

# The Growing Importance of Support for Learners and Faculty in Online Distance Education

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## Abstract

*Due to the complexity of the development and implementation of online distance learning and its pedagogical opportunities and challenges, the support for learners and faculty gains added importance. A difference is made between support measures in the framework of the teaching/learning process and on an administrative-institutional level. Special emphasis is placed on the higher education context. Often a fundamental change to the service culture and to faculty's conceptions of themselves is necessary in the development of online education. In contrast to traditional classroom education it will be shown in this chapter that the importance of support is increased in three ways.*

## 1. Introduction

Online learning is in many ways a new phenomenon and its pedagogical, organizational and technical structure is currently developing. A new field of pedagogical activity is being created which is determined by underlying theoretical, technological, economic and social conditions.

There is hardly a single education institution, whether in the public or the private sector that is not thinking about the introduction of "e-learning", i.e. flexible learning with new media. The focus of this paper is placed on the higher education context. In general, online teaching and learning is currently developing in three different areas:

1. At distance teaching or open universities, which have always been engaged in media-based learning;
2. At traditional campus universities, where new media are used to enrich face-to-face teaching, increase flexibility, to offer online degree courses, particularly courses and programs for the purpose of continuing education, and hence, to reach more (paying) students;
3. In the field of corporate training, in which e-learning is often regarded as an attractive and low-cost model for flexible "just-in-time" learning.

Because of the similarity of distance education with online learning, the former can provide valuable strategies, approaches and practical experiences with regard to the conception and organization of this new form of learning. Distance education can look back on over 150 years of experience with media-based teaching and learning: "Today's virtual instruction has its roots in correspondence schools" (Gladieux & Swail, 1999, p. 9). Distance teaching universities are therefore at a clear advantage in the development of online degree courses and "virtual" universities (cf. Peters, 2003; Schulmeister, 2001; Zawacki, 2001).

The experience of distance education shows that support for students is of decisive importance for successful distance study. *Student support systems* have existed in

traditional distance education for decades. Distance universities are therefore also known as "helping organizations" (Delling, 1971). Information and communication technologies open up new paths for the support for students. What is new and important is that with the introduction of complex technologies, and therefore of new pedagogical opportunities, faculty themselves require special support in the development of online teaching (Brindley, Zawacki & Roberts, 2003).

However, although many stress the significance of support, aspects of support are not sufficiently acknowledged in the literature on distance education research. Robinson (1995) names four possible reasons for this:

... learner support may be perceived as a less glamorous activity than some others in open and distance education (support staff often have less power, status and pay); it is often regarded peripheral to the 'real business' of developing materials; it is an element particularly vulnerable to financial cuts; or it may largely be a pragmatic activity rooted in the lessons of experience. (p. 221)

Recently, Moore & Anderson (2003) published the 'Handbook of Distance Education', which has over one thousand pages and a great number of articles. It is remarkable that the term "support" is not found in the index of this book. This is particularly critical, because, in comparison with traditional distance education, support in online education is of even greater importance, as will be shown in the following sections.

## 2. Two Dimensions of Support

It should be stressed here that, against the background of the complex pedagogical, organizational, technical and economic requirements of online education, an extended understanding of support is required, one that goes beyond pedagogical intervention on the microstructural level of action in the teaching and learning process.

In pedagogical practice, support measures have traditionally always been woven together with teaching and learning (support, welfare, counselling). Pedagogical activities in this microstructural sense are, for example:

- definition, substantiation and transparent presentation of learning goals,
- taking prior knowledge into consideration and linking this knowledge with learning objectives,
- consideration of teaching methods based on the specific needs of the learning group,
- rousing, exciting and strengthening students' attention and interest,
- presenting and working out the teaching contents in a suitable scope and in a logical sequence to simplify comprehension,
- clear presentation of complex learning matters,
- flexible reaction to questions and contributions,
- motivating students through positive feedback and constructive criticism,
- giving advice on working towards the learning matter,
- help and guidance through enabling processes (*scaffolding*) and fostering autonomous learning,
- support through tutors,

- support on the application of what was learned, and the transfer to other contexts,
- taking into account feedback from students,
- checking learning success with subsequent corrections,
- learning assistance, e.g. counselling for overcoming learning difficulties,
- advising on organizational questions, e.g. degree course advice for beginners and special groups (e.g. foreign students, the disabled).

This list does not claim to be complete and further pedagogical activities could no doubt be added. While these measures were provided in relative isolation in traditional universities, the digitalization of learning and teaching creates a new field of pedagogic-didactic activity, in which several of these activities and new forms of support are related to each other and bundled.

What is new, in particular for campus universities (especially in the central-European context), is the need to develop systematic strategies for online learning and teaching, similar to the principles of the division of labour and specialization (instructional design process), as they have been practiced for many years in distance education systems. Support systems are initially enabled through processes of the division of labour, because staff can be specialized to professionally support students and faculty (the differentiation between "academic" and "academic support staff").

A favourable administrative-institutional framework for promoting and developing online distance learning is required (change management), e.g. through incentives for faculty members to participate in online education, and the availability of the technological infrastructure with the appropriate technical support. The organizational, administrative and infrastructural aspects are not mere preconditions, but are interpreted as elements of support. Faculty support in particular is an important element.

Whereas measures in traditional pedagogic and didactic practice were typically linked to a person, in this extended understanding of support they are also defined and provided by the teaching institution (the macrostructural level of action).

### **3. The Importance of Support in Online Education**

There are three main reasons why support for students and faculty in online education takes on added importance and these will be described in the following sections:

1. In contrast to face-to-face teaching, distance education in general puts more responsibility on the learners to manage their own learning (section 3.1).
2. Online learning requires more competencies (e.g. media literacy) and skills from learners and these need to be developed (section 3.2).
3. It is especially important to provide faculty support structures to promote, develop and implement online distance learning and teaching (section 3.3).

#### **3.1. Empirically Verifiable Effects of Support in Distance Learning**

In distance education, care and support are conventionally more important than in traditional education: "... the distance education community seems to be more driven by concern for planning customer care and support than the traditional universities"

(Rumble, 2000, p. 218). The need for support always played a more important role than in traditional universities:

While students will have more freedom and opportunity, they must also assume more responsibility for managing their own learning, in terms of when they will study, how much they want to learn, and seeking out information and resources. Some students may be unwilling or inadequately trained to accept this responsibility and will need help in making the necessary adjustments in their study habits. (Moore & Kearsley, 1996, p. 16)

Distance education research has concerned itself in numerous studies with the subject of student support in the context of student drop-out levels (cf. Tinto, 1975, 1986). Tallman's quantitative study (1994) on the connection between support and student satisfaction comes to the following conclusion: "Satisfaction with correspondence education is a complex matter. Isolating specific variables that will guarantee student satisfaction may not be possible.... High quality support services will encourage student satisfaction" (p. 52).

Ryan (2001, p. 75) correlates the quality of support with student drop-out levels by compiling data from different authors who have reported on the drop-out levels in larger distance teaching universities. The span ranges from values over 90% at the Asian *mega-universities* (Daniel, 1996) to 25-50 % at the Open University UK. The differences are explained with the different quality of support for students. In comparison with the drop-out levels quoted above for distance teaching universities Ryan gives an average drop-out level of 17% for all British campus universities. In the latest drop-out study by the Universities Information System ("HIS"), Heublein, Schmelzer, Sommer and Spangenberg (2002) calculate a level of 27% for first-degree students at universities and 22% at universities of applied sciences in Germany.

Most authors are in agreement that drop-out levels at distance universities are higher than those at campus universities. However, the comparability is restricted and must be interpreted with great caution (Peters, 1992).<sup>1</sup>

Different starting conditions and socio-economic characteristics of distance students must be considered. Distance students are usually mature adults, who have (more) life and vocational experience, and various occupational and family obligations to fulfil (cf. Peters, 2001; Rowntree, 2000; Thompson, 1998). Distance students also often pursue career defined goals and their learning is frequently problem oriented and less towards a final examination. However, more and more younger traditional baccalaureate age students are choosing online education to be independent from time and space:

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<sup>1</sup> Dropping out is first of all a matter of definition. The mere quotient from students starting their first year and certificates or degrees awarded does not do justice to reality. Based on the experiences of the FernUniversität Hagen, Fritsch (1988) breaks the numbers down more exactly into *non-starters* (students who register but do not start studying), *draw-backs* (students who drop out at a very early stage), *drop-outs* (students who are not admitted to examinations) and *failures* (students who fail their examinations in the end). However, the various forms are treated differently in research and the statistics provided. Most drop-outs are found at the start of courses. The Open University UK has an *introductory or trial period*, in which all student applicants must take part. Registration is not complete until participants confirm their intention to study at the end of this period (Holmberg, 1995). This means that *non-starters*, and many *draw-backs*, are not included in the OUUK's drop-out statistics. Rumble (as cited in Peters, 1992) indicates a drop-out level of 55% for the Open University UK, whereby *non-starters* and *draw-backs* are not counted - if they were, the level would rise to 68.5%. This example illustrates quite clearly the difficulties when evaluating and comparing the data provided.

Our student body is quite diverse. In age the biggest segment, is from 25 to 44; but increasingly the age group under 25 is growing. These are usually traditional students who go to residential campuses. However, in the United States, those campuses are becoming more and more expensive, and many students have to work and go to school part-time. So increasingly they come to us. (Allen, 2004, p. 274 in this volume)

However, these younger students need special support that prepares them for distance study since they may have even fewer independent learning skills than their older counterparts.

Peters (1992) quotes a study by Bartels, v. Prümmer and Rossie (1988) that contains a list of reasons for dropping out from the FernUniversität Hagen. The first five reasons have nothing to do with the actual teaching and learning process in distance education: 1. *Change of job, Job stress* (59.3%), 2. *Too much time required for studying* (49.4 %), 3. *Restrictions on private life too great* (34.8%), 4. *The course would have lasted too long* (34.2%) and 5. *Too much stress from family, household, children* (33.2%). It is only in sixth place that a point is named which directly concerns studying at the FernUniversität: *Would rather study at a campus university* (31.4%). Only 9.6% named too difficult content and comprehensive difficulties as reasons for dropping out (cf. Rekkedal's chapter in this volume for a more elaborated discussion on models of attrition).

In view of the difficult conditions for studying support for distance students is of greatest importance. The key to success is high-quality support for students:

On the basis of my many years of experience I dare claim that the most favourable factor paving the way for motivated students' success and preventing dropout is empathy between the learning and teaching parties, availability of immediate support and advice when difficulties crop up, ease in consulting tutors and other subject specialists and general feelings of rapport. (Holmberg, 2001, p. 74)

### **3.2. Competencies for Online Learning**

Given the current 'half life' of knowledge, the knowledge that exists at the end of schooling, or on completion of a university degree, quickly becomes obsolete (Dohmen, 1996). This development demands a continuous updating and supplementing of knowledge and skills from people in work process throughout their lifetime (Schäfer, 2002). Terms such as *lifelong learning* or *learning-on-demand* indicate this trend:

Lifelong learning is any purposeful learning that an individual engages in throughout the life span; it is an activity engaged in to gain greater individual self-fulfilment and to improve the quality of life for the individual and the emerging society. The knowledge explosion requires professionals to engage in lifelong learning if they intend to stay current – let alone evolve, advance, and remain competitive – in their profession. (Dunlap, 1999, p. 41)

A teaching and learning culture based on a constructivist approach is demanded in order to meet the requirements of an information or knowledge society:

With the knowledge society as a vision the university needs more than optimal technical equipment. It needs a new learning culture, which builds on the idea of

lifelong learning and supports the activity and constructivism of learning as well as self-control and cooperation. (Mandl & Reinmann-Rothmeier, 1998, p. 197)

However, lifelong learning presupposes a great amount of self-control and cooperation in order to develop skills and competencies that are needed throughout the lifespan. The advantages of online learning enable defined methods and forms of support that facilitate more self-determination and autonomy for students, but demand them as well.

In the professional world of the future, university graduates, as *knowledge workers*, must have different, or differently weighted qualifications than those of the industrial society with which we are familiar (Klauder, 1992). Competencies and intelligent strategies for using the new information and communication technologies are required when dealing with information and knowledge. However, the media competency that many demand must go beyond the mere handling of tools and systems (digital literacy) and include dealing with information critically (media literacy).

Against the background of this social transformation Reinmann-Rothmeier & Mandl (1997) derive a number of competencies that are of great importance in the knowledge society – the following concern online learning in the narrower sense:

- Technical competence in handling the new information and communication technologies will become a basic qualification (digital literacy).
- Competencies for knowledge management are seen as a very promising response to the flood of information and explosion of knowledge, and a central, basic qualification for the future (cf. Astleitner & Schinagl, 2000). Information must be critically reflected (media literacy), reconfigured and integrated in a personal context, in order to construct individual knowledge from information.
- Social competence is necessary to deal with the complexity of knowledge and the high level of specialization in our society and requires cooperation on all levels. The willingness and ability to work in a team and to cooperate with others are essential and refers in particular to communication and cooperation in the process of online learning.

This means that learners must be willing and have the ability to recognize the current demand for further training and individual learning goals on the basis of the requirements of their own lives and work, to plan their learning autonomously and to absorb and organize it largely independently of instructors. Given the flood of information and databases available on the Internet, the greatest and most difficult challenge is probably the ability to search for, find, select and assess the information against the background of the pursued learning targets and the application context. Routinely handling different tools in the online learning environment is a fundamental precondition here. Social competencies are of special importance particularly in collaborative learning arrangements, in which the focus is on articulation and communication in study groups.

The high level of autonomy that this form of learning requires therefore puts great demands on learners' metacognitive skills (*metacognition*) and their *self-directedness* (Dunlap, 1999). According to Ridley, Schultz, Glanz and Weinstein (1992) the following metacognitive competences are required for lifelong learning: the ability to detect gaps in knowledge, to set targets, to plan and organize the learning process; to activate relevant prior knowledge to achieve the learning target; to assess ones own progress and

to evaluate the selected information and materials; to keep track of the learning steps which are required and are still outstanding; to make good use of time and resources, and finally, where this is necessary, to modify the learning strategy in the course of the learning process. Knowles (1975) defined self-determined learning accordingly:

In its broadest meaning, 'self-directed learning' describes the process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing learning strategies, and evaluating learning outcomes. (p. 18)

The development of the qualifications and abilities referred to here are very important in traditional campus-based universities, but they are crucial to success in the online learning environment. In the online environment, unlike campus settings, face to face support from peers, instructors, and other support personnel are not readily available.

For the support of students, who are responsible for their own learning processes, this means a change in the learning and teaching behaviour from expository teaching and receptive learning to advisory and tutorial support for students learning independently. A study by Smith (2000) examined the learning behaviour of 1252 students in the field of vocational education and training (VET) in flexible learning environments. The findings show that the abilities for autonomous learning especially for online learning still have to be developed. Students are often not prepared for taking on the responsibility for their own learning process: "The current investigation has concluded that VET learners are not typically well-equipped for flexible delivery. They exhibit a low preference for self-directed learning." (p. 43).

Therefore, intensive support for students in online learning is of great importance. The expression "*scaffolding*" illustrates the goal of student support very well: scaffolding is placed around the students which supports them in the development towards independent and autonomous learning and thus enables problems to be solved which would not have been achieved without this support. McLoughlin (2002) describes nine categories of scaffolding across different teaching contexts: orientation (communication of expectation), coaching, eliciting articulation, task support, expert regulation, conceptual scaffolding, metacognitive scaffolding, procedural scaffolding, and strategic scaffolding.

### **3.3. Faculty support**

The pedagogical opportunities that new media offer can only be developed and exploited if they are well accepted by motivated faculty members, thus allowing educational innovation. The development and implementation of high-quality and innovative online courses depends mainly on them: "Presidents may dream visions, and vice presidents may design plans, and deans and department heads may try to implement them, but without the support of faculty members nothing will change." (Bates, 2000, p. 95).

Advising and supporting faculty in pedagogical and technical questions in online learning will become more important, because the development and implementation of online courses, or of complete online degree courses, is a very complex task, which individual instructors or single departments will be unable to manage themselves in an 'lone-ranger' approach (Bates, 2000). The lack of support and training for teachers and tutors is a limiting factor in the development of online teaching: "Any significant

initiative aimed at changing teaching methods or the introduction of technology into teaching and learning should include effective e-moderator support and training, otherwise its outcomes are likely to be meagre and unsuccessful." (Salmon, 2000, p. 55).

Technical support is certainly important. Hara and Kling's study (1999) shows that the frequency of experiencing frustration and drop-out rates increase if faculty are practically unable to help directly with simple technical problems and must refer students to the technical support service. Instructors must also be able to display a certain level of command and routine in dealing with the media. However, simple technical training will not lead to success. Against the background of the pedagogical and didactic developments of online learning there will have to be a major change in faculty's conceptions of themselves, in their teaching behaviour and methods, right through to counselling and tutorial support. Along with the technical questions of online support pedagogical counselling and training will be an even more important structural aspect in faculty support. For faculty without online experience it is helpful at the beginning to be protected from dealing with technical details so they can concentrate on the instructional design of their online courses. In spite of this, the aim must be to make them as independent as possible of technical support.

Although it is not disputed that faculty support is necessary for the introduction of online learning and teaching, many universities find it difficult to create the organizational structures and incentives for faculty that are necessary for education innovation. The effective support and promotion of online teaching requires organizational structures in the university such as competence centres for e-learning support in order to support faculty members (who are responsible for content) to work with a team who can help them with instructional design and other pedagogical issues in order that they can develop the necessary skills to teach online.

Three areas of faculty support can basically be differentiated: course development and teaching support, management of online materials and resources, and technical support (Brindley, Zawacki & Roberts, 2003). University support infrastructures are a precondition for creating an environment in which problems and obstacles upon the introduction of online learning and teaching can be overcome. The development and promotion of online teaching and learning can only be realized by a support strategy that takes effect both from the top and from the bottom (cf. Zawacki-Richter, 2004):

- a) The necessary institutional framework can be created through a consistent top-down approach. These include:
  - strategic planning with the goal of introducing online teaching and learning and with binding agreements on targets for all the departments in the university,
  - the provision, permanent guarantee and maintenance of the necessary technical infrastructures,
  - organizational structures for the support system's service institutions and media competence centres,
  - the introduction of incentive systems for participation in online teaching, and finally,
  - the financial and personnel resources.



- b) A slow change to the general service culture and to faculties' concepts of themselves can only be achieved by means of a cautious bottom-up strategy. The following measures contribute to this:
- learning from examples of colleagues with good practical experience (peer to peer learning),
  - informal personal pedagogical and media-technology advice and support from competent online learning experts (educational consultants),
  - formal measures for professional development and training,
  - support through teamwork and professional project management oriented towards the principles of instructional design, and
  - safeguarding control over contents and study materials through faculty (intellectual property and copyright issues).

#### **4. Concluding Remarks**

All learners need support. The form and extent of the support depends on the individual students: on their learning styles, their prior knowledge, their occupational background, their goals and their social obligations. However, in contrast to traditional campus universities support in online education gains increased importance:

- a) Learning which is imparted through media enables, but also demands, more self-determination and autonomy from learners. Support, for example, from online tutors, which facilitate independent learning, takes up a central position in online education. In addition, mature, employed students who put in great efforts to complete their studies, and also less experienced younger students need special support in online learning.
- b) In addition to the competencies for autonomous learning further skills need to be developed and supported for learning in an online environment: skills in handling new media and the targeted search for and evaluation of information and knowledge (media literacy and knowledge management). Social competence is of great importance for communication and cooperation in the online environment.
- c) Finally, online education strongly depends on the faculty, who need advice and support in the pedagogical and technical questions of on-line learning because of the complexity of media projects. Providing suitable institutional conditions and organizational structures to support online teaching is in itself an element of support, because only in this way can faculty be enabled to make effective use of the new technologies in supporting their students.

Support affects both the pedagogical aspects of online teaching and learning (academic support in the narrower sense), and the organizational, economic and technical framework conditions and preconditions on the administrative-institutional level (support in the wider sense). It can only partially be aligned with traditional support measures; however, it can be more easily developed in support systems such as those that evolved in distance education institutions.

At present, online support systems are most advanced at distance teaching universities, which have specialized in the support and professional guidance of students who study at a distance (cf. Brigham, 2001; Phillips, 2003). However, campus universities are increasingly introducing 'flexible learning' in order to reach new target groups and to

provide additional and more flexible support for their on-campus students (cf. Zawacki, 2002). A support system must always be tailored individually to the requirements of students and teachers, to the institutional, cultural and national context and, finally, against the background of the specialized goals of a course or programme. For this reason there can be no generally valid, ideal model for support systems.

Experts advocate using a constructivist approach to meet the requirements of lifelong learning. However, the pedagogical paradigm shift demands a changed understanding of media, students and teachers. The media should not be used as one-way presentation media, but as information, exploration and communication *tools*, which are part of the constructivist learning and teaching environment. A new image and a new understanding of students and faculty comes to the fore: from expository teaching and receptive learning to advising and facilitation of autonomous learning, whereby the indissoluble connection between independence and support for learning becomes clear. Support is needed to facilitate this process of educational innovation.

## References

- Astleitner, H., & Schinagl, W. (2000). *High-level Telelernen und Wissensmanagement - Grundpfeiler virtueller Ausbildung*. Frankfurt am Main: Peter Lang.
- Bartels, J., von Prümmer, C., & Rossie, U. (1988). *Subjektive Studienziele*. Hagen: FernUniversität, Zentrales Institut für Fernstudienforschung.
- Bates, A. W. (2000). *Managing technological change - Strategies for college and university leaders*. San Francisco: Jossey Bass.
- Brigham, D. (2001). Converting student support services to online delivery. *International Review of Research in Open and Distance Learning*, 1(2), 1-16.
- Brindley, J. E., Zawacki, O., & Roberts, J. (2003). Support services for online faculty: The provider's and the users' perspectives. In U. Bernath & E. Rubin (Eds.), *Reflections on teaching and learning in an online master program - A case study* (pp. 137-165). Oldenburg: Bibliotheks- und Informationssystem der Universität Oldenburg.
- Daniel, J. (1996). Mega-universities and knowledge media – technology strategies for higher education. London: Kogan Page.
- Delling, R. M. (1971). Grundzüge einer Wissenschaft vom Fernstudium. *Epistologidaktika*, 1, 14-28.
- Dohmen, G. (1996). Lebenslanges Lernen - aber wie? Eine Einführung. In B. Nacke & G. Dohmen (Eds.), *Lebenslanges Lernen - Erfahrungen und Anregungen aus Wissenschaft und Praxis* (pp. 11-22). Würzburg: Echter.
- Dunlap, J. C. (1999). Developing web-based performance support systems to encourage lifelong learning in the workplace. *WebNet Journal*, 1(2), 40-48.
- Fritsch, H. (1988). *Drop-out is a matter of definition*. Hagen: FernUniversität, Zentrales Institut für Fernstudienforschung.
- Gladieux, L. E., & Swail, W. S. (1999). *The virtual university & educational opportunity - issues of equity and access for the next generation*. Washington, D.C.: The College Board.

- Hara, N., & Kling, R. (1999). Students' frustrations with a web-based distance education course. *First Monday*, 4(12).
- Heublein, U., Schmelzer, R., Sommer, D., & Spangenberg, H. (2002). *Studienabbruchstudie 2002 - Die Studienabbrecherquoten in den Fächergruppen und Studienbereichen der Universitäten und Fachhochschulen*. Hannover: Hochschul-Informationssystem (HIS).
- Holmberg, B. (1995). *Theory and practice of distance education*. London, New York: Routledge.
- Holmberg, B. (2001). *Distance education in essence - An overview of theory and practice in the early twentyfirst century*. Oldenburg: Bibliotheks- und Informationssystem der Universität Oldenburg.
- Klauder, W. (1992). Die Arbeitswelt der Zukunft. In S. Ehses (Ed.), *Zukunft der Arbeit - Arbeit der Zukunft*. Münster.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Englewood Cliffs, NJ: Cambridge Adult Education.
- Mandl, H., & Reinmann-Rothmeier, G. (1998). Auf dem Weg zu einer neuen Kultur des Lehrens und Lernens. In G. Dörr & K. L. Jüngst (Eds.), *Lernen mit Medien* (pp. 193-205). Weinheim, München: Juventa Verlag.
- McLoughlin, C. (2002). Learner support in distance and networked learning environments: ten dimensions for successful design. *Distance Education*, 23(2), 149-162.
- Moore, M. G., & Anderson, W. G. (Eds.). (2003). *Handbook of distance education*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view*. Wadsworth: Belmont.
- Peters, O. (1992). Some observations of dropping out in distance education. *Distance Education*, 13(2), 234-269.
- Peters, O. (2001). *Learning and teaching in distance education*. London: Kogan Page.
- Peters, O. (2003). Learning with new media in distance education. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education* (pp. 87-112). Mahwah, NJ: Lawrence Erlbaum Associates.
- Phillips, M. (2003). Delivering learner support on-line: Does the medium affect the message? In A. Tait & R. Mills (Eds.), *Re-thinking learner support in distance education: change and continuity in an international context* (pp. 168-184). London: RoutledgeFalmer.
- Reinmann-Rothmeier, G., & Mandl, H. (1997). Kompetenzen für das Leben in einer Wissensgesellschaft. In S. Höfling & H. Mandl (Eds.), *Lernen für die Zukunft, Lernen in der Zukunft - Wissensmanagement in der Bildung* (pp. 97-107). München: Hans-Seidel-Stiftung.
- Ridley, D. S., Schultz, P. A., Glanz, R. S., & Weinstein, C. E. (1992). Self-regulated learning: The interactive influence of metacognitive awareness and goal-setting. *Journal of Experimental Education*, 60(4), 293-306.

- Robinson, B. (1995). Research and pragmatism in learner support. In F. Lockwood (Ed.), *Open and distance learning today* (pp. 221-231). London: Routledge.
- Rowntree, D. (2000). *Who are your distance learners*. Retrieved June 24, 2002, from: [http://www-iet.open.ac.uk/pp/D.G.F.Rowntree/distance\\_learners.htm](http://www-iet.open.ac.uk/pp/D.G.F.Rowntree/distance_learners.htm)
- Rumble, G. (2000). Student support in distance education in the 21st century: Learning from service management. *Distance Education*, 21(2), 216-235.
- Ryan, Y. (2001). The provision of learner support services online. In G. Farrel (Ed.), *The Changing Faces of Virtual Education* (pp. 71-94). Vancouver, Canada: The Commonwealth of Learning.
- Salmon, G. (2000). *E-Moderating - The key to teaching and learning online*. London: Kogan Page.
- Schäfer, E. (2002). Aspekte einer Bildungs- und Lernkultur der Hochschule in der Wissensgesellschaft. In M. Cordes & J. Dikau & E. Schäfer (Eds.), *Hochschule als Raum lebensumspannender Bildung - Auf dem Weg zu einer neuen Lernkultur* (pp. 3-30). Regensburg: Arbeitskreis Universitäre Erwachsenenbildung.
- Schulmeister, R. (2001). *Virtuelle Universität, Virtuelles Lernen*. München, Wien: Oldenbourg Verlag.
- Smith, P. J. (2000). Preparedness for flexible delivery among vocational learners. *Distance Education*, 21(1), 29-48.
- Tallman, F. D. (1994). Satisfaction and completion in correspondence study: The influence of instructional and student-support services. *The American Journal of Distance Education*, 8(2), 43-57.
- Thompson, M. M. (1998). Distance learners in higher education. In C. C. Gibson (Ed.), *Distance learners in higher education* (pp. 9-24). Madison, WI: Atwood Publishing.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89-125.
- Tinto, V. (1986). *Leaving college: Rethinking the causes and cures of student attrition* (Vol. 45). Chicago: University of Chicago Press.
- Zawacki, O. (2001). Zum Verhältnis von Online-Lehre und Fernstudium. In E. Wagner & M. Kindt (Eds.), *Medien in der Wissenschaft: Virtueller Campus, Szenarien - Strategien - Studium* (Vol. 14, pp. 411-419). Münster: Waxmann.
- Zawacki, O. (2002). Organisationsstrukturen für E-Learning Support an der University of Pretoria. In G. Bachmann & O. Haefeli & M. Kindt (Eds.), *Campus 2002 - Die virtuelle Hochschule in der Konsolidierungsphase* (Vol. 18, pp. 112-121). Münster: Waxmann.
- Zawacki-Richter, O. (2004). *Support im Online Studium - Die Entstehung eines neuen pädagogischen Aktivitätsfeldes*. Innsbruck: StudienVerlag.