DOCUMENT RESUME

ED 352 494 CE 062 635

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TITLE How Do Idaho Post-Secondary T&I Instructors Feel about Time-Shortened Tech-Prep Articulation?
PUB DATE Dec 92
NOTE 26p.; Paper presented at the American Vocational Association Convention (St. Louis, MO, December 1992).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adoption (Ideas); *Articulation (Education); Attitude Change; College School Cooperation; Educational Change; Educational Innovation; Educational Mobility; Educational Planning; Higher Education; Resistance to Change; State Programs; Statewide Planning; *Teacher Attitudes; *Technology; *Trade and Industrial Education; Trade and Industrial Teachers
IDENTIFIERS *Idaho; Stages of Concern Questionnaire; *Tech Prep

ABSTRACT

A study examined the acceptance of the time-shortened articulation (TSA) approach adopted to implement tech prep programs by Idaho postsecondary trade and industrial instructors. From a sample of 143 instructors, 46 usable responses were received. Hall's (1979) Stages of Concern (SoC) model was used to determine if they had accepted the process, attitude, and goal of TSA tech prep. Responses were analyzed to determine to which of Hall's seven SoC levels the instructors had progressed. The SoCQ Scoring Device was used to score the questionnaires. Individual raw scores were computed, converted to SoC intensity percentiles, and individually graphed. Individual graphs were examined to assess the peak SoC stage and thus indicate where each instructor was on the acceptance continuum. Scores were then grouped by demographic data: instructor's educational institution, age, trade and industrial subject area, and educational level. The SoC profiles indicated that only 6 instructors or 13 percent had accepted TSA tech prep. Certain groups did not accept this educational change: instructors with graduate degrees, welding instructors, and instructors from certain institutions. No significant difference among the groups studied was indicated by a chi-square treatment. (Appendixes include 6 tables and a list of 10 references.) (YLB)

HOW DO IDAHO POST-SECONDARY T&I INSTRUCTORS FEEL ABOUT TIME-SHORTENED TECH-PREP ARTICULATION?

A Research Paper
Presented At
The American Vocational Association
1992 Convention
Saint Louis, Missouri

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by

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Abstract

The articulation of Tech-Prep programs has been spurred on by the Perkins legislation. Idaho has adopted the time-shortened articulation (TSA) approach to implement its Tech-Prep programs. This study examined the acceptance of TSA Tech-Prep by 46 Idaho post-secondary T&I instructors utilizing Hall's Stages of Concern (SoC) model. The T&I instructors were grouped for data analysis by educational institution, instructors' educational level, instructors' age, and instructors' T&I subject area. The SoC profiles indicated that only 13.0% of the instructors had accepted TSA Tech-Prep. No instructors from North Idaho College, Boise State University, or Lewis-Clark State College had reached a SoC acceptance stage. Welding instructors and T&I instructors with a graduate degree indicated non-acceptance of TSA Tech-Prep. However no significant difference (a =.05) between the groups studied was indicated by the chi-square treatment. Recommendations for improving the acceptance of TSA Tech-Prep by Idaho's post-secondary T&I instructors are noted.

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According to Pollard (1991). technical-preparation educational programs (Tech-Prep) are currently in the forefront of vocational-technical education across the nation. Tech-Prep has been spurred on by the Carl D. Perkins Act Amendments which made available $125 million to distribute to the states for their Tech-Prep programs (Wilcox, 1991). However for Tech-Prep to flourish. states must develop articulation and collaboration through out their educational systems (Coorough. 1992).

Hull (1992) noted that articulation is a process, an attitude. as well as a goal:

> As a process, articulation is coordination of policies and practices among sectors of the education system to produce a smooth flow of students from one sector to another. As an attitude. it is willingness of educators in all sectors to work together to transcend the individual and institutional self-interest that impedes maximum development of the student. As a goal, it is the creation of an educational system without artificial divisions. (p. 18)

There are two approaches to the articulation of Tech-Prep programs: 1) advanced placement program

articulation or time-shortened articulation (TSA) and 2) advanced skill program articulation. According to the Idaho Division of Vocational Education (1991), Idaho was to utilize the TSA approach when implementing Tech-Prep programs. In this approach, credit received by secondary students is used toward the total hours required for post-secondary certification.

According to Coorough (1992), the key to making the adoption of Tech-Prep programs successful is the enthusiastic acceptance of Tech-Prep by the post-secondary instructors. However, according to Weissglass (1991) instructors do not adapt easily to new approaches, such as TSA Tech-Prep.

Pollard (1991) conducted a study of attitudes toward Tech-Prep programs and noted that:

> Studies of articulation programs focus on three primary areas: administration, curriculum, and philosophy. Although these topics were emphasized in the instituted articulation programs, past literature indicated no research concerning attitudes and perceptions that was specifically related to the new tech-prep programs. (p. 36)

Purpose

The purpose of this study was to ascertain if Idaho's post-secondary T&I instructors had accepted the process, attitude, and goal of TSA Tech-Prep.

In order to address this question, Hall's (1979) Stages of Concern (SoC) model was utilized. Hall's SoC views the acceptance of educational change as a process. The SoC describes an individual's feelings, perspectives, and attitudes as they consider or accept the use of TSA Tech-Prep. An instructor's individual SoC moves from early self concerns to task related concerns and then to concerns about the impact of the innovation. Hall's SoC levels can be seen in Table 1.

Methodology

This study examined to which of Hall's seven SoC levels Idaho's post-secondary T&I instructors have progressed relative to the acceptance of TSA Tech-Prep. The research methodology utilized consisted of mailing a questionnaire to all of the State's post-secondary T&I instructors. The returned questionnaires were then analyzing utilizing the chi-square treatment to determine any statistically significant differences.

Table 1

Stages of Concern about the Innovation

6. REFOCUSING: Focus on exploration of more universal benefits from the innovation. Individual has definite ideas about alternatives.
5. COLLABORATION: The focus is on coordination with others regarding use of the innovation.
4. CONSEQUENCE: Attention focuses on impact of the innovation on students in the individual's sphere of influence.
3. MANAGEMENT: Attention is focused on the processes and tasks of using the innovation and best use of resources.
2. PERSONAL: Individual is uncertain about the demands of the innovation and the role of the innovation.
1. INFORMATION: A general awareness of the innovation and interest in learning more about it.
0. AWARENESS: Little concern about or involvement with the innovation is indicated.

Instrumentation

Hall and Rutherford's (1976) Stages of Concern Questionnaire (SoCQ) was utilized to measure Idaho's post-secondary T&I instructors' attitudes toward TSA Tech-Prep. The SoCQ consists of 35 items with five questions relive to each of Hall's (1979) SoC levels.

Estimates of internal consistency, alpha coefficients, for the seven SoC stages assessed via the SoCQ range from .64 to .83 (Wedman et al. 1986). Hall and Rutherford (1976) noted that the SoCQ was a valid measure of the educational change examined.

In addition to the SoCQ, a demographic data sheet was utilized. Demographic information obtained included; instructor's educational institution, instructor's T&I teaching area, instructor's age, and instructor's educational level.

Subjects

According to Key and Key (1992), the Tech-Prep curricula can lead to careers in trade and industrial (T&I) occupations, allied health, business or marketing, or numerous other fields of employment. This study only examined the T&I career cluster.

The population and sample for this study consisted of the 143 T&I instructors as listed by Idaho's six post-secondary vocational-technical schools. Those institutions included: Boise State University (BSU), Idaho State University (ISU), Lewis-Clark State College (LCSC), College of Southern Idaho (CSI), North Idaho College (NIC), and Eastern Idaho Technical College (EITC).

Of the 143 cover letters, demographic data sheets, and questionnaires mailed, 63 were returned or a response rate of 44.1%. Further examination of the returned questionnaires noted only 46 were from T&I instructors. Thus the number of subjects utilized in this study was established as those 46 post-secondary T&I instructors.

Procedure

The 46 usable questionnaires were scored utilizing the SoCQ Scoring Device (Hall, 1979). Individual raw scores were first computed, converted to SoC intensity percentiles, and then individually graphed. These individual graphs were then examined to assess the peak SoC stage, thus indicating where each instructor was on the acceptance continuum.

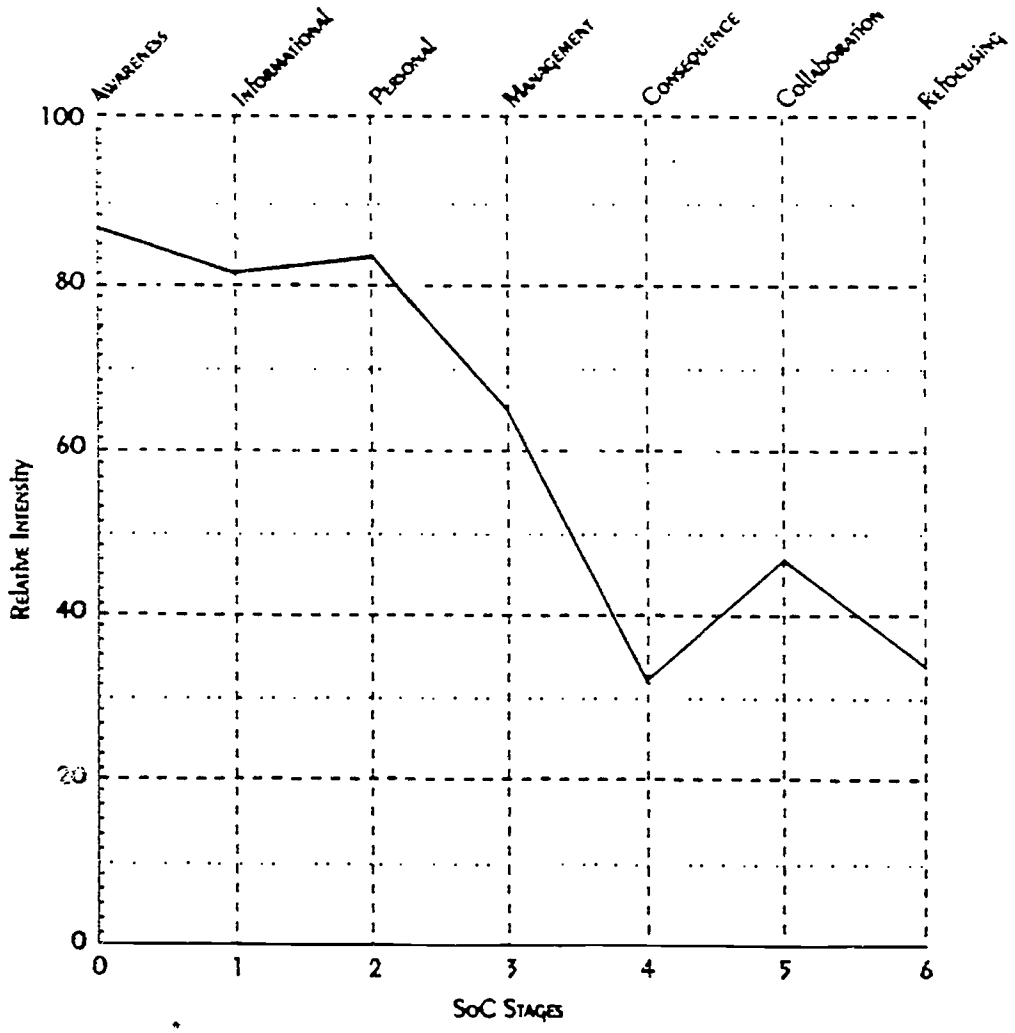
Scores were then grouped according to the information from the questionnaire's demographic data by the instructors' educational institution, age, T&I subject area (auto mechanics, drafting, welding, diesel mechanics, and electronics), and educational level.

Data Analysis

Analysis of the total sample's SoC profile, Figure 1, indicated an intensity peak at the awareness stage. This SoC group peak at the awareness stage indicated that the T&I instructors, as a group, had not accepted TSA Tech-Prep. An individual or group that has accepted the educational change would have its SoC intensity peak in one of the later four SoC stages (management, consequence, collaboration, or refocusing).

Table 2 showed the number of T&I instructors in each SoC stage. (Note: Tables 2-6 are located on pages 13-19) Twenty of the 46 instructors' individual SoC peaks (43.5%) were noted at the awareness level, thus indicating a lack of knowledge of TSA Tech-Prep. Forty of the 46 instructors' SoC profiles (87.0%) were below the management stage, indicating only 13.0% of the respondents had accepted this educational innovation.

Figure 1. SoC Profile of the Total Sample.



In comparing the instructors by educational institution, Table 3 noted that no BSU, LCSC, or NIC instructors had SoC profiles above the management stage, which indicated none of the T&I instructors at these institutions had accepted this educational innovation. Statistical analysis noted no significant difference between educational institution at the a =.05 level (Chi-Square 10.146, df=5, p=.071).

Dividing the sample by the instructors' educational level, Table 4, the data indicated that none of the respondents with graduate degrees (n =10) had accepted this educational change. The group noting the highest level of adoption was the instructors with below a baccalaureate degree (23.8%). However, the difference between educational levels was not significant (Chi-Square 4.184, df=2, p=.123).

Table 5 showed the sample divided by the instructors' age. No significant difference was indicated between T&I instructors of different age levels (Chi-Square .421, df=2, p=. 810). It should be noted that there were not respondents below 30 years of age.

Table 6 indicated the SoC level of the post-secondary T&I instructors by subject area. Nine of the 46 respondents' SoC profiles were not included in this analysis because of group sizes of two or less. Drafting instructors indicated the greatest level of acceptance of TSA Tech-Prep at 25.0%. The only T&I subject area with no instructors noting acceptance was welding. The chi-square statistical treatment indicated no significant difference between T&I teaching area (Chi-Square 1.742, df=4, p=.783).

Findings

The results of this study indicated that only six of 46 (13.0%) Idaho post-secondary T&I instructors had accepted the concept of TSA Tech-Prep. Instructors at EITC and CSI noted the highest level of acceptance. While all of the respondents from BSU, LCSC, and NIC indicated non-acceptance of this educational change. T&I instructors with graduate degrees and those who taught welding also noted non-acceptance of this educational innovation. Statistical treatment noted no significant difference (a =.05) between any of the groups examined.

Recommendations

Weissglass (1991) noted that staff development is the key to successful educational change. He suggested that providing information "is not sufficient to over come the obstacles to change caused by the culture of schools" and the instructors' "lack of awareness of the need for change". (p. 32) He indicated the following steps should be taken by staff developers:

1. Breakdown the isolation of the instructors.
2. Improve instructors' listening skills.
3. Provide opportunities for instructors to express their feelings about the change.
4. Address instructors' personal concerns.
5. Establish instructor support networks.

Conclusion

Non-acceptance of TSA Tech-Prep by Idaho's post-secondary T&I instructors was indicated by this study. This lack of acceptance could prove to be a major obstacle in implementing the new Perkins legislation.

The results of this study indicated certain groups of the post-secondary T&I teaching profession did not accept this educational change. Those groups were

instructors with graduate degrees, welding instructors, and instructors from CSI, LCSC, and NIC.

In order for Tech-Prep to become an educational success in Idaho, as it has become in other parts of the country, Idaho Tech-Prep change agents must utilize innovative change processes, as noted by research, and not rely on traditional methods of information dissemination.

Table 2

SoC Stagess of The Total Sample

SoC Level	n	%	Intensity
Awareness	20	43.5	88
Information	5	10.9	82
Personal	15	32.6	85
Management	5	10.9	66
Consequence	0	0.0	32
Collaboration	0	0.0	47
Refocusing	1	2.2	34
Total	46		

Table 3

SoC Stages by Instructors' Educational Institution

	NIC			BSU			LCSC		
SoC Level	n	%	Int	n	%	Int	n	%	Int
Awareness	2	33.3	88	5	62.5	91	3	42.9	93
Information	1	16.7	75	1	12.5	65	1	14.2	85
Personal	3	50.0	89	3	37.5	81	3	42.9	89
Management	0	0.0	45	0	0.0	65	0	0.0	73
Consequence	0	0.0	32	0	0.0	21	0	0.0	42
Collaboration	0	0.0	41	0	0.0	42	0	0.0	41
Refocusing	0	0.0	20	0	0.0	31	0	0.0	32
Totals	6			8			7		

Table 3 (continued)

SoC Stages by Instructors' Educational Institution

	CSI			ISU			EITC		
SoC Level	n	%	Int	n	%	Int	n	%	Int
Awareness	3	50.0	86	7	53.3	87	0	0.0	79
Information	1	16.7	81	1	6.7	80	0	0.0	90
Personal	0	0.0	79	5	33.3	83	2	50.0	94
Management	2	33.3	71	1	6.7	58	2	50.0	86
Consequence	0	0.0	35	0	0.0	29	0	0.0	53
Collaboration	0	0.0	51	0	0.0	54	0	0.0	45
Refocusing	0	0.0	34	1	6.7	38	0	0.0	49
Totals	6			15			4		

Chi-Square 10.146, df=5, p=.071

Table 4

SoC Stages by Instructors' Educational Level

	Below BS			BS			MS		
SoC Level	n	%	Int	n	%	Int	n	%	Int
Awareness	7	33.3	85	8	53.3	91	5	50.0	88
Information	4	19.0	83	1	6.7	83	0	0.0	78
Personal	5	23.8	85	5	33.3	84	5	50.0	87
Management	4	19.0	65	1	6.7	66	0	0.0	68
Consequence	0	0.0	38	0	0.0	28	0	0.0	30
Collaboration	0	0.0	41	0	0.0	52	0	0.0	52
Refocusing	1	4.8	34	0	0.0	25	0	0.0	43
Totals	21			15			10		

Chi-Square 4.184, df=2, p=.123

Table 5

SoC Stages by Instructors' Age

	31-40			41-50			Above 50		
SoC Level	n	%	Int	n	%	Int	n	%	Int
Awareness	2	18.2	87	10	50.0	85	8	53.3	92
Information	0	0.0	85	3	15.0	82	2	13.3	78
Personal	7	63.4	92	5	25.0	81	3	20.0	84
Management	2	18.2	76	2	10.0	60	1	6.7	66
Consequence	0	0.0	48	0	0.0	27	0	0.0	31
Collaboration	0	0.0	55	0	0.0	47	0	0.0	40
Refocusing	0	0.0	36	0	0.0	28	1	6.7	38
Totals	11			20			15		

Chi-Square .421, df=2, p=.810

Table 6

SoC Stages by Instructors' T&I Subject Area

	Auto			Welding			Drafting		
SoC Level	n	%	Int	n	%	Int	n	%	Int
Awareness	4	50.0	91	2	40.0	86	3	37.5	89
Information	1	12.5	86	2	40.0	87	1	12.5	90
Personal	2	25.0	88	1	20.0	89	2	25.0	86
Management	1	12.5	78	0	0.0	61	2	25.0	81
Consequence	0	0.0	38	0	0.0	40	0	0.0	33
Collaboration	0	0.0	57	0	0.0	31	0	0.0	56
Refocusing	0	0.0	36	0	0.0	31	0	0.0	28
Totals	8			5			8		

Table 6 (continued)

SoC Stages by Instructors' T&I Subject Area

	Diesel			Electronics		
SoC Level	n	%	Int	n	%	Int
Awareness	3	50.0	82	3	30.0	87
Information	1	16.7	71	0	0.0	82
Personal	1	16.7	74	5	50.0	86
Management	1	16.7	55	1	10.0	64
Consequence	0	0.0	31	0	0.0	38
Collaboration	0	0.0	32	0	0.0	50
Refocusing	0	0.0	38	1	10.0	43
Totals	6			10		

Chi-Square 1.742, df=4, p=.783

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