

DOCUMENT RESUME

ED 455 784

IR 020 740

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TITLE Towards a Person-Centered Model of Instruction: Can an Emphasis on the Personal Enhance Instruction in Cyberspace?.
PUB DATE 2000-10-00
NOTE 8p.; In: Annual Proceedings of Selected Research and Development Papers Presented at the National Convention of the Association for Educational Communications and Technology (23rd, Denver, CO, October 25-28, 2000). Volumes 1-2; see IR 020 712.
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Computer Assisted Instruction; *Distance Education; Instructional Design; Instructional Development; Learner Controlled Instruction; Models; Teaching Methods; Teaching Models; World Wide Web
IDENTIFIERS Rogers (Carl)

ABSTRACT

A person-centered model of instruction has been developed for use in designing instruction in virtual, Web-based environments. This model, based on the work of Carl Rogers, attempts to address several issues raised in the literature regarding: (1) the changing role of instructors and students; (2) the broadening of the notion of learning outcomes; (3) the isolation and dissatisfaction of students in dispersed locations; and (4) problems with authenticity and individualization of experience. This paper posits that Rogers' work can be used to design instruction for virtual Web-based environments, and a conceptual analysis is offered upon which to base this claim. A person-centered approach is described and contrasted with instructionist (Dick and Carey) and constructivist (Duffy and Jonassen) approaches. A discussion of potential benefits and drawbacks concludes the article. (Contains 23 references.) (Author/AEF)

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Towards a Person-Centered Model of Instruction: Can an Emphasis on the Personal Enhance Instruction in Cyberspace?

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Abstract

A person-centered model of instruction has been developed for use in designing instruction in virtual, web-based environments. This model, based on the work of Carl Rogers attempts to address several issues raised in the literature regarding a) the changing role of instructors and students b) the broadening of the notion of learning outcomes, c) the isolation and dissatisfaction of students in dispersed locations and d) problems with authenticity and individualization of experience. A person-centered instructional model is described and contrasted with instructionist (Dick and Carey) and constructivist (Jonassen) approaches.

Introduction

Virtual, web-based environments, while attractive in their potential to widen the scope of users' experiences for communication, collaboration, and access to resources can also create artificial and possibly depersonalizing social circumstances. A person-centered model of instruction has been developed for use in designing instruction in virtual, web-based environments. This model, based on the person-centered theory of Carl Rogers attempts to address several issues raised in the literature regarding a) the changing role of instructors and students b) the broadening of the notion of learning outcomes, c) the isolation and dissatisfaction of students in dispersed locations and d) problems with authenticity and individualization of experience. How should instructors confront these types of issues which arise in a distributed instructional network?

In this paper we posit that Rogers' work can be used to design instruction for virtual web-based environments and we offer a conceptual analysis upon which to base this claim. A person-centered instructional model is described and contrasted with instructionist (Dick and Carey) and constructivist (Duffy and Jonassen) approaches. A discussion of problems and potentials concludes the article.

Defining Virtual Environments

As with any new technology, definitions that are complementary, mutually exclusive, subsuming, and directly contradictory seem to proliferate as fast as the innovation itself. Virtual reality and its many applications are no exception. In this section we give an overview of prominent definitions and select one, to be used for purposes of analysis in this article. Virtual reality (VR) is, quite literally, an analogous reality to our own but with one significant difference--it occurs in computerized and/or networked electronic environment. Definitions of VR range from "one part computer simulation and one part consensual hallucination" (Biocca & Levy, 1995; Gibson, 1984 p.54) to a computer-created sensory experience completely immersing a participant so they believe and barely distinguish a "virtual" experience from a real one (Franchi, 1994).

Types of VR applications tend to fall into two general categories: immersion and simulated environments. VR immersion environments using specially designed hardware worn by the user can literally make the individual feel like they are in another environment in a cyberspace. In contrast, in VR simulated environments, the user experiences a particular context or situation in a much less sensory and more cognitive way, by accessing software applications on a networked hyperspace -- such as the World Wide Web. These types of WWW virtual environments have several common applications. Users can take virtual tours of on-line museums or other remote locations such as strolling around virtual parks or navigating to selected locations via a virtual map of particular areas. Another common VR simulation environment-- a chat room-- provides tools for participants to talk with people at geographically dispersed locations in real time conversations. Since simulated VR environments require less hardware and technical commitment, they have tended to flourish in educational settings.

In fact, according to Mason (1996), the many virtual classrooms and universities can be characterized by three broad categories:

1. Text based systems, including electronic mail, computer conferencing, real time chat systems, MUDs/MOOs, and other WWW applications;
2. Audio conferencing such as audiographics, and real time audio over the Internet; and

3. Videoconferencing, one-way and two-way, software driven videoconferencing and other web-based visual media.

Virtual education purportedly differs from traditional education in less obvious ways than the presentation mode. Chalmers (1997) asserts that a virtual educational space can offer increased levels of interactivity and the development of learning communities through the use of the communication tools described by Mason. One example of this increased activity level is apparent in a text-based interactive learning environment, PuebloMOO. PuebloMOO (<http://www.pc.maricopa.edu/community/pueblo/>) is a complex environment where the students are free to explore a world created completely in the computer, interact with other people, and make choices regarding the character they use (called an avatar) in the virtual environment. The opportunity to personalize one's role in a virtual environment could be beneficial because it allows learners to meld learning with recreation and socialization developing activities all at one time.

Virtual environments, while attractive in their potential to support a variety of users' interactions, also have the potential to create artificial and possibly depersonalizing social circumstances.

Dehumanizing Effects of Virtual Environments

Concerns associated with the dehumanizing effects of mass-produced, one-size-fits-all instruction is framed by the largely European debate of *Fordist*, *Neo-Fordist* and *Post-Fordist* approaches (Campion, 1995). On a continuum from maximum central control, low skill, and little learner responsibility (Fordism) to less managerial control, high skill and responsibility for learning (Post-Fordism), each position implies that control emanates from the point of instruction (or the instructor) and is not shaped through negotiations between the instructor and learner. In other words, though the debate addresses issues, which arise from the social, the underlying epistemological assumptions of the positions specifically exclude the social negotiation of learning. While this theoretical debate is less publicly articulated in the United States, it is important to note how often disgruntled distance education students report they feel alienated and dissatisfied with on-line learning (Biner, Dean, & Mellinger, 1994). Students at the so-called "remote sites" complain of a lack of co-presence with the instructors and other students. In fact, the only consistently reported benefit is "convenience." While American educators claim interaction and personalized instruction are valued (Simonson, Smaldino, Albright, & Zvacek, 2000 p. 41), reports of distance learning experiences show these goals less often achieved in actual practice. How should instructional designers use and possibly modify available theory and concepts to maximize the potential of virtual environments while confronting the personalization issues that seem to develop in a distributed network of instruction?

In search of theory-based instruction for Virtual, Web-based Environments

The introduction of new interactive technologies inevitably effects the learning context. In virtual environments, both the role of the instructor and the form of instruction will change dramatically. A central change will be less control for the instructor coupled with more opportunities for learner-selected and -controlled exploration and interaction. Indeed, unbeknownst to the instructor at any given point in time, students may be logging in and participating actively. Directive, didactic forms of instruction will need modification. Instruction that is shaped and enhanced by facilitation may be a key to accommodating increased learner control. Students will clearly need specialized guidance exploring their on-line learning opportunities and the design of instruction will need to take into account the special nature asynchronous interaction supported by web-based virtual environments. We hypothesize the notion of instructional design as primarily facilitation can be informed by the work of Carl Rogers.

When Rogers wrote *Freedom to Learn* (1994), he was focused on traditional schools but saw the person-centered educational approach developing its strongest roots in alternative schools and what he presciently called "universities without walls." While many instructional theories focus on the learner's achieving specific learning objectives, Rogers' instructional theory focuses on a goal of teaching the learner how to learn. It is because of this focus that Rogers felt the learner would become a freely functioning, self-enhancing, self-actualizing, creative, and dependable person.

Carl Rogers revealed that he developed his person-centered theory because we live in a constantly changing world and that people in such continually evolving contexts needed to be flexible thinkers adapting easily to change. More importantly, he claimed, the constant of change required students to learn how to learn to adapt to different types of learning required in a variety of settings for myriad purposes. Rogers boldly suggested the facilitator should encourage the learners to charge off in new directions dictated by their own interests and to unleash their sense of inquiry and exploration (Rogers & Freiberg, 1994). How can the design of instruction support such learner directed activity? What, if any, will be the outcomes of such instruction and how can evaluation take place? Will assessment

be mutual or individual? What kinds of performance are desirable? Will learner development and satisfaction lead to outcomes that will be valued personally and publicly?

The purpose of this paper is to discuss the utility of the person-centered instructional theory of Carl Rogers for designing instruction in virtual environments based on both a conceptual and a comparative analysis. The conceptual analysis focuses on outcomes ascribed to web-based learning from the literature as they can be framed by specific aspects Rogers' theory such as personal development and learners' self actualization. Next, we present a model of person-centered instruction and compare it to two prominent instructional approaches. We follow this discussion with a case example of a course, which applies aspects of the model. Finally, a discussion of problems and potentials with the model concludes the article.

A conceptual Analysis of Rogers' Person-Centered Instructional Theory

Using an Epistemological Heuristic

We posit that the foundational conceptual analysis for our investigation of the utility and robustness of Rogers' work as it may be applied to on-line, virtual learning environments must begin with a sound epistemological analysis of his theoretical perspective. In order to accomplish this goal, we employed the "structure of knowledge" approach developed by Gowin (1981). This approach is particularly appropriate because it is inquiry-based -- the analysis proceeds from central questions emanating from a learning event (in our case the event is "instruction in a web-based environment). Our central "focus questions" are "what are the epistemological elements (world view, principles, concepts) of Rogers' theory?" and "how can these be applied to instructional design in virtual environments?" Gowin's heuristic details several components of the underlying knowledge structure of a given theoretical approach such that world view, core principles and concepts are related to directly to a specific learner event and the various knowledge claims and value to the learner can be described. The results of this analysis follow.

Carl Rogers and Person-Centered Learning

Carl Rogers developed a system of non-directive psychology called client-centered therapy that allows the client, who knows what hurts, to marshal the resources of personal experiences and discover their own meanings. The client learns through such reflective experience and uses it to grow as a person. Rogers hypothesized that core concepts of client-centered psychology could be applied analogously towards a person-centered education.

Rogers theorized that a person emerging from therapy or from the best of education has experienced optimal psychological growth (Rogers & Freiberg, 1994). Specifically, the person is able to function freely -- realizing his or her potentials, striving to be self-enhancing, continuing to develop, and always seeking newness in each moment-- resulting in a self-actualized person. Maslow (1970), describes this self-actualized person as someone who has developed or is developing into the full stature of personal capability. Of importance is that learners continue to learn creatively through life rather than becoming automatons reciting the information provided to them (Patterson, 1973). Rogers himself tied self-actualization to creativity with these words: "The mainspring of creativity appears to be the same tendency which we discover so deeply as the curative force in psychotherapy - one's tendency to actualize oneself, to become one's potentialities . . . the urge to expand, extend, develop, mature - the tendency to express and activate all the same capabilities of the organism . . ." (Davis, 1992 pp. 3-4). Building on Rogers, Davis claims creativity involves developing your talents; learning to use your abilities; exploring new ideas, places, activities; and developing a sensitivity to problems of others and humankind (Davis, 1992 p. 7). In a person-centered approach the linking of self-actualization, freedom, and creativity will be required in order to design instruction, which accommodates the largely unfettered, learner-controlled choices available to a user.

Davis' (1992) elaborated the notion of creativity in terms of what he called the "4-P's": The creative person, process, product (Barron, 1988), and press (Isaksen, 1987; Mooney, 1963; Taylor, 1988). The creative person is the individual in the creative environment, moving through the process of creativity, or having created the creative product (Davis, 1992). The creative process is the steps taken to creatively solving real problems (Davis, 1992). The creative product is the outcome of the creative process. It can emphasize originality, and a sense of value (Davis, 1992). Creative press (as in pressure) is the social and psychological environment affecting any other aspect of the creative person, process, or product or all three.

While the development of self-actualized creative people, who are life-long learners, is clearly a commendable goal, how can this goal be actually achieved? Firstly, an instructor should realize self-actualization cannot be taught and the student reaches the goal of becoming a self-actualized person through his or her own individualized learning experience. Unlike didactic teaching methods, which provide knowledge to the learners, the

teacher in a person-centered environment becomes a facilitator of the learning the students conduct. Such a facilitated experience is termed "significant learning" because the individual initiates it, allowing the individual to provide personal control with the element of learning built into the whole experience (Sahakain, 1970). In this experience the learner becomes "the creative person" engaged in a creative process. There are several tasks for an instructor wishing to move into a facilitator role. The teacher should first set the mood for the environment or the creative press. There should be a sense of cooperation and trust within the group enhancing the creative experience rather than competitive attitudes which will disrupt the sense of trust and cooperation thus creating a negative creative press on the experience. Next, the teacher as facilitator becomes one of many resources of information rather than as the main source of information for the students. Most importantly though, the teacher as facilitator should be genuine and strive for awareness of personal attitudes. The teacher also needs to feel acceptance of his or her own feelings thus developing an authentic relationship with the students (Rogers, 1961).

Furthermore, the instructor needs to be self-actualized in order to foster these qualities in the students (Patterson, 1973). When Rogers and Freiberg (1994) talked to students, they found many of the same tasks required to become a facilitator were also wanted by students. They found students want to be trusted and respected, want freedom, a place where people care, choices to make decisions, and teachers who helped them succeed (Rogers, 1961). In a person-centered educational experience not only will the learner create a creative product from the learning experience, but the learner's increased self-actualization can also be considered a creative product. As a learner becomes more self-actualized, the learner will be able to perceive reality more accurately; accept him or herself and others; understand varying views and perspectives; become more spontaneous, independent, and more creative (Davis, 1992; Maslow, 1970).

Table one that follows describes a model of person-centered design distilled from the above conceptual analysis and illustrates how creativity operates within the model. Additionally, this person-centered model is contrasted with classic instructionist and constructivist approaches.

A Person-Centered Model of Instructional Design

In this section we move on to our second focus question "how can Rogers' theoretical elements be incorporated into an instructional design model that will be useful in virtual, web-based environments?"

Table 1. Person-Centered Instructional Design Model to the "4-Ps" of Creativity

Person-Centered Instruction (Rogers)	"4-Ps" of Creativity
<u>Learner Analysis</u> Emphasis is on the learners' interests, personal ability, and prior knowledge of a given topic.	<u>Creative Person</u> Emphasis on the person.
<u>Task Formation</u> Task formation proceeds through an analysis of integrating students knowledge and interests around the principles of the content or discipline.	<u>Creative Person</u> Focus on developing tasks centered around the person
<u>Learning Environment Selection</u> Select a non-competitive environment that supports cooperative learning and allows the learner to take responsible control over it.	<u>Creative Press</u> Creating a social/psychological environment to support the person, process, and product
<u>Develop Learning Goal</u> Develop individual achievable objectives within the context of the learning experience based on the students' interests and abilities and contract with the instructor.	<u>Creative Process</u> Process of selecting a goal (creative product)
<u>Individualized Assessment Development</u> Work with students to develop forms of self-evaluation.	<u>Creative Process</u> Develop ways to test goal achievement
<u>Reciprocal Teaching</u> Organize the areas of interest to cover in the topic and sequence in a format to maximize the learning potential.	<u>Creative Process</u> Organizing the process of the experience

Person-Centered Instruction (Rogers)	"4-Ps" of Creativity
<u>Selection of Instructional Resources</u> Identify and select resources to enhance the learning experience and present them to the students. The teacher presents himself or herself as a resource.	<u>Creative Process and Press</u> Selecting resources to support the process and teacher taking role of a resource to support the social/psychological environment
<u>Learner's Self Evaluation</u> Learners conduct self-evaluation based on the contract of the level of personal involvement, self-initiated involvement, and pervasiveness, which shows the significance of the learning experience.	<u>Creative Process</u> Testing and evaluating the process and the creative product
<u>Outcomes of Process</u> 1. Significant Learning 2. Self-actualization 3. Creative product (The learner will show not only an accumulation of knowledge of the topic but also satisfaction in the learning, desire to master the experience, and a greater understanding of the problem, and potential resolutions)	<u>Creative Product</u> Learning, self-actualization, and a product emphasizing the originality of the person are created.

In table two below we provide a comparison of Rogers' person-centered elements with two design models - the classic instructional design of Dick & Carey (1996) and constructivist design as described by Jonassen (1999).

Table 2. Comparison of Instructional Design Models

Instructionalist Design (Dick and Carey)	Constructivist Design (Jonassen)	Person-Centered Instruction (Rogers)
<u>Needs Assessment</u> Determine what is the optimal situation and the actual situation. Find what change is needed to fill the gap between the situations. This will identify the instructional goal.	<u>Problem Definition</u> Define how the problem is represented and the manipulation space.	<u>Learner Analysis</u> Emphasis is on the learners' interests, personal ability, and prior knowledge of a given topic.
<u>Task Analysis</u> Determine step by step how the students will accomplish the goals.	<u>Determine Problem Dimensions</u> Determine what is needed to resolve the problem.	<u>Task Formation</u> Task formation proceeds through an analysis of integrating students knowledge and interests around the principles of the content or discipline.
<u>Learning Environments</u> No focus on developing a learning environment.	<u>Describe Learning Environment Supports</u> Determine the cases, resources, and tools needed to provide support for the learning environment.	<u>Learning Environment Selection</u> Select a non-competitive environment that supports cooperative learning and allows the learner to take responsible control over it.
<u>Performance Objectives Development</u> Write performance objectives of what students will be able to do upon completion of the instruction.	<u>Goals and Constraints Are Unstated</u> Uncertainty is a plus. Offer no rules for predicting the outcome.	<u>Develop Learning Goal</u> Develop individual achievable objectives within the context of the learning experience based on the students' interests and abilities and contract with the instructor.
<u>Assessment Instrument</u>	<u>Alternative Assessments</u>	<u>Individualized Assessment</u>

Instructionalist Design (Dick and Carey)	Constructivist Design (Jonassen)	Person-Centered Instruction (Rogers)
<u>Development</u> Develop assessment instruments to measure task achievement.	<u>Development</u> Provide opportunities for flexible, creative demonstrations of student understanding.	<u>Development</u> Work with students to develop forms of self-evaluation.
<u>Instructional Strategy</u> Sequence and organize the information as an instructional strategy for delivery.	<u>Instructional Strategy</u> Coaching, modeling, and scaffolding support and challenge the learner to succeed.	<u>Reciprocal Teaching</u> Organize the areas of interest to cover in the topic and sequence in a format to maximize the learning potential.
<u>Selection of Instructional Resources</u> Develop and select instructional resources.	<u>Provide the Problem Manipulation Space</u> Include objects and tools that are required for the learner to manipulate the environment.	<u>Selection of Instructional Resources</u> Identify and select resources to enhance the learning experience and present them to the students. The teacher presents himself or herself as a resource.
<u>Evaluation of Learning</u> Design and conduct a formative evaluation to determine the effectiveness of the instruction. Conduct a summative evaluation to verify the effectiveness of the instructional event.	<u>Evaluation of Learning</u> Evaluate the problem solving process and viability of the solution.	<u>Learner's Self Evaluation</u> Learners conduct self-evaluation based on the contract of the level of personal involvement, self-initiated involvement, and pervasiveness, which shows the significance of the learning experience.
<u>Outcome of the Process</u> Based on assessment scores, formative evaluation, and summative evaluation achievement of the goal can be determined.	<u>Outcome of the Process</u> Outcomes are understanding and further inquiry.	<u>Outcomes of Process</u> 1. Significant Learning 2. Self-actualization 3. Creative product (The learner will show not only an accumulation of knowledge of the topic as well as a creative product but also satisfaction in the learning, desire to master the experience, and a greater understanding of the problem, and potential resolutions)

Conclusions

What are the potential benefits and drawbacks of using a person-centered model of instructional design? By emphasizing students' interests and abilities, courses taught in virtual environments such as certain applications delivered via the WWW, can create an atmosphere of mutual participation and allow for accommodations of various skill and ability levels. Students can exercise the freedom to choose, which is encouraged by the user-controlled hypermedia web environment. By utilizing the person-centered approach in design of instruction, students can take full advantage of the very features of virtual environments that are thought to promote engagement and enhance learning. In other words, the design of instruction using person-centered design is a good fit with a user-controlled, web-based instructional environment such as the one discussed in the case study above.

However, the elements promoting the success of such an approach--user responsibility, ability to be self-assessing and proactive in learning-- are the very elements, when lacking, which will result in an instructional experience that is non-productive at best and frustrating at worst. For example, how will students who have incorrectly assessed their abilities fare in such a free choice environment? Indeed, what kinds of self-assessment tools will need to be available for students (and instructors) to make such appraisals of skill and knowledge? What opportunities or interim assistance is needed to aid these students in fully participating in the course and learning the material? Will students who often expect to obtain course material via lecture and didactic instruction feel cheated

if the instructor relies on them to shape their own course experiences? Will these students have a point? What is the proper role of the instructor?

While the caveats for using a person-centered model are valid, we posit from our initial exploration of the utility of adapting central concepts and principles from Rogers' person-centered approach has shown it to be potentially useful. Designing instruction for virtual, learner-centered courses or learning experiences requires an approach focused on the learner. The use of such approaches may ameliorate the issues raised by the Fordist debate and ensure that on-line courses and virtual communication and collaboration environments develop in ways that truly exploit the instructional potential to develop self-actualized, independent learner.

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