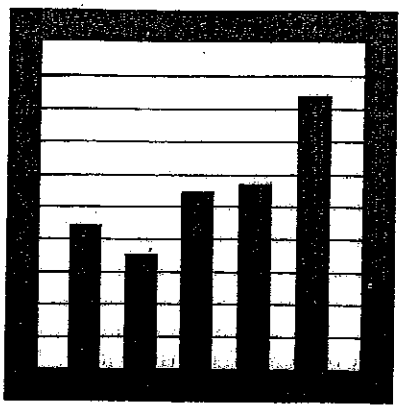
Survey Results of ID Activities in Higher Education



Harry Liebler
Assistant Professor of Library Science
Instructional Designer/TV Producer-Director
Chicago State University
Chicago, IL 60628

The following description of the extensiveness and characteristics of instructional development activities in higher education institutions was derived from the author's doctoral dissertation research, the purpose of which was to develop several models for describing and defining instructional materials production within an instructional development framework.

Method

First a theoretical "ideal" model was developed from the professional literature. This ideal model was synthesized by: examining the general systems model (Nord, 1971, p. 12); then demonstrating the relationship between the systems model and instructional development models; and finally comparing instructional development components, audiovisual instructional materials production components, and administrative controls and procedures of audiovisual instructional materials production.

Basically the resulting model was a synthesis of the Instructional Development Institute or University Consortium for Instructional Development and Technology model (Twelker, Urback & Buck, 1972) with Jay Sedlik's film production model (Sedlik, 1969) into a utopian prescriptive instructional development model with extensive detailing of audiovisual production procedures.

The model was tested against current practices in a survey of higher education institutions in the state of Illinois. This survey determined the current operational procedures that are necessary for the production of audiovisual instructional materials within an instructional development framework. The report of instructional development activities was derived from the data gathered to determine the characteristics of instructional development activities currently being practiced.

Information was first gathered by sending a letter to the chief academic officer with a return post card that asked if instructional materials were produced and if an instructional development process was followed. Instructional development was defined as "a systematic approach to analyzing instructional problems and developing practical solutions."

One hundred thirty institutions returned the post cards (an 81 percent return rate). Initially 38 responded "no" to both production and instructional development activities; 40 responded "yes" to production and "no" to instructional development activities; 1 responded "yes" to instructional development and "no" to production activities; and 51 responded "yes" to both instructional development and production activities. However, after follow-up phone calls to corroborate the post card answers and to schedule interviews, 13 of the 51 changed answers: 6 indicated no instructional development and 7 indicated no production activities. This appeared to indicate a lack of understanding on the part of the chief academic officer about what was occurring in instructional development and materials production within their institutions.

Thus a total of only 46 out of 130 institutions followed instructional development procedures and a total of only 38 both produced materials and followed instructional development procedures. Of these, 31 agreed to be interviewed.

Findings

Information resulting from the interviews is as follows: (a) instructional development activities were most often informal, conducted by the learning resource center, directed toward the production of a lesson or series of lessons, and informally coordinated through the use of a model or flowchart whose procedures were internalized in the mind of the developer; (b) production activities were most often initiated during a consultation with the instructor, who also decided the type of materials to be produced; (c) faculty were the most actively involved in the instructional development-production process with the production staff second and developers third; and (d) most institutions felt that their instructional development and production programs were meeting the needs of their institutions. (See Tables 1 through 5 for detailing and documentation of these findings.)

Although 130 institutions responded to the post card survey, only 15 institutions (including one from the pilot test) indicated that they used a relatively

Table 1. Departments responsible for instructional materials production

Department	Number of responses
Learning Resource Center	12
Learning Resource Services/Audiovisual Services	7
Other	4

Table 2. Formal and informal basis of instructional development

Basis	Number of responses
Formal	
Instructor given release time	3
Workshops in instructional development for faculty	3
Developer assigned to faculty	2
Committee on methodologies of instruction	1
Informal	
Developer or audiovisual person works with faculty	21

The interview schedule was developed from the ideal model and was validated by a panel consisting of a media administrator, a media production specialist, and an instructional developer. The resulting interview schedule items follow:

1. Do you consider instructional development activities to be part of your duties and responsibilities?
2. Is there another person or persons at your institution who is/are an instructional developer(s)?
3. Does your institution's administration consider you to be the person who should perform instructional development activities?
4. What department or administrative body has responsibility for instructional development activities?
5. What department or administrative body has responsibility for instructional materials production?
6. Describe the functional relationship between the two departments or administrative bodies.
7. Are instructional development activities conducted on a formal or informal basis? Explain.
8. On which of the following levels do you most often concentrate your instructional development activities: single lesson, several lessons, single course, sequence of courses?
9. Do your instructional development procedures include use or modification of commercially prepared materials?
10. Is there a model, procedural schematic, or flowchart that is used to indicate the procedural steps of your instructional development process?
11. Do your instructional development procedures meet the instructional needs of your institution?
12. Who initiates the production of instructional materials?
13. How is the production of instructional materials initiated?
14. Who decides which type of instructional materials will be produced?
15. What method is used for determining which audiovisual materials will be produced?
16. Which audiovisual materials were produced by your institution during the last academic year? How many of each were produced?
17. Describe the kinds of production activities performed and the number of staff members available for activities in television, graphics, audio, and photographic production.
18. Please carefully examine the following cards on which are indicated possible instructional materials production procedures. Determine those procedures that are included in your production process.

The following procedures were listed one to a card:

Analyze characteristics of learner
Analyze conditions (learning environment)
Analyze relevant resources
Analyze production capabilities
Identify objectives
Identify terminal objectives (actions, knowledge, and skills the learner is expected to acquire)
Identify enabling objectives (actions, knowledge, and skills the student must learn to attain terminal objectives)
Specify instruction (content)
Segment project into subassignments
Select media to be produced
Write script outline
Review content accuracy
Informally assess anticipated instructional effectiveness and utility
Write visual development of script outline
Critique possible media presentation techniques
Select media presentation techniques
Determine and obtain copyrights
Write script
Develop storyboard

Decide to test or not to test preprototype (formative) materials
Test "first draft" instructional materials with students
Preplan technical production
Develop specifications and contracts for commercially prepared materials
Produce visual/audio
Approve visual/audio
Review technical quality of media
Determine whether or not media follows script
Edit rough copy of media
Edit refined copy of media
Mix/dub audio
Produce prototype
Test to determine that students learn from materials produced
Revise materials produced
Distribute final instructional products
Prepare progress reports
Analyze progress reports
Analyze production techniques

19. Place the cards in the order of your production process.

20. If you were to consider different types of media (audio, visual, and audio-visual) would the procedure be different for each of these types? If yes, how are they different?

21. Does television require different procedures from those for other audio-visual materials?

22. Are different production procedures used for materials made for large group, small group, and self-instruction materials?

23. Is there a method for checking faulty technical production procedures which lead to faulty products?

24. Are there any formative evaluation procedures in the areas of content accuracy, technical quality, and pilot testing used for the evaluation of instructional materials during their development? If yes, describe.

25. Is the instructional effectiveness of the final product evaluated? If yes, how?

26. What is the title of the person or persons who actually perform(s) and whose primary responsibility is it to perform each of the production procedures used in your production process and which were listed on the cards? For example, who determines instructional objectives: the production staff, the instructional developer, and/or the faculty. You might answer that both the instructional developer and faculty member perform this function and that it is the primary responsibility of the faculty member.

27. Does your total production program meet the instructional needs of your institution?

28. Do you have any other comments concerning instructional development or instructional materials production procedures?

After validation by the panel, the interview schedule was pilot tested with 4 of the 31 institutions that had agreed to be interviewed. However, because four institutions provided incomplete or inconsistent answers only 23 institutions were included for data analysis.

complete instructional development procedure. However, it must be noted that in almost every one of these institutions only a very small percent of the faculty were reported to be involved in a relatively complete instructional development process.

This is especially significant because the faculty is central to the instructional development process. Faculty members not only are the initiators of activities (see Table 6) but also are more involved in activities and are more often the people primarily responsible for activities (see Tables 7 and 8).

Also, little incentive is offered faculty for developing instruction. Only three institutions provided release time or special funding for faculty involvement in instructional development projects and this was usually on a competitive basis.

Most instructional development processes were reported not to be complex.

Table 3. Level of instructional development activity

Level	Number of responses
Lesson	
Single lesson	10
Several lessons on a common theme	3
Single and/or several lessons	3
Total	16
Course	
Single course	6
Sequence of courses	0
Single and/or sequence of courses	1
Total	7

Table 4. Instructional development activities

Activity	Number of responses
Local production of instructional materials	17
Use of commercially prepared materials	17
Modification or adaptation of commercially prepared materials	13

Table 5. Use of instructional development models

	Model used		No. model used
	Formally by institution	Informally by developer	
Number[a]	6	11	6
Total	17		6

[a]Of institutions.

Table 6. Initiator of instructional materials production

Initiator	Number of responses
Instructor	18
Instructor and others	3
Others	2

Table 7. Persons performing instructional development-production procedures in all institutions

Person	Total number of procedures performed	Average institutional total[a]
Instructional developer	326	14.2
Production staff	388	16.9
Faculty	430	18.7
Other	75	3.3

[a]Average institutional total = $\frac{\text{Total number of responses}}{\text{Total number of institutions}}$

Table 8. Persons with primary responsibility for performing procedures in all institutions

Person	Total number of procedures performed	Average institutional total
Instructional developer	206	8.9
Production staff	281	12.2
Faculty	307	13.3
Other	39	1.7

They were not the extensive technical processes outlined in the ideal model. Most activities were simply "walk-ins." Only when a sophisticated or extensive product was being created was the total procedure followed thoroughly. There was no formal adherence to order or pattern of procedures. The order of activities varied from institution to institution and from project to project. The only common pattern was that of initial "problem definition," then "development," and finally "evaluation."

Further variability came from the difference in sophistication in understanding of the instructional development process among those who performed instructional development functions. This was made apparent by the lack of knowledge or use of instructional development models and by the confusion of audiovisual selection and organizational procedures with instructional development process procedures.

Instructional Development or Production Emphasis

Upon initial inspection of the data there appeared to be a difference in responses of procedural order and ranking of instructional development-production activities for two-year community college verses senior—upper level, graduate, or post bachelors specialized—institutions and for urban versus suburban institutions. The split in population between these dichotomies was fairly equal—junior, 11 and senior, 12; urban, 9 and suburban, 11.

Upon further examination of the junior-senior and urban-suburban dichotomies, the differences appeared to be between institutions with a "production," a traditional audiovisual orientation, and those with an instructional development orientation. The instructional development emphasis institutions were those that followed a more thorough development process. While the production emphasis institutions were more concerned with audiovisual selection techniques—color, sound, motion, etc. There were 11 of 12 senior institutions and 8 of 9 urban institutions with an instructional development emphasis, 8 of 11 junior institutions and 7 of 11 suburban institutions with a production emphasis, and a total of 14 instructional development emphasis institutions and 9 production emphasis institutions. There were only minor differences in the order of procedures between the instructional development-senior-urban and the production-junior-suburban dichotomies.

Since the sample population was small, the differences between the instructional development-production, junior-senior, and urban-suburban dichotomies are not extensive. However, the larger the sample population would become, the greater would be the potential for differences in dichotomies. If the number of junior or suburban institutions were increased and the junior-senior or urban-suburban dichotomies were maintained for analysis, there would be the possibility that a larger percentage of instructional development emphasis institutions would result, thus altering the "junior" or "suburban" dichotomies considerably. However, regardless of the size of the sample population, it would be more likely that the order of procedures resulting from the instructional development-production analytical dichotomy would not vary or would vary with only minor differences.

Factors determining emphasis

There are several factors that indicate whether or not a production or instructional development emphasis exists at any institution. First, is a model in use? (interview item 10). Next, what is the nature of this model—production or instructional development? Next, how does the interviewee demonstrate knowledge of this model? (This is evident from the similarity between the answers to item 10, the model used, and items 18 and 19, the procedures actually followed.) Finally, did the interviewee use either traditional audiovisual or curriculum-related instructional development terminology to describe instructional development and materials production activities?

An excellent example of the use of these factors in making the distinction between production and instructional development emphasis is the rationale for including one of the investigated institutions as a production emphasis institution. Although this institution offered an instructional development model, the Cavert model (Cavert, 1974), in response to item 10, it did not follow this model. In the Cavert model, "determine target audience," "define the needs," and "establish goals" are procedures that precede "identifying objectives." However, in the order or proced-

ures offered in answer to item 19, the first procedure was "identifying objectives." Also the last stage in the Cavert model, "diagnosis (test and validate the instructional segment . . .)" was not included in its procedures. Furthermore, in answer to items 24 and 25 inquiring into formative and summative evaluation, the response was "no" to both, thus indicating a complete lack of evaluation essential to systematic instructional development. Also, in response to item 15, asking for the method used to determine which materials will be produced, only alternatives for media selection categories, i.e., color, motion, etc., were included. Instructional development categories were not included.

Differences in emphasis

Further examples of the differences between the production and instructional development emphasis institutions is clearly demonstrated by the difference in responses to many interview items. Twelve interviewees at instructional development institutions compared to five interviewees at production emphasis institutions indicated that others on campus also performed instructional development functions (item 2). The most marked difference between the two groups is found in the responses to the models used to represent the instructional development process at the respective institutions. In the instructional development emphasis institutions, all used instructional development models including seven published models and guides. In the production emphasis institutions, six used no model at all and of the three that used models, two used production models or guides developed at the institution and one claimed to use an instructional development model but could not adequately demonstrate its use.

Differences between institutions were also reflected in differences as to whether instructional developers or production staff performed activities. In item 12, 14, 23, and 24 the instructional development emphasis institutions tended to have developers performing activities in addition to or in lieu of production personnel. The production emphasis institutions had only production personnel performing activities.

Responses to item 15 offered by instructional development emphasis institutions indicate more instructional development methods, i.e., objectives (4), type of learning (1), etc. Responses from production emphasis institutions had more audiovisual selection criteria, i.e., color or black and white (3), motion or still (2), sound or silent (1), etc.

Twice as many persons at instructional development emphasis institutions had degrees in Instructional Media and Technology (instructional development, 8; production, 4). Also more than twice as many persons at instructional development emphasis institutions had degrees in Education (instructional development, 5; production, 2). There were also lower averages for the number of years worked in both educational media and instructional materials production in instructional development emphasis institutions (instructional development, 10.4 average years worked in media and 7.4 average years worked in production; production, 16.4 average years worked in media and 12.9 average years worked in production). This difference possibly suggests the newness of instructional development concepts and their exposure to and practice by younger professionals.

The differences in personnel between instructional development and production emphasis institutions can be found by comparing the average institutional totals of responses to item 26: who performs each procedure, of instructional developers and production staff. The average institutional total is computed by separately adding all the responses in the personnel categories and then dividing the category by the number of institutions. The average for instructional development emphasis institutions for the developer was 18.3 and for the production staff 15.9. The average for production emphasis institutions for the developer was 7.7 and for the production staff 18.3. Thus the average number of responses for the developer was higher in instructional development emphasis institutions, 18.3 compared to 7.7. The average number of responses for the production staff was higher in production emphasis institutions, 18.3 compared to 15.9. (See Tables 9 and 10.) The responses to the question asking who is the person primarily responsible for performing procedures (item 26), results in the same differences. The average number of responses for developers was higher in instructional development emphasis institutions, 11.3 compared to 5.3. The average number of responses for production staff was higher in production emphasis institutions, 14.3 compared to 10.8. (See Tables 11 and 12.)

Table 9. Persons performing procedures in instructional development institutions

Person	Average institutional total
Instructional developer	18.3
Production staff	15.9
Faculty	20.6
Other	3.1

Table 10. Persons performing procedures in production emphasis institutions

Person	Average institutional total
Instructional developer	7.7
Production staff	18.3
Faculty	15.6
Other	3.5

Table 11. Persons with primary responsibility for performing procedures in instructional development emphasis institutions

Person	Average Institutional Total
Instructional developer	11.3
Production staff	10.3
Faculty	14.3
Other	1.4

Table 12. Persons with primary responsibility for performing procedures in production emphasis institutions

Person	Average Institutional Total
Instructional developer	5.3
Production staff	14.3
Faculty	14.5
Other	2.1

Traditional Audiovisual Versus Instructional Development Approach

In institutions that called their instructional materials production procedures "instructional development,"

there was obvious confusion between the procedures followed to produce materials and the systematic use of those procedures to develop instruction. The use of these procedures may or may not have included the production of materials. Part of this conflict arises out of the contrast between the traditional approach to production and the systematic process approach to instructional development. Those who perceive of themselves as producing instructional materials also see themselves as following the procedures necessary for instructional development; however, in the traditional audiovisual approach, materials are produced for instruction that has already been determined. The procedures are not followed in a systematic process that develops the content, determines presentation mode, and then produces materials to meet objectives which present the content in a mode systematically determined. Thus the concern is for how materials are to be produced, not why. There is no relationship between the determination and organization of the content and the selection and production of instructional materials as a single coordinated systematically functioning process. Thus it appears that the dichotomy, which Robert Heinich (1970) noted regarding the choice of support approach for the instructional system, of planning instructional materials *before* instructional assignments are made—at the curriculum planning level—or planning instructional materials *after* instructional assignments are made—at the classroom implementation level (Heinich, 1970, pp. 21, 125)—has not, as he indicated (Heinich, pp. 141, 146), been decided in favor of the curriculum planning approach. Most institutions continue to follow a traditional "service" role, which provides "audiovisual aids" in response to previously planned instruction, rather than developing together both instruction and its requisite materials, instructional development.

This traditional approach is also demonstrated by a lack of adequate evaluation. Often instructional products are produced and distributed without a thorough evaluation of their effectiveness. Usually evaluation consists of asking either the instructor or his students if the materials are "OK." This procedure is adequate for materials that are "aids" to previously determined instruction but is totally inadequate for materials that are integral elements of an instructional process.

Another gap in the instructional development process is a complete absence of systematic evaluation of the instructional development process itself. There was no adequate method altering the process in order to alleviate deficiencies or to improve existing functions.

Another problem arose in regard to instructional materials production. Eight institutions, which were not included in the interviewed sample, indicated that they followed an instructional development framework but did not produce instructional materials. Thus they did not include an essential option in the development process, the production of instructional materials.

In addition, a severe problem sometimes resulted from a lack of articulation between instructional development, in the form of either faculty or curriculum development, and production activities. Production must be coordinated within and focused toward an instructional development framework to be an effective element of the instructional development process.

It is apparent that little comprehensive instructional development is conducted in higher education in Illinois in light of the limited use of a complete instructional development process, the limited involvement of faculty in the process, the lack of adequate evaluation procedures, the "service" emphasis on activities, the lack of production activities in many institutions, and the limited use of production activities within an instructional development framework.

Recommendations

1. Instructional development can be successful only if it has the support of the key administrators of an institution. Therefore, efforts must be made to gain key administrative support.

2. A plan for improving the climate for greater faculty involvement in development requires a multi-faceted instructional materials production center. Since most activities are "walk-ins," (single requests for materials whose details and content are predetermined by the client) professionally executed products efficiently produced would create a climate of favorable contact, increase the demand for more products, and facilitate the involvement of faculty in a complex instructional development process that includes the production of instructional materials.

3. There should be workshops in the practical application of the instructional development process rather than a detailing of individual procedures or a discussion of which model is most appropriate. There should be instruction in the use of an integrated problem definition, system development, and evaluation process with its application as a total process applied to the unique instructional process actually occurring in individual institutions.

4. The question arises when considering institutions with a production emphasis as to whether or not they are also institutions that actually follow an instructional framework. It is suggested that in future research the extent of "systematic approach" or instructional development activity (as contained in the definition of instructional development found in the AECT Educational Technology: Definition and Glossary of Terms) be examined. Further investigation will determine if these institutions should be labeled "instructional development active."

5. After more than a decade of discussion, practice, and investigation of instructional development procedures, it is somewhat remarkable to discover the limited scope and impact of instructional development in higher education, where instructional development is taught if not practiced. Although the data herein are limited to a single state, Illinois, they most certainly reflect the extent of activities elsewhere and, therefore, demand investigation beyond the scope of this report.

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