles less trivial. One is, that the world of science is based upon the principle of differentiation, and what it requires from each member individiually and rewards in career and reputation, is originality; scholars (and the more ambitious students) who are trying to adjust to this norm for their research are unlikely to refrain from it in teaching and will probably not accept a general and continuous standardisation of teaching through prefabricated materials and programs. The same principle affects scientists developping and evaluating program centered innovations, too, as they in turn tend to leave projects behind them when the interesting research problems have been solved and publications sent out and the trivial job of repeating, producing, implementing, reviding, varying etc. would begin. A second obstacle I think, is related to the social functions the higher education system has to perform (here esp. status allocation): program centered approaches have been and sometimes still are pushed forward with the promise of greater efficiency and, consequently, as a solution to the quantitative problems of our universities (see above 1.) by saving teaching hours and study time. But professors, following their academic norms and "managing" their status, would do all to fill an eventual vacuum with new and, may be, very important subject matter, thus transforming, perhaps rightly so, the quantitative into a qualitative effect. Students on their side, realizing, that later on they will never have learning opportunities as in the university (inspite all promises of permanent education) and, knowing at the same time, that to all experience their eventual status strictly depends on the degree reached resp. the time spent at the university, would also not

earlier leave the university if not forced to. Anticipating this, administrators, otherwise keen on economizing, might as well stick to prescriptions and compulsion from the very beginning instead of investing large funds in developments of educational technology which perhaps would turn out to be a sort of "occupational therapy" for researchers and innovators.

4. Conclusions.

The task assigned to me was to report on research based theories concerning innovations in teaching and learning strategies and their relationship to university organisation. Summarizing the description given the following points can be made:

4.1 There is not much of reliable research and, thus, of research-based theories on university and department organization as to its effects upon the processes of research and of teaching and learning strategies. Even if well-known and plausible arguments drawn from common sense and, at best, thorough thinking would be replaced by solid research it is unlikely that this aspect of the problem would have much impact on eventual decisions.

4.2 Under the impact of external and internal crisis and of the student movement, universities in German speaking countries have known a greater number of innovative efforts regarding curriculum, structure of studies and, most of all, learning situations during these last years than in some decades before. But in positivistic terms of empirical research, few experiments were designed or few innovations were carried out and evaluated in a way to reach the possible and necessary standard of methodological sophistication; on the other side, in terms of practicability and implementation, some of these innovations have been taken as models and imitated or repeated regardless of level and results of evaluation.

4.3 Anyway, the most innovations of all sort have not been deduced from research-based theory and, carried through under all the limits, struggles and compromises of a real social context, they have not contributed much to such a theory. Moreover - and this is to be said not only for the situation in the German speaking countries - such a theory would require to go beyond the borders of the single experiment or attempt usually isolated and evaluated as such: even a significant success achieved through new teaching and learning strategies in one course or the other might soon be lost or neutralized in the flood of other influences exerted by the most different factors in organisation and "climate" of the department, procedures and requirements in examens, norms and behaviours of other teachers or other reference groups, challenges from other contents etc. Only strategies broad in coverage and continuing in time with correspondingly broad and lasting effects in social attitudes as in cognitive structures could come out with a research-based theory on innovations in teaching and learning strategies in relation to organizational context; this means that such a theory not developped in our countries would have to be made up in the framework of a theory of socialisation.

4.4 Again, even if there were theories of this scope allowing to design rational strategies for the improvement of teaching and learning, there are good reasons to doubt whether factual decisions would be immediately submitted to this point of view. Among other functions the higher educations system has for the reproduction of society and of the class structure, the function of good teaching and learning is but one. This does not mean that it would not be worthwhile to continue in struggling for innovations and in thinking about the research-based theory which we are seeking.

LITERATURVERZEICHNIS

ALEX, L./HEUSER,H./HERRMANN,M. u.a.:Angebot und Bedarf an hochqualifizierten Arbeitskräften in der Bundesrepublik Deutschland bis 1980. Arbeitskräftebilanz und Intensivanalyse. Bonn: Bundesminister f.Bildung und Wissenschaft 1972 (Schriftenreihe Hochschule Nr. 8)

ANTONS,K: Praxis der Gruppendynamik. Göttingen: Hofgrefe 1973

ARBEITSGEMEINSCHAFT AN DER UNIVERSITÄT HAMBURG: Eine Orientierungseinheit für Studienanfänger der Naturwissenschaften - Beispiel Chemie. Hamburg 1974 (Blickpunkt Hochschuldidaktik, hg.von AHD, Nr. 30)

BARTSCH,Chr. et al.: Blockseminar über "Gerechtigkeit" in Göttingen. In: LÄHNEMANN, J.(Hg.): Ansätze zu einer Hochschuldidaktik im Bereich evangelischer Theologie. Hamburg 1973 (Hochschuldid.Materialien hg.von AHD, Nr. 39), S. 88-118.

BECHER,A.: Innovations in teaching and learning strategies and the organisation of higher education institutions in the U.K. 1975 (Paper for Concil of Europe Symposium in Gothenburg, hectogr.)

BECKER,E./JUNGBLUTH,G./VOEGELIN,L.: Projektorientierung als Strategie der Studienreform. In: studentische Politik (1972) H.2/3, 3-25

BECKER,E.: Studienreform und Studienberatung unter der Herrschaft des Knappheitsprinzips. In: studentische politik Nr.6/7 (1973), 17-31

BERNDT,E.-B. (Hg.): Erziehung der Erzieher rororo - 1972
vgl. Nevermann,A.:Bremer Überlegungen zur Lehrerbildung In: Schulmanagement 1971,H.3, 44-48

BOURDIEU,P./BORDANSKI,L./SAINT-MARTIN,M.de: les Stratègusde reconversion - In: Social Sciene Information 12 (1973), Nr. 5, p. 61-113

BUNDESASSISTENTEN KONFERENZ (BAK): Beiträge zur Studienreform. Didaktische Aufgaben einer Gesamthochschule. Bonn 1970 (Materialien der BAK 6)
...Forschendes Lernen-Wissenschaftliches Prüfen. Bonn 1970 (Schriften der BAK 5)

BUNDESVEREINIGUNG DER DEUTSCHEN ARBEITSGEBERVERBÄNDE: Überlegungen zur Errichtung von Gesamthochschulen. Köln, April 1973 (Privatdruck)

DAHRENDORF,R.: Vortrag (ohne Titel) und Diskussion. In: Neue Wege zur Hochschulreform: Differenzierte Gesamthochschule. Autonome Universität. Hamburg 1967 (Bergedorfer Protokolle Bd. 20)

DOHMEN,G./PETERS,O.: (Hg.) Hochschulunterricht im Medienverbund. Athenäum et.al.,F.O., 1971 (2vol.)

ECKSTEIN,B./RABOWSKI,P.: Gruppendynamische Arbeit an der Hochschule. Heidelberg 1973

ENTWISTLE,N.: Complemantery paradigns for research and development work in higher education. In: VERRECK, W.A. (ed.): Methodological Problems in Research and Development in Higher Education. Amsterdam (1974),...

ENTWISTLE,N.: Approaches to Teaching and Learning: Guidelines from Research. 1975 (Paper for Council of Europe Symposium in Gothenburg, hektogr.)

ERZIEHUNG UND UNTERRICHT (Austrian periodical) 1973, Nr. 7: several articles on "Projektstudium".

FERNSTUDIUM MEDIENVERBUND: Empfehlungen des Vorbereitunsausschusses; vorgelegt der Ständigen Konferenz der Kultusminister in der BRD zum 30.6.1970. o.O. (Bonn) o.J. (1970)

FORSCHUNGSGRUPPE HOCHSCHULKAPAZITÄT der Universität Mannheim (Hg.): Organisation der Hochschule und des Studiums. Pullach 1973 (HIS-Brief Nr. 36)

FRANSSON, A.: University studies in small groups: intentions and outcomes. Göteborg 1975 (Paper for Council of Europe Symposium in Gothenburg, Hektogr.)

GEHRMANN,G./Wildt,J. (Hg.): Projektorientiertes Studium I. Hamburg 1973 (Hochschuldidaktische Arbeitspapiere, hg. vom IZHD, Nr.2)

GESAMTHOCHSCHULE KASSEL-Projektgruppe: Weitere Überlegungen zur Integration. Kassel 1972.(Hektogr.Ms.) (303ff.)

GÖTTINGER KOLLEKTIV: Lehrerausbildung durch Projektstudium. Reinbek 1973

GOLDSCHMID,M.L./SHORE,B.M: The Learning Cell. A. Field Test of an Educational Innovation. In: VERRECK,W.A. (ed.): Methodological Problems in Research and Development in Higher Education. Amsterdam 1974

HECKMANN,F.: Sozialisationswirkungen von pädagogischen Kursen. Eine empir. Untersuchung über den Zusammenhang von Persönlichkeitsvariablen und Beeinflußbarkeit. In: Zf Päd. 20 (1974), 461-475

HEINDLMEYER,P./HEINE,U./MÖBES,H.-J./RIESE,H.: Berufsanforderungen und Gesamthochschule. Eine quantitative Analyse für die Bundesrepublik Deutschland bei 1991 (ursprünglicher Titel des HIS-Gutachten, jetzt:) Berufsausbildung und Hochschulbereich. Pullach 1973

HENTIG,H. v.: Magier oder Magister? Über die Einheit der Wissenschaft im Verständigungsprozeß. Stuttgart: Klett 1972

HERZ,O./FALTIN,G. Berufsforschung und Hochschuldidaktik. 2 vol. Hamburg 1974 (Blickpunkt Hochschuldidaktik 32/33)

HERZ,D. (Hg.): Praxisbezug im Studium. Hamburg 1975 (Blickpunkt Hochschuldidaktik...)

HOFER,M.: Die Verbesserung von Lehrbüchern als hochschuldid. Notwendigkeit. in: Hochschuldidaktische Projekte. Stuttgart 1972, 38-53

HOLZAMER,K.:VOGEL,B.: Projektstudie zur Gründung einer Gesellschaft für die Einrichtung eines Universitätsfernsehens (1968). In: Projekte, Probleme und Perspektiven des Fernstudiums im Medienverbund. o.O.: 1970

HUBER,L.: Forschendes Lernen als hochschuldidaktisches Prinzip. In: Neue Sammlung 10 (1970), 227-244

HUBER,L.: Hochschuldidaktik. in: WULF,Chr. (Hg.): Wörterbuch der Erziehung. München 1974, 289-297

HUBER,L.: Studienberatung. Hamburg 1974 (Hochschuldidaktische Stichworte, hg. vom IZHD, Nr.8)

HUBER,L.: Die "Pädagogische Eignung" des Hochschullehrers. In: Die Deutsche Universitätszeitung (1975),H.5,165-169

INTERDISCIPLINARITY. Problems of teaching and research in universities. Paris 1972 (OECD)

KADELBACH,G./REBEL,K-H.: Forschungsreport Funkkolleg-Modell I u. II. Weinheim 1972 (Tübinger Beiträge zum Fernstudium Bd. 5)

KEHLER,I.: Didaktik eines Studienreformmodells. Ein Beitrag zur Evaluation der Baukastengesamthochschule. Weinheim 1973

KEIL,W./PIONTKOWSKI,U.: Strukturen und Prozesse im Hochschulunterricht. Weinheim 1973

KLAFKI,W. et al.: Funk-Kolleg Erziehungswissenschaft. Frankrut 1970

KLÜVER, J. (Hg.): Reform der Studieneingangsphase I, Hamburg 1973; II, 1974 (Hochschuldidaktische Arbeitspapiere, hg. vom Interdisz. Zentrum für Hochschuldidaktik Nr. 1 resp. 5)

KRAFFT,A./SANDERS,H./STRAUMANN, P.R.: Hochqualifizierte Arbeitskräfte in der Bundesrepublik Deutschland bis 1980 sowie ökonomische Analyse und Prognose. Bergisch Gladbach 1971

KUPFFER,H.: Konkrete UNterrichtshilfe durch Abstraktion von der pädagogischenWirklichkeit? (Microteaching in der LAB). In: Bildung und Erziehung 27 (1974), 224-237

LEBUHN,Ulf: Verhaltenstraining. Kritik eines hochschuldidaktischen Ausbildungsmodells mit Fernrückkoppelung. In: AV-Praxis 24(1974), 24-28

MAJAULT,J. L'enseignement en France. London etc., 1973,p.57 ff.

MATTL,W.: Zur Bedeutung der Gruppe im Lernprozeß-theoret. Ansätze und empirische Befunde. In: Unterrichtswissenschaft 1973, H 75-82

MEISTER,H.: Lehrmethoden, Lernerfolge und Lernvoraussetzungen bei Studenten. Experimentelle Bedingungsanalyse eines hochschuldidaktischen Projekts zur problemorientierten Einführung in die Pädagogische Psychologie. Düsseldorf 1974 (Studien zur Lehrforschung 7)

MEYER,E.: Lehrer und Lehrergruppen in ihrer unterrichtlichen Funktion. (Analyse mittels Videobandaufzeichnung). In: Aula 7 (1974), 16-21

MEYER,E.: Gruppenunterricht-Grundlegung und Beispiel. Oberursel 1972

MEYER,E.: (Hg): Die Gruppe im Lehr- und Lernprozeß. Frankfurt 1972

MEYER,E.: Gruppenaktivität durch Medien. Heidelberg 1973

MEYER,E.:/RIHOVSKY,K: Vom Hochschulinternen Fernsehen zum Audiovisuellen Zentrum. Heidelberg 1972

MEYER-ALTHOFF,M.: (Hg.): Tutorentätigkeit und Tutorenausbildung. Hamburg 1974 (Hochschuldidaktische Arbeitspapiere, Hg. vom Interdisz.Zentrum für Hochschuldidaktik, Nr.4)

MEYER-ALTHOFF,M.:/SCHWÄRZEL,W./WILDT,J.: Gruppendynamik. Hamburg 1975 (Hochschuldidaktische Stichworte, hg. vom Interdisz. Zentrum f.Hochschuldidaktik Nr. 10)

NUTHMANN,R.: Annahmen zur Veränderung der Qualifizierungsprozesse hochqualifizierter Arbeitskräfte und ihrer Verwertung im Beschäftigungssystem. In: HERZ/FALTIN, l.c.,II,9-34

PÄDAGOGISCHES ZENTRUM BERLIN (Hg): Deutschsprachige Lehrprogramme. Eine Bibliographie. Pullach 1973

PORTELE,G. (Hg.): Intrinsische Motivation in der Hochschule. Eine empirische Untersuchung zum forschenden Lernen. Hamburg 1970 (Blickpunkt Hochschuldidaktik, hg. vom AHD, Nr. 12)

STUDENTISCHE POLITIK (periodical) 5 (1972) Nr. 2/3: Projektorientiertes Studium.

PROJEKT OSDORFER BORN: Endbericht zum Forschungsvorhaben Projektstudium im sozialwissenschaftlichen Bereich. Hamburg 1974

PROJEKTGRUPPE 'Textinterpretation und Unterrichtspraxis': Projektarbeit als Lernprozeß. Frankfurt 1974

RAU,J.: Die neue Fernuniversität. Ihre Zielsetzung, ihr Aufbau und ihre geplante Arbeitsweise. Düsseldorf 1974.

E.SCHMALOHR,: Die Wirksamkeit akad. Lehrveranstaltungen, Bericht über amerik. Untersuchungen, in: ZifPäd. 15(1969)37-61

SCHOTT,E. u.U.: Zur psychosozialen Struktur von Studienanfängern in der Medizin. Ulm 1974.(Hektogr.Ms.)

SCHULZ v.THUN,F./LANGER,I./TAUSCH,R.: Verständlichkeit in Schule,Verwaltung, Politik, Wissenschaft. Mit einem Selbsttrainingsprogramm zur Darstellung von Lehr- und Informationstexten. München 1972)

SOZIALISTISCHE PROJEKTARBEIT im Berliner Schülerladen "Rote Freiheit". Frankfurt 1970

STIFTUNG VOLKSWAGENWERK (Hg.) Tutorenprogramm. Information-Diskussion. Hannover 1970-73 (Loseblattsammlung)

STRAUMANN,P.R.: Neue Konzepte der Bildungsplanung. Hamburg 1974

TRENT,J.W./COHEN,A.M.: Research on teaching in higher education. In: Travers, R.M.W.(ed.): Second Handbook of Research on Teaching. Chicago: Rand McNally (1973)

UNIVERSITÄT BIELEFELD (Hg.): Lehre, Studium, Strukturmerkmale. Bielefeld o.J., (1969) (Schriften zum Aufbau einer Universität).

VOPEL,K.W.(ed.): Gruppendynamik,Experimente im Hochschulbereich Hamburg 1972 (Blickpunkt Hochschuldidaktik hg.von AHD Nr. 24)

WAGNER,A.: Wie kann Verhalten trainiert werden - und soll es sein? In: Gesamtschule 1974, H.4, 11-15

WEIZSÄCKER,E. et at.: Baukasten gegen Systemzwänge. München 1970

WELTNER,K.u.a.: Integrierende Leitprogramme im Hochschulunterricht. Beiträge der Bildungstechnologie zur Studienreform. In: Neue Unterrichtswiss. (Hannover) 7 (1974), 213-219

WIDMAIER,H-P.u.a.: Hochqualifizierte Arbeitskräfte in der Bundesrepublik Deutschland bis 1980. Bonn 1971

WISSENSCHAFTLICHER BEIRAT: "Fernstudium im Medienverbund". Projektförderung 1970-1972. Dokumentation-Diskussion. Tübingen 1974

ZIFREUND: Training des Lehrverhaltens mit Fernsehaufzeichnungen. "Microteaching" als Beitrag zu einer Reform der Lehrerausbildung. In: betrifft: erziehung B (1970) Nr. 6

APPENDIX

Publications of the ARBEITSGEMEINSCHAFT FÜR HOCHSCHULDIDAKTIK e.V.

In der Reihe »Hochschuldidaktische Materialien« sind bisher erschienen:
(die Hefte 1—17, 22, 23, 25, 34 und 36 sind vergriffen)

Heft 1: Bericht über die Jahrestagung 1968

Heft 2: Studienordnungen für das Fach Geschichte

Heft 3: G. Andersson, Bibliographie zur Didaktik der Rechtswissenschaft

Heft 4: Hochschuldidaktik und Geographiestudium

Heft 5: E. Liefmann-Keil, Studentische Arbeitsgemeinschaften

Heft 6: Psychologie, Studienordnung und Tutorenprogramm

Heft 7: Didaktik des Ingenieurstudiums

Heft 8: Rechtswissenschaftliche Vorlesungen

Heft 9: Eyferth-Jungermann, Programmierte Unterweisung und begleitende Diskussion als Alternative zum Unterricht in Seminarform

Heft 10: Schmalohr-Guhde, Zur Situation der Hochschuldidaktik in Großbritannien und den USA

Heft 11: Fachausschuß Geschichte im AHD, Leitsätze und Empfehlungen für die Gestaltung des Studiums der Geschichte an deutschen Hochschulen

Heft 12: Th. Finkenstaedt, Englischunterricht — Ziele und Wege

Heft 13: Natascha Würzbach, Gruppenarbeit im Rahmen des literar-wissenschaftlichen *Proseminars*

Heft 14: Ewald Standop, Prolegomena zu einem Studienplan für die akademische Ausbildung von Sprachlehrern und Philologen

Heft 15: Werner Kirsch (Hrsg.), Das Mannheimer Modell

Heft 16: Brigitte Behrendt, Richtlinien, Ordnungen und Fragebogen zum Tutorenprogramm in der FU Berlin

Heft 17: E. Guhde, Bibliographie zur Hochschuldidaktik

Heft 18: Ewald Standop / Klaus Vopel (Hrsg.) Sprachlehrinstitute — Modelle und Maßnahmen (DM 5,—)

Heft 19: J. Honerkamp / M. Scheunert (Hrsg.), Didaktik der Physik im Grundstudium (DM 2,50)

Heft 20: Uwe Laucken / August Schick, Die Entwicklung einer Einführungsübung für Psychologiestudenten (DM 2,—)

Heft 21: *Martin Krampen, Forschungs- und Entwicklungsprojekte in der Hochschuldidaktik der Medizin* (DM 2,50)

Heft 22: W. Kilian / W. Laatz, Reformversuch mit Studienanfängern an der Rechtswissenschaftlichen Fakultät der Universität Frankfurt a.M. 1969/70

Heft 23: C. Dreyer, Eingangssemester im Kunsthochschulstudium

Heft 24: P. Neumann-Mahlkau (Hrsg.), Ausbildung von Ingenieuren und Naturwissenschaftlern im Gesamthochschulbereich (DM 5,—)

Heft 25: Otto Harth und Klaus Brodda, Problemanalyse der medizinischen Ausbildung

Heft 26: Th. Finkenstaedt / K. Schröder, Quo vadis? — Englisch als Zielsprache (DM 4,—)

Heft 27: D. Klenapfel, Vorlesung und Vorlesungskritik (DM 2,50)

Heft 28: E. Steil, Kleingruppenunterricht in der Medizin (DM 6,—)

Heft 29: W. Pohl (Hrsg.), Industrial design — Ein neues Studienmodell an der *Hochschule für bildende Künste Hamburg* (DM 3,—)

Heft 30: Herbert Jäger / Peter Thoss, Kleingruppenarbeit in der Juristenausbildung (DM 3,—)

Heft 31: Fritz Hartmann / Manfred Pflantz, Klinisches und Sozialwissenschaftliches Curriculum an der Medizinischen Hochschule Hannover (DM 3,50)

Heft 32: Gerd Jansen, Projektorientiertes Studium im Rahmen des Faches Werken und Werkdidaktik (DM 3,—)

Heft 33: U. Laucken / A. Schick / J. Wickert, Die Entwicklung einer Einführungsübung für Psychologiestudenten, II. Teil eines Erfahrungsberichts (DM 2,—)

Heft 34: R. Cachandt u.a., Entwurf eines theologischen Curriculums

Heft 35: Wolfgang Butle / Uwe Dethloff, Zur Integration der gesprochenen Sprache in den Fremdsprachenunterricht der Hochschule (DM 3,—)

Heft 36: Christian K. Friedl, Zur heuristischen und evaluativen Funktion der *Taxonomien von Lernzielen in der medizinischen Studienplanung*

Heft 37: Wilfred Nix / Eckart Fiedler, Der Ausbildungsgang des Mediziners in den USA: curriculare, hochschuldidaktische und organisatorische Probleme — Versuch einer Bestandsaufnahme (DM 5,—)

Heft 38: Ewald Standop, Überlegungen und Vorschläge zu einigen anglistischen Kurstypen — (DM 3,50)

Heft 39: Johannes Lähnemann, Ansätze zu einer Hochschuldidaktik im Bereich *evangelischer Theologie* — (DM 6,—)

Heft 40: G.-W. Speierer, Gruppenmethoden für den Medizinunterricht (DM 9,—)

Heft 41: W.E. Reinke / U. Schott, Integration des Unterrichts (Bericht über ein Forschungsprojekt) (DM 9,50)

Heft 42: Dorothea Möhle, Einführung in die Probleme des Lernens und Lehrens von Sprache (DM 5,—)

Heft 43: Arbeitsgruppe Studienberatung an der Universität Hamburg, Studienberatung in der Lehrerausbildung - Das Problem, ein Lösungsversuch und ein Ergebnis (DM 6,—)

Heft 44: W. Brocks / K. Burth / C. Rinneberg, Graduierte Ingenieure im Weiterstudium Eine vergleichende Untersuchung über drei Semester (DM 11,—)

Die Schriften dieser Reihe können zu den genannten Preisen zuzüglich Versandspesen bezogen werden durch den Herausgeber:

Heft 45: Klaus Riemenschneider, Blockstudium in Hohenheim — Bericht über ein Experiment zur Reform von Lehre und Studium (DM 7,—)

In der Reihe »Blickpunkt Hochschuldidaktik« sind bisher erschienen:
(die Hefte 1-8, 15, 16 und 18 sind vergriffen)

Heft 1: Prüfungen als hochschuldidaktisches Problem

Heft 2: H. Prior, Formen des Hochschulunterrichts

Heft 3: B. Berendt, 18 Jahre Tutorenarbeit an der FU Berlin

Heft 4: B. Eckstein/E. Bornemann, Arbeit mit kleinen Studentengruppen

Heft 5: L. Huber, Kann man Hochschuldidaktik »institutionalisieren«?

Heft 6: L. Huber (Hrsg.), Unterrichtsbeobachtung und Unterrichtskritik a.d.Hochschule

Heft 7: Roxin/Zweigert/Schneider/Bull, Das Rechtsstudium auf dem Wege zur Erneuerung

Heft 8: K.H. Flechsig/U.P. Ritter (Hrsg.), Konstanzer Werkstattseminar zur Hochschuldidaktik

Heft 9: O. Herz / L. Huber / M. Walther, Organisationsmodelle der Hochschuldidaktik (DM 3,—)

Heft 10: K.F. Schumann / H.J. Claus, Prognose des Studienerfolgs: Bemerkungen zum Stand der Forschung (DM 2,—)

Heft 11: H. Prior, Gruppendynamik in der Seminararbeit, Reflexionen und Materialien aus einem Seminar (erscheint Januar 1973 als Neuauflage)

Heft 12: G. Portele, Intrinsische Motivation in der Hochschule (DM 2,50)

Heft 13: B. Eckstein, Hochschulprüfungen (DM 4,—)

Heft 14: Fritsch u.a., Fernstudium im Medienverbund (DM 3,—)

Heft 15: G. Ottwaska, Studienbedingungen — Prüfungsleistungen — Berufserfolg

Heft 16: Universitäre Erwachsenenbildung — Wissenschaftliche Weiterbildung

Heft 17: H. Prior, Kritische Bibliographie zur Hochschuldidaktik (DM 6,—)

Heft 18: D. Spindler / M. Walther, Zur Lage der Hochschuldidaktik

Heft 19: H. Simons, Sozialisation durch die Hochschule (DM 3,—)

Heft 20: E. Todt / H.J. Friedrich, Die Bedeutung der Interessen für die Wahl des Studienfaches (DM 3,50)

Heft 21: Jürgen Jahnke, Studienberatung zur Arbeitstechnik (DM 3,—)

Heft 22: O. Herz / K.H. Reif / M. Sader, Lernen in der Hochschule — Beiträge und Vorschläge aus motivationspsychologischer Sicht (DM 5,—)

Heft 23: P. Krope, Entwurf einer Theorie zur Entwicklung von Lernzielen (DM 4,50)

Heft 24: Klaus W. Vopel (Hrsg.), Gruppendynamische Experimente im Hochschulbereich (DM 6,—)

Heft 25: B. Genser / K. Vopel / P. Buttgereit / B. Heinze, Lernen in der Gruppe: Theorie und Praxis der themenzentrierten interaktionellen Methode (DM 6,—)

Heft 26: Universitäre Erwachsenenbildung — Wissenschaftliche Weiterbildung (DM 5,—) Hrsg. Arbeitskreis Universitäre Erwachsenenbildung, Hannover

Heft 27: H.-H. Muller / R. Schulmeister, Hochschuldidaktik und hochschulpolitische Praxis — Gremienbeschlüsse zur Studien- und Prüfungsreform (DM 5,—)

Heft 28: E. Schott, Zur empirischen und theoretischen Grundlegung eines Bewertungsinstrumentes für Vorlesungen (DM 7,—)

Heft 29: W. Mattl, Kleingruppenarbeit in Verbindung mit fernstudiendidaktischem Material (DM 12,—)

Heft 30: Arbeitsgemeinschaft a.d. Universität Hamburg, Eine Orientierungseinheit für Studienanfänger der Naturwissenschaften. Beispiel Chemie (DM 12,—)

Heft 31: R. Kuntz-Brunner / W. Schneider, Kontaktstudium an den wissenschaftlichen Hochschulen der Bundesrepublik (DM 8,—)

Heft 32: G. Faltin/ O. Herz, Berufsforschung und Hochschuldidaktik I Sondierung des Problems (DM 10,—)

Heft 33: G. Faltin/ O. Herz, Berufsforschung und Hochschuldidaktik II Handelsspielräume als Zielkategorie (DM 10,—)

Heft 34: D. Hartung/W. Neef/R. Nuthmann, Tätigkeitsfeld und Praxisbezug — Stellungnahmen zur Eingrenzung von Tätigkeitsfeldern und zur Verstärkung des Praxisbezuges von Bildungsgängen im Hochschulbereich (DM 10,—)