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THE EDITORS

This issue of the *International Journal of Vocational Education and Training* features three research articles. Two articles concern the training of teachers, and one article examines internships for administrators. A review of a edited book about work and education in America rounds out this issue.

In "Teacher Motivation & Job Satisfaction - A Qatar Case Study in Technical Education," Hagmann and Anwari examine motivational potential and job satisfaction among teachers and instructors of a technical school in Qatar. Their work is rooted in the scholarship of Hackman and Oldham's Job Characteristics Model, which is, in itself, an extension of well–known work from the 1960s by Frederick Herzberg on his Two-Factor Theory (also known as the Motivation-Hygiene Theory) .

Hagmann and Anwari apply the Hackman and Oldham's Job Characteristic Model to the perceptions, classroom teachers and workshop instructors of a technical school in Qatar hold towards their jobs. Although this study has somewhat limited sample size and a unique environment that might limit the generalizability of the findings, this study demonstrates the potential for tying motivating features in school environments to teacher satisfaction, which, in turn, is an predictor of performance, absenteeism, and turnover.

Hagmann and Anwari write that, "This study represents the first systematic work with regard to teacher motivation and job satisfaction in Qatar and helps optimizing teaching resources."

Robert Clark and Richard Walter offer perspectives on competencies developed in internships for administrators in their article, "Values Placed on Administrator Internship Training Programs by Current Administrators." They investigated the importance of competencies associated with an administrative internship program conducted in central Pennsylvania in the U.S. They surveyed 38 certified career and technical directors in rural, urban, and suburban areas about their perceptions of the importance of competencies developed within the internship program for Pennsylvania .career and technology education program directors.

Clark and Walter summarize exhaustive tabulations of their survey data to demonstrate, not surprisingly, that career and technology school directors place a high value on development of administrative skills and accountability in internships for administrators. Ethics and collective bargaining skills came out high on the list, too.

Readers must assess whether the findings of Clark and Walter's work – work that might be particular to the U.S., Pennsylvania, and to the brand of career and technology practice in these locations, as well as conditioned by U.S. legal policies and practice (e.g., HIPPA) – are generalizable to other people and settings. Nevertheless, as Clark and Walter suggest, their findings might be "useful for university internship programs in determining how to structure administrative internship experiences for administrative candidates."

Gunbayi, in "A Reform for Vocational and Technical Education Training Teachers in Turkey," outlines changes occurring as a result of the closing of a Faculty of Technical Education, Faculty of Vocational Education, and Faculty of Trade and Tourism Education in Turkey, which formerly trained teachers for vocational and technical secondary education institutions. Although this change might be disruptive, Gunbayi indicates that the transformation is progressing toward implementation.

In our book review section, Gordon examines *Work and Education in America: The art of integration*, an edited work by Barabasch and Rauner published by Springer. Gordon concludes that, "Overall, it is an outstanding book and career and technical teacher educators in general will find it of interest and importance." The *Journal* wishes to publish additional analytical reviews of books and software relenat to our readers. Share what you believe is useful with your comrades in vocational education and training.

This issue of the *Journal* ends with our suggestions for potential authors, "Manuscript Preparation and Publication Guidelines for the *International Journal of Vocational Education and Training*." Following these guidelines requires your attention to detail. Authors must produce an manuscript and ancillary materials (e.g., tables, figures, and references)that meet certain technical guidelines because the *Journal*, in contrast with a more commercial operation, is produced by volunteers.

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RMB + DLP

TEACHER MOTIVATION & JOB SATISFACTION - A QATAR CASE STUDY IN TECHNICAL EDUCATION

STEFAN HAGMANN[1] & MOHAMMED ALI ANWARI[2]

ABSTRACT

The purpose of this study was to examine motivational potential and job satisfaction among teachers and instructors of a technical school in Qatar. To discern the relationships between job characteristics and psychological states and to compare results with other data, the Model of Hackman & Oldham is applied. Results show that the work environment is of highly motivating potential and job satisfaction shows a moderate agreement with short comings in security and pay satisfaction. The received scores are similar or outperform other samples. Findings give technical schools clear reasons for changes in human resources management. This study represents the first systematic work with regard to teacher motivation and job satisfaction in Qatar and helps optimizing teaching resources.

The vocational education and training in Qatar was started in mid 1950s by establishing an Industrial Secondary School. In 1970s, the Vocational Training and Development Department was established offering a two-year training program. In the early 1980s, the Qatari government and public became increasingly concerned about the quality of the education system in general. Several studies recommended improvements to the system. An UNESCO study in 1990 (Ministry of Education and UNESCO, 1990) highlighted a number of areas for improvement, including problems directly associated with teachers: high turnover and low status of the teaching profession among Qatari nationals, especially in men. In 1996, the Ministry of Education in Qatar established an in-country committee to review all aspects of the education system. This committee conducted a comprehensive study of teachers, students, and administrative personnel in a sample of 21 Qatari schools (Ministry of Education - Higher Committee for Oversight of the Politics of Education, 1996). The study confirmed the findings of UNESCO study and made recommendations to increase teacher performance and satisfaction and to improve student achievements. Several new initiatives were introduced in the 1990s both simultaneously with and in response to the committee study. One of these initiatives was the establishment of three new schools in 1999: One technical school and two scientific secondary schools.

The technical school, called the Secondary School for Industrial Technology (SSIT), was then established in collaboration with the German Agency for Technical Cooperation (GTZ). SSIT is contributing to the social and economic development of Qatar by offering technical education to young Qataris on secondary school level, grade 10-12, preparing them for employment, in-company upgrade training or post-secondary education. At SSIT, the teaching and training activities are conducted as a mix of 50% classroom learning

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by teachers to cover general academic subjects as well as specialized (trade related) subjects. The other half of the program is dedicated to hands-on workshop/laboratory training delivered by workshop instructors. In 2004, the Supreme Education Council (SEC) in Qatar launched the "Education Reform Initiative" with the objective of reforming the present school system to make it compatible with international standards. Under this reform the governmental schools were converted to "Independent Schools." An Independent School is a government-funded school that is granted autonomy to carry out its educational mission and objectives while being held accountable to terms of an operating contract with SEC. All Independent Schools must meet established curriculum standards in Arabic, English, mathematics and science, as well as comply with periodic financial audits. SSIT was among the first batch of independent schools. Under this education reform initiative, the present study was carried out.

THEORETICAL FRAMEWORK

Studies on teacher motivation and job satisfaction are very rare in Qatar and Gulf region. This study is the first regional work systematically applying Hackman and Oldham's Job Characteristic Model to examine the motivational potential and job satisfaction among teachers. Teachers are arguably the most important group of professionals for any nation's future. Therefore, it is disturbing to find that many of today's teachers are dissatisfied with their jobs. Before describing theories of contextual, enriching factors of a workplace and elaborating factors of job satisfaction, it is crucial to determine what facilitates teacher motivation.

STUDIES ON TEACHER MOTIVATION

Many factors have been examined in an attempt to find which ones promote teacher motivation most. Jesus & Lens (2004) describe an integrated model of teacher motivation focusing on different cognitive-motivational theories. Pay incentives have been found to be unsuccessful in increasing motivation. In their study of 167 teachers, Sylvia and Hutchinson (1985), concluded that "teacher motivation is based in the freedom to try new ideas, achievement of appropriate responsibility levels, and intrinsic work elements … schemes such as merit pay were predicted to be counterproductive" (p. 841). They explained that true job satisfaction is derived from the gratification of higher-order needs, social relations, esteem, and actualization rather than lower-order needs (p.842). Indeed, Rothman (1981) contrasted the security and financial motives for entering teaching during the depression years with present-day idealistic and intellectual convictions. The conclusion of Greenwood and Soars (1973) that less lecturing by teachers and more classroom discussions related positively to teacher morale further supports the importance of higher-order needs. Similar findings are found by Davis & Wilson (2000).

Studies showed that improvement in teacher motivation has benefits for students as well as teachers; however, there is no consensus about the precise benefits. For example, researchers have had varying results when examining whether teacher motivation leads to increased levels of academic achievement (Stevens & White, 1987). While the relationship between teacher motivation and student achievement has not yet been established, the correlation between teacher motivation and student self-esteem has been shown by Peck et al. (1977). The authors found that "teachers with strong positive attitudes about teaching had students whose self-esteem was high" and that "students seem

to recognize the effectiveness of teachers who are satisfied with their teaching performance." (Peck et al. 1977, p. 2). Rothman (1981) suggested that this association exists because teachers serve as more than just educators; they are role models. The benefits of teacher satisfaction for both teachers and pupils points to the importance of studying how teachers feel about work.

STUDIES ON JOB SATISFACTION

Job satisfaction has been found to relate inversely to individuals' personality traits and social and demographic variables. Among them turnover intentions of individuals who experience relatively low job satisfaction tending to change their work positions (see Jesus & Conboy, 2003). A possible explanation of why some individuals experience relatively high job satisfaction in a particular work environment while others experience relatively low job satisfaction in the same work environment is the difference in personality characteristics (Omundson et al., 1996). In the same context, results of Schonfeld's (2001) study showed that support from non work sources was directly related to future improved symptom levels and self-esteem. Supervisor and colleague support were directly related to future job satisfaction. Several studies have focused on teachers' job satisfaction and its psychological, social and cultural correlates. Examples of this research are the studies of Hammarberg and Hagekull (2000), Lenox (2000) and Zigrang (2000). Hammarberg and Hagekull (2000) found that subjective conditions (e.g., job satisfaction, center quality, social recognition, satisfaction with education) were related to teachers' perceived control over child behavior, while objective conditions (such as length of professional experience and the educational level) were not. Results of Lenox's and Zigrang's studies revealed a statistically significant positive relationship between principals' considerate leadership style perceived by teachers and teacher job satisfaction. Results suggest that there is a relationship between principals who lead with a considerate leadership style and teacher job satisfaction. In addition, the results of Lenox's study showed a significant correlation between organizational culture and general job satisfaction, intrinsic job satisfaction, and extrinsic job satisfaction. Barnett & McCromick (2003) confirm these findings.

Al-Mashaan (2003) investigated the differences between males and females on one hand, and between Egyptian and Kuwaiti teachers on the other. In his sample of 406 teachers, he also examined the correlation between Type A behavior and job satisfaction. Type A behavior has been defined as an active and complex emotion which includes behavioral aptitudes such as: muscle tension, excitation, quick speech and concentration, an accelerated rate of activities and emotional responses such as excitement or aggressive infuriation, and the increase of probability of anger (Rosenman, 1990). Results revealed that there are no significant differences between males and females in Type A behavior. However, there are significant differences between males and females in job satisfaction, organization structure, and satisfaction with organizational processes. Results also revealed a significant difference between Kuwaiti and Egyptian teachers in the research variables. In addition, information, results indicate significant positive correlations between Type A behavior and job satisfaction.

WORK ENRICHMENT THEORIES

The study of how people react to changes in the workplace is called job enrichment. Jobs are considered enriched when there are context factors that impact a person's intrinsic motivators which are creating positive outcomes.

To understand why job enrichment works and how it can be applied to an educational setting, the roots of its theoretical background are highlighted through introducing descriptions of Herzberg's Two-Factor Theory (1966) and Hackman and Oldham's Job Characteristics Model (1975).

First, the Two-Factor Theory (also known as the Motivation-Hygiene Theory) developed by Frederic Herzberg (1966) describes the factors of a work that promote satisfaction and those that promote dissatisfaction (Herzberg 1966; Hackman & Oldham 1975; Frase 1989). According to Herzberg, it is neither the broadening of responsibilities nor toils known as work enlargement that leads to job satisfaction. Rather job enrichment that leads to important job content factors into the design of an appropriate framework. These factors are known as "motivators" or "satisfiers" and are intrinsic to the work itself. Examples of these include more recognition for one's efforts, more possibilities for achievement, more responsibility, more room for advancement, and increased personal growth. On the other side, the contextual factors that lead to dissatisfaction include such things that once they are presented can become dissatisfiers upon their removal. Examples can include lowered salaries, perceived negative change in working conditions, and less satisfying interpersonal relations. These are collectively known as "hygiene' factors."

As a second theory, the Job Characteristics Model (JCM) developed by J. Richard Hackman and Greg Oldham (1975) has extended Herzberg's Theory. Whereas Herzberg advocated the creation of "good" jobs, Hackman and Oldham built on that concept by attempting to refine our understanding of what a "good job" actually looks like. In other words, what are the characteristics of motivating jobs? Further, they also suggested that different workers react differently to jobs. Their research led them to conclude that five key characteristics could be used to describe the motivating potential of a job. These characteristics are: skill variety, task identity, task significance, autonomy and feedback. Their research found that jobs scoring high in terms of a combination of these five characteristics resulted in higher job satisfaction and productivity than jobs scoring low. For a job to be intrinsically motivating, all five characteristics must be simultaneously present, to some extent. Skill variety describes the degree to which a job requires the exercise of a number of different skills, abilities, or talents. Such activities must not merely be different, but they must be distinct enough to require different skills. Task identity defines the extent to which a job requires completion of a whole and identifiable piece of work. Task significance refers to the importance of the job; the degree to which the job has an impact on the lives of other people, the immediate organization or the external environment. Autonomy is the degree to which the jobholder is free to schedule the pace of his or her work and determine the procedures to be used. Feedback is the degree to which the individual doing a job obtains information about the effectiveness of the performance. Feedback does not only refer to supervisory feedback, but also the ability to observe the results of their work.

MOTIVATION POTENTIAL SCORE (MPS)

Hackman and Oldham sought to measure the motivating potential of jobs assessing the extent a job exhibits the five characteristics. A motivating job shows evidence of all five core job characteristics. The score calculated using this equation is only a crude indication of a job's motivational potential. Thus, two different people may produce a different score for the same job.

The utility in this equation lies in its ability to pinpoint particular problems for a specific job. Then, having pinpointed the problem, the job can be "re-designed" to correct the shortcomings in one or more of the five critical components. The MPS score may turn out to be positive or zero. Jobs that produce a high motivating potential score are expected to lead to higher performance, satisfaction, low absenteeism, less staff turnover, and high intrinsic motivation. Examples of the three core characteristics of educational settings in technical learning environments are experienced meaningfulness, experienced responsibility, and knowledge of results.

EXPERIENCED MEANINGFULNESS

A mechanics instructor has to be able to facilitate discussions with other practical and abstract applications in a workshop setting (like a student is asking if a certain welding technique can be applied to repair his friend's car). Furthermore, he has to be able to design course materials and use computer technology to perform his job. This would require more skills and new responsibilities that may influence his work outcomes.

EXPERIENCED RESPONSIBILITY

A teacher is given the freedom to decide important matters pertaining what tools or methods to use for his course but subsequently he will also be personally responsible for any failure or success of the learning activity.

KNOWLEDGE OF RESULTS

In the traditional learning environment, teachers as well as instructors get the feedback from students' practical involvement such as their participation in the course and academic performance.

RESEARCH QUESTIONS

The purpose of this study was to apply the Job Characteristic Model to the perceptions, classroom teachers and workshop instructors of a technical school hold towards their jobs. The main two research questions can be described as follows:

1. How do the subjects feel about their ...
- ... core job characteristics as described in the model?
- ... critical psychological states as described in the model?
- ... personal and work outcomes focusing on satisfaction and
- ...motivation as described in the model?
2. How do the mean scores compare to other similar studies?

METHOD

PARTICIPANTS

The participants consisted of 31 classroom teachers and workshop instructors of a technical secondary school in Qatar. Eighteen participants were classroom teachers while 13 were workshop instructors. In total, 26 (84%) of the subjects spoke Arabic and 5 (16%) subjects spoke English.

MATERIALS & PROCEDURE

Using the Job Diagnostic Survey (JDS), teachers and instructors were asked to rate the extent to which the five core job characteristics are present in their work. Ratings were then used to calculate the overall "motivational potential" (MPS) of the work. The original instrument consists of approximately 80 items and involves the use of a 7-point rating scale for each item. Although all items of Section B were based on the original JDS, we had to contextualize the original instrument. To do so, the questionnaire was translated into Arabic based on a translation-retranslation analysis. This was to ensure that non-English speaking participants understand the questions. The questionnaire was then divided into two sections. Section A focused on demographic profiles while Section B focused on the perceived job characteristics, psychological states and work outcomes. To avoid a central tendency bias, a forced choice method was applied as a second change. To do this, the scale was reduced to a 6-point rating scale (1 = I strongly disagree, 6 = I strongly agree) for all items. Figure 1 shows an extract of Section B. The survey consisted of in total 46 questions and was given to all participants.

	Based on your experience, please mark the most appropriate response.	I strongly disagree					I strongly agree
01	My work is very eventful.	O	O	O	O	O	O
02	Just doing the work required by the job provides many chances for me to figure out how well I am doing.	O	O	O	O	O	O
03	My job is quite simple and repetitive.	O	O	O	O	O	O
04	The job provides me the chance to completely finish the pieces of work I begin.	O	O	O	O	O	O
05	The way I do my job will affect the life and well-being of other people.	O	O	O	O	O	O
06	The job gives me considerable opportunity for independence and freedom in how o do the work.	O	O	O	O	O	O
07	The job itself provides very few clues about whether or not I am performing well.	O	O	O	O	O	O
08	The job denies me any chance to use my personal initiative or judgment in carrying out the work.	O	O	O	O	O	O
09	The amount of feedback given by the school management is sufficient.	O	O	O	O	O	O
10	The job requires me to use a number of high-level skills.	O	O	O	O	O	O

Figure 1. *Adapted JDS questionnaire (selection)*

RESULTS

Table 1 presents the minimum and maximum scores, means, and standard deviations for each of the covered job dimensions.

Table 1. *Means & Standard Deviations of Job Dimensions, Psychological States & Personal/Work Outcomes*

	n	min	max	*M*	*SD*
Job Dimensions					
Skill variety	30	1	6	4.75	.79
Task Identity	31	2	6	4.79	.70
Task Significance	30	1	6	5.25	.58
Autonomy	29	1	6	4.10	1.1
Feedback from Job	30	1	6	4.00	.78
Feedback from Agent	29	1	6	3.52	.99
Dealing with Others	31	1	6	4.40	1.00
Psychological States					
Experienced Meaningfulness	30	1	6	5.31	.86
Experienced Responsibility	31	2	6	5.54	.65
Knowledge of Work Results	31	2	6	4.82	1.19
Personal / Work Outcomes					
General Job Satisfaction	31	1	6	4.83	1.42
Internal Work Motivation	31	1	6	5.27	.75
Growth Satisfaction	30	1	6	4.56	1.09
Pay Satisfaction	30	1	6	3.03	1.57
Security Satisfaction	31	1	6	3.11	1.72
Coworkers Satisfaction	30	2	6	5.03	.91
Supervision Satisfaction	31	1	6	4.64	1.50

MOTIVATION POTENTIAL

As indicated in the table, mean scores for all but one (Feedback from Agent) are slightly higher than four, thus indicating moderate presence of the dimension. The degree in which the job impacts the lives of others (M=5.25) received the highest faculty agreement. There was also less variability in the responses for this item compared to the others as the smaller standard deviation suggests

(*SD*=.58). This shows how important the teachers and instructors estimate the impact of their work on the future career paths of the students towards a technical career rather than an ordinary post-secondary career. Scores on how the job involves doing a "whole and identifiable" piece of work (*M*=4.79) and how the job requires utilization of various skills and talents (*M*=4.75) were also high. The linkage of classroom theory lessons and their practical application in the workshops give reasons to see a completion of a whole and identifiable piece of work for both, teachers and instructors. These combined assignments often require the exercise of a number of different skills and abilities which go beyond the normal scope of both groups. The degree to which the job requires them to work closely with others (*M*=4.40), provides freedom in determining how the work is done (*M*=4.10) and to which the job provides feedback (*M*=4.00) were still highly received. This reflects the fact that both groups had to schedule the pace of their work and determine the different content to be taught. In addition to the subject specific planning, teachers and instructors had to organize the coordination between their activities. The subjects were neutral or uncertain regarding the degree to which the organization provided sufficient feedback on the job, resulting in the lowest score (*M*=3.52). For the dimensions with high variances, only the items covering "Feedback from Agent" showed differences in the perceptions of teachers and instructors. While the means of both groups are similar (M_T=3.45; M_I=3.63), the variance of instructor scores was much smaller compared with the teachers' scores (SD_T=1.20; SD_I=.61). This could result from the fact that the instructors had full time consultants available who followed up daily duties and gave guidance and support in case of questions. That consultancy was also accessible for teachers but limited to technical subjects only. All other subjects were excluded.

In the sample, teachers attained a mean score of MPS_T=94.65 while instructors attained a mean score of MPS_I=82.93. These scores also remained stable when the scores of all professionals were aggregated on the school level (MPS_s=89.44) as shown in Table 2.

Table 2. *Motivating Potential Score (MPS) Results*

		M					
Group	n	Skill Variety	Task Identity	Task Significance	Autonomy	Feedback from job	MPS
School	31	4.75	5.03	5.61	3.58	4.87	89.44
Teacher	18	4.78	5.22	5.61	3.72	4.89	94.65
Instructor	13	4.71	4.91	5.62	3.38	4.83	82.93

The MPS is interpreted as a global measure for enabling forms of organizational formalization. At 89 points, the mean score attained by the professionals is relatively high. It corresponds to 44% of the maximum potential points. According to Hackman and Oldham (1980), scores below 20% of the maximum should be taken as low because they strongly de-motivate staff. In the norm of Hackman & Oldham and a comparable study teachers scored 52% (Hackman & Oldham 1980) to 96% (Lawrence 2004) while employees in service professions scored as well 44%; police officers, 32% (Gaines & Jermier 1983); and bank employees, between 31% and 41% (Griffin 1991). Hence, the teachers and instructors in the present study attain equal or higher scores than of those measured in other professions. A reason

for this difference might be related with the high expectations of teachers and instructors towards an independent school system.

CRITICAL PSYCHOLOGICAL STATES

As indicated in Table 1, the subjects exhibited the most regarding their perceptions that the job instilled a sense of responsibility for the results of one's work (M=5.54). The standard deviation (SD=.65) suggests that there was less variability in responses regarding this item than the other two psychological states. At the time the study was conducted, a national framework for technical education was in the developmental stage. So, teachers and instructors were highly responsible for the planning and assessment of the different technical programs to meet the expectations of all stakeholders.

There was a high variance in perceptions on the "Knowledge of Work Results" which were basically replicated within both groups (M_T=4.94, SD_T=1.24; M_I=4.65, SD_I=1.14). Since this psychological state is highly related with frequent feedback on relevant information, the different perceptions could again stem from the fact that the instructors and the technical subjects' teachers were provided with a fulltime consultancy which offered feedback on results.

AFFECTED OUTCOMES

As indicated in Table 1, the means range between three and five suggest a moderate agreement or satisfaction response. The subjects responded most strongly to the degree they felt the work motivates them (M=5.27) with not much variance in their opinions (SD=.75). This result confirms the earlier findings on "task significance" and "task identity" which could be seen as a major factor for motivation. The subjects felt dissatisfaction regarding pay (M=3.03) and job security (M=3.11). However standard deviations suggest a wider variability of responses which need to be further analyzed. The analysis of both sub-groups shows that the means and variances remain basically the same within the groups for most items. But for the group of teachers, the subjects' perceptions are extremely divers when questioned about job security satisfaction (M_T=3.02, SD_T=1.98), pay satisfaction (M_T=2.85, SD_T=1.77) and supervision satisfaction (M_T=4.46, SD_T=1.75). With regard to job security, one reason for dissatisfaction and diversity could be the fact that there was a structural change in the way schools were organized. The school being analyzed was operated as an "independent school" which were eligible to contract staff independently. So, the transition from public to private contracting could be seen as a risk. With regard to pay satisfaction, again the change to an independent organization could have resulted in the expectation that there is more flexibility in contracting. But due to the fact that this particular school had a low teacher-student ratio which forms the basis for the school's employee budget, payments could not outnumber public standard salaries.

COMPARISONS TO OTHER STUDIES AND NORMS

The analysis of job dimensions for jobs including teaching and instruction were conducted in several studies. On the one hand, normative data is provided by a study of Hackman et al. (1979) involving almost seven thousand employees. In establishing the norm, the authors placed the teaching occupation in the group labeled "professional job family (PRO)." On the other hand, a study applying the Hackman & Oldham's Model on music teachers (Lawrence 2001)

serves as a further comparison (CMS). Encountering the very small sample size of this study and the scale of the other US studies, the objective was to position this first data of the Gulf Region in the framework of US studies. For this positioning, SSIT scores were transformed to a 7-point rating scale (see Wimmer & Dominick 2005). Table 3 gives an overview of the means on job dimensions and the MPS of the studies.

Table 3. *Comparisons with other Studies and Norms*

JCM Dimensions/ MPS	$SSIT_t$	PRO	CMS
Skill variety (SV)	5.54	5.4	4.59
Task Identity (TI)	5.58	5.0	4.42
Task Significance (TS)	6.12	5.6	4.31
Autonomy (AU)	4.78	5.4	4.71
Feedback from Job (FJ)	4.65	5.1	4.56
Feedback from Organization (FO)	4.11	4.2	3.96
Dealing with Others (DO)	5.13	5.8	5.25
MPS	131.85	154	96.16
Experienced Meaningfulness (EM)	6.19	5.40	3.90
Experienced Responsibility (ER)	6.46	5.80	5.05
Knowledge of Results (KWR)	5.61	5.00	4.17
General Job Satisfaction (GJS)	5.63	4.90	4.47
Internal Work Motivation (IWM)	6.15	5.80	5.23
Growth Satisfaction (GS)	5.63	5.10	5.88
Pay Satisfaction (PS)	3.53	4.40	3.77
Security Satisfaction (SES)	3.62	5.00	4.99
Coworkers Satisfaction (CS)	5.86	5.50	5.78
Supervision Satisfaction (SUS)	5.41	4.90	5.36
Coworkers Satisfaction	30	2	6

JCM Dimensions/ MPS	$SSIT_t$	PRO	CMS
Supervision Satisfaction	31	1	6

Note: $SSIT_t$ = transformed scores of SSIT sample

Figure 2 compares the three samples pertaining to job dimensions. For the "Task Identity" (TI) and "Task Significance" (TS) dimensions there are obvious differences between the three samples. In terms of the "Skill Variance" (SV) dimension, there is a difference between the sample of this study and the CMS sample. No differences seem to appear for the "Feedback from the Organization/Agent" (FO) dimension. While there are differences to the PRO sample, it furthermore seems that the present study and the CMS sample have a similar trend on all other dimensions of the model.

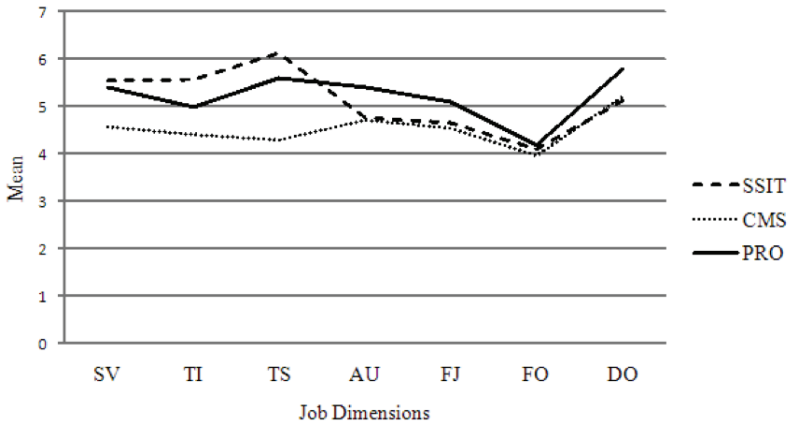

Figure 2. *Comparisons on Job Dimensions*

In terms of MPS scores all three samples offer different scores. The sample of the Hackman et al. (1979) study (PRO) seems to outnumber the "Music Teacher" sample (CMS), while the score of the educational staff of this study seems to score in between. To clarify the differences, a one-sample t-test was calculated. The t-tests show, that in terms of "Task Identity" (TI) and "Task Significance" (TS) the differences across all of the samples are highly significant ($p<.001$). For "Skill Variance" (SV) the comparison with the CMS-sample shows highly significant differences ($p<.001$) while comparisons with the PRO sample for "Autonomy" (AU) and "Feedback from the job" (FJ) and "Dealing with others" (DO) show significant differences ($p<0.05$). All other comparisons of the job dimensions turn out not to be significantly different ($p>0.05$). For the MPS-scores, the *t*-tests indicate a highly significant difference between our study and the CMS sample ($p=0.001$) and a significant difference to the PRO sample ($p<0.05$).

The comparison of psychological states in Figure 3 shows, that there is a consistent difference between the samples across all scores of psychological states. While the teachers and instructors in our study always scored higher

than the two other groups, the PRO sample achieves higher results than the music teacher sample (CMS).

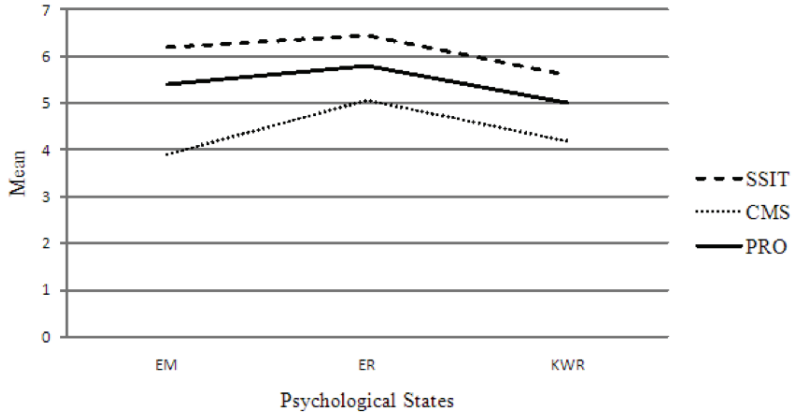

Figure 3. *Comparisons on Psychological States*

To clarify the significance of those differences, a one-sample t-test was carried out. The results show a significant difference between the present study and the PRO sample for the "Knowledge of Work Results" (KWR) (p<0.05) and highly significant differences for all other comparisons (p<.001).

In contrast to the above comparisons, the personal/work outcomes of the different samples (Figure 4) show an indifferent picture. On one side, one group shows similarities with another sample while on the other side there are huge differences between the same comparisons.

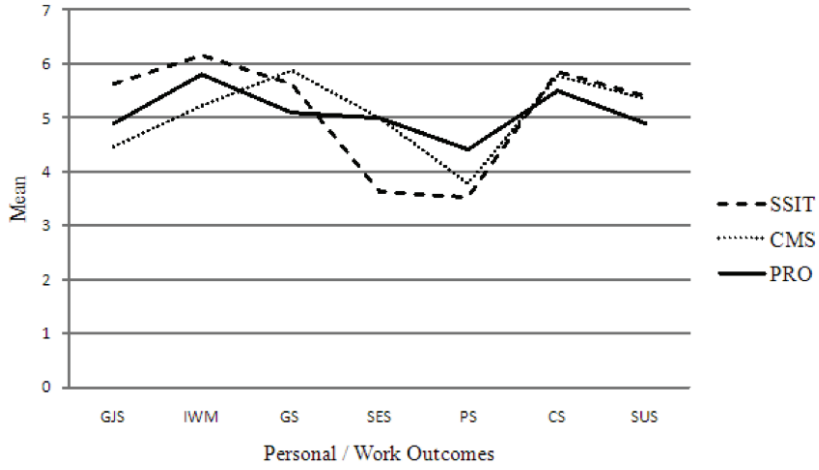

Figure 4. *Comparisons on Personal/Work Outcomes*

To sort out differences, a one-sample *t*-test was calculated. In terms of "General Job Satisfaction" (GJS, p<.05), "Internal Work Motivation" (IWM,

$p<.05$), and "Security Satisfaction" (SES, $p<.05$) the subjects of the present study differ significantly from those of the two other samples. With regard to "Pay Satisfaction," the SSIT scores are significantly lower than the PRO sample ($p<.05$). All other comparisons are not significantly different ($p>.05$).

DISCUSSION

Results for this study indicate in general that the JDS provides valid feedback on different job characteristics which reflect classroom practice as well as the organizational and work environment of a technical school. In particular, the results show that apart from a high potential for motivating personal there are job dimensions (like feedback from the organization) which reflect the different perceptions of classroom teachers and workshop instructors and give detailed reason for improvements. High MPS scores of the subjects describe a highly motivating environment, showing significant differences in comparison to other professions and replicating data of previous studies in education. The analysis of critical psychological states as well as affected outcomes delivers detailed feedback on strengths (e.g. experienced responsibility, internal work motivation) and areas for improvements (e.g. pay satisfaction and job security). Also, the results indicate that positive effects of initiatives were clearly reflected in the JDS (like providing feedback to workshop instructors). This potential can be used to evaluate the effects of approaches focusing on JDS dimensions (like school development projects, improvement projects within quality management attempts or projects addressed to a sub cohort of a school). Based on such detailed feedback, follow-up projects can be carried out more accurately which could in turn lead to higher effectiveness of the approaches. Next to single comparisons, a frequent use of the instrument (or sub-scales) can generate trends which could be further benchmarked with norms or results of other schools in the region.

For the school management, a high motivating potential score is important to monitor expecting high performance, satisfaction, as well as low absenteeism and staff turnover. In order to elaborate on teacher motivation and job satisfaction, the scale (or selected sub-scales) seems to fit to vocational learning arrangements and to be valid in terms of measuring differences of sub-groups in the school with reasonable economic effort. As shown in another application of Nordstrom et al. (2003), it illustrates further potential to be applied in the classroom as a Class Diagnostic Survey (CDS).

The major limitation of this research study is, apart from the small sample size, the effect or influence on staff expectations aroused from the transition from governmental to independent schooling. Further research is needed in order to clarify such environmental effects and as such clearly limits some of the findings of this study.

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VALUES PLACED ON ADMINISTRATOR INTERNSHIP TRAINING PROGRAMS BY CURRENT ADMINISTRATORS

ROBERT CLARK & RICHARD WALTER[1]

ABSTRACT

In an effort to determine the values placed on administrative internship competencies, this study identified the levels of importance place on each component of an administrative internship by practicing career and technical administrators. The results of this study suggest that current career and technical administrators value internship competencies involving administration and accountability as the top internship area priority for intern experiences. The participants rated the single competency associated with budgeting and finance as the top competency of importance. Findings will be useful for university internship programs in determining how to structure administrative internship experiences for administrative candidates.

"Another way to teach people to swim is by kicking them off the dock" was a favorite expression of Herman Schneider (1872-1939), the founder of modern cooperative education (Reilly, 2006, p. 15). Schneider was colorfully asserting his long-held position that combining academic study with internship experiences resulted in more effective learning and transition to full-time employment. Initially Schneider's focus was upon providing these opportunities for engineering students at the University of Cincinnati. However, their successes became apparent and the concept was incorporated into other departments at Cincinnati, as well as other secondary and postsecondary institutions.

Eames and Cates (2004) selected Kolb's model of experiential learning as an exemplar of why Schneider's idea spread widely and continues to flourish:

> It describes the learning process as a four-state cycle, which co-op students move through on a continuing basis: 1) Concrete experience followed by; 2) Observation and reflection which lead to; 3) The formation of abstract concepts and generalizations which lead to; 4) Hypotheses to be tested in future action, which in turn lead to concrete experiences. (p. 42)

Internships have become an integral part of many students' studies and are considered vital to the curriculum by tying classroom learning into successful job skills. Many industries rely upon internships to provide potential employees the real world experience needed to enter the job market. Business, finance, accounting, and tax professional schools depend on internships as part of the education experience, as do medical, dental, and nursing schools.

The Career and Technical Education (CTE) administrative internship at Penn State University is a component of the director certification track offered through the Professional Personnel Development Center in the Workforce Education and Development Program. The CTE director certification track is approved by the Pennsylvania Department of Education to prepare properly

[1]This article was prepared while Clark and Walter were Associate Professors in Workforce Education and Development at Penn State University.

experienced individuals for leadership positions in career and technical education. Candidates must complete the prescribed preparation courses that culminate in a semester-long internship experience with an administrative director of a career and technical center. The administrative competencies for the internship program have evolved over the last 20 years as the requirements of the CTE director position have changed. However, at no point have the internship competencies been reviewed or validated by practicing CTE administrative directors in Pennsylvania. Consequently, the need for this study emanated from these concerns and a need to refine and prioritize the level of competency attainment expected of internship participants.

REVIEW OF RELATED LITERATURE

Internships are a well established component of educational and training programs for college students and professional education programs. Knouse, and Fontenot (2008) stated, "Many have touted college student business internships as highly beneficial experiences that facilitate transitioning into the real world of business" (p. 61). Coco, (2000) showed that 92% of all business schools have internships as part of the required curriculum. In the preparation of income tax professionals, Siegel, Blackwood, and Landy (2010) believed that internships positively affect performance evaluations, promotions, and employee retention of tax professionals.

In medical training programs, internships are considered to be vital to nurse training. Jaco, Gordon, and Marvin (2003) emphasized that many hospitals rely on nursing internship programs for providing training to help students become competent and confident in their practice. This educational process includes guided learning activity with multiple benefits, including incorporation of critical thinking into practice by individualizing the plans of care and understanding the relationships between nursing theory and practice. This is supported by Tovey (2001) who stated that internship experience can provide students with meaningful experiences that involve applying theories and practices discussed and, sometimes, applied in the classroom. Students involved in internships are typically more committed and are more likely to finish their programs. In their research on teaching internships, Helfeldt, Capraro, Foster, and Carter, (2009) stated that "among the program results, were a 100% retention rate of interns in the teaching profession, significant growth in teaching interns' confidence, readiness, and self efficacy regarding their abilities to teach successfully. Tovey (2001) supported this perspective and believed that internships offer valuable experiences, and introducing new talent into the workplace. Raymond, McNabb, and Matthaei (1993) showed that internships were the key to helping students apply the knowledge from the classroom to real world problems, and exposed students to ethical issues and global dimensions not taught in the classroom. Additionally, Callahan and Benzing, (2004) found that students with internships were hired more quickly and had better overall employability. Finally, Roever (2000) stated that students with internships who were not immediately hired stayed in the employment pool longer than students without internships.

THEORETICAL FOUNDATION

Upon examination of the related literature, David Kolb's work appears to have the greatest potential within an internship setting and ability to enhance the education process. Kolb's Experiential Learning Theory (ELT) draws upon the

works of Dewey, which stressed the role of experience in the learning process (Rudowski, 1996). Thus, his learning model is grounded in the theoretical framework of personal experience (Ausburn & Brown, 2006). Kolb's ELT is built on six propositions (Kolb & Kolb, 2005), which include:

> (a) Learning is best conceived as a process, not in terms of outcomes. (b) All learning is relearning. (c) Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world. (d) Learning is a holistic process of adaptation to the world. (e) Learning results from synergetic transactions between the person and the environment. (f) Learning is the process of creating knowledge. (p. 194)

Kolb's ELT identifies four modes of grasping/transforming experience within his model that include: Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation. These four modes are represented in his experiential learning cycle. Kolb and Fry (1975) identified that the learning process can begin at any one of the four modes and should be viewed as a continuous cycle (see Figure 1). Kolb's model is directly applicable to CTE director internships, as the transfer of learning via experience is of the greatest importance.

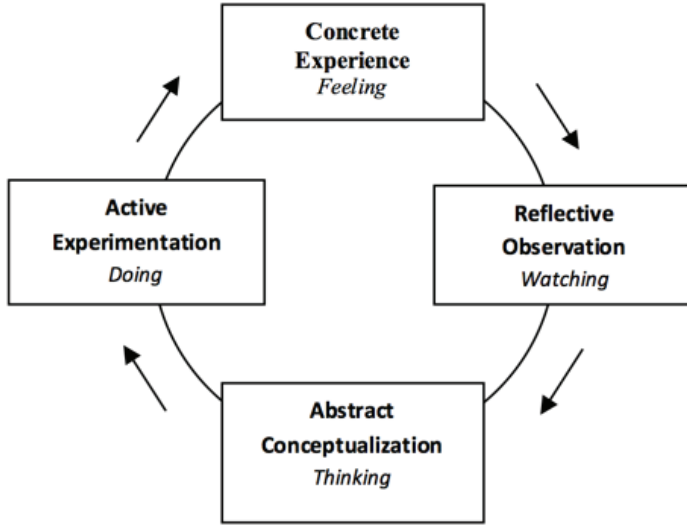

Figure 1. *The four modes of Kolb's Experiential Learning Cycle*

PURPOSE OF THE STUDY & METHODS

This study investigated the importance of each current competency associated with the administrative internship program. Thirty-eight certified career and technical directors in rural, urban, and suburban areas of central part of the state were invited to provide their perceptions on the importance of each competency within the CTE director internship program. The administrative internship competency list was created from course requirements within the 24 credit director certification track and from state certification guidelines.

All individuals pursuing an elementary or secondary administrative certificate (principal, supervisor, vocational director, superintendent) are required to participate in a semester long internship. Director certification candidates are required to serve their internship in a career and technology center with a CTE director serving as mentor.

This study represents the initial effort to validate the internship competencies from the field of experienced directors and to prioritize their beliefs on which experiences are the most important to the internship experience. Participants were asked to rate each administrative internship competency within a questionnaire using a five point Likert scale, five representing very important and one, not important. The response rate of the completed questionnaires was 100%. It should be noted that while these findings have implications for CTE administrator preparation across the state and perhaps the nation, they are not generalizable beyond the frame of the study.

FINDINGS

This section details the findings of the study. Tables are provided for each administrative internship area inclusive of competency area means and standard deviations on the rankings. Participants were asked to rank each competency area on a one to five Likert scale with one representing low importance and five representing high importance. As part of the internship, all competencies are categorized into an internship competency area.

The section begins with a ranking and analysis of the administrative internship areas in Table 1. Next, administrative internship areas are reviewed by analyzing the ratings and standard deviations for each competency. The second table contains a ranking of the twelve highest rated administrative internship competencies. The remaining tables and analysis cover each internship area and the competencies associated with that area.

Table 1. *Ranking of CTE Administrative Internship Areas by Respondents (N=38)*

Administrative Internship Area	*M*	*SD*
Administration and Accountability	4.30	.93
Administration /Supervision of Curriculum	4.20	.82
Professional Development and Leadership	4.18	.89
Personnel Management	4.15	.89
Management of Communication	4.12	.97
Management of Business and Finance	3.93	.99
Instructional Management	3.92	.88
Facilities Management	3.60	1.22
Management of Student Services	3.52	1.08

Note. A mean of five represents very important and one, not important.

The rankings of the nine administrative internship areas (see Table 1) by career and technical administrators in the Central Region of Pennsylvania resulted in means ranged from 3.52 to 4.30. The highest rated area of internship importance was Administration and Accountability with a ranking of 4.30. The Administration and Supervision of Curriculum category ranking of 4.20 was very similar to the ranking received by the Administration and Accountability category as supervision and accountability are very closely linked. With an almost identical ranking to the Administration and Supervision category, Professional Development and Leadership received a 4.18. The next two categories, Personnel Management and Management of Communication, were also highly valued by the participants. They received nearly identical rankings of 4.15 and 4.12, respectively. Management of Business and Finance and Instructional Management were almost identically ranked by the participants at 3.93 and 3.92, respectively.

While fiscal operations do not directly impact instruction, the resource allocations and fiscal decisions influence the instructional materials and equipment that students have available during their education. Additionally, Management of Business and Finance includes state and federal regulations for budgeting, expenditures, revenue reconciliation, and related matters in which administrative directors' feel are very important to the internship experience. Instructional Management, with a rating of 3.92, ranks lower than Administration and Supervision and Administration and Accountability. While those areas are closely related, it appears that the administrative directors believe that the management of instruction is still an important component of the administrative internship.

Table 2. *Twelve Highest Rankings of Internship Competencies (N=38)*

Internship Competencies	Internship Area	*M*
Prepare and administer an annual budget for a career and technical center	Management of Business and Finance	4.69
Maintain ethical standards prescribed by the education profession	Professional Development and Leadership	4.62
Comply with collective bargaining contracts pertaining to personnel	Personnel Management	4.55
Understand the purpose of articles of agreement for a career and technical center	Administration and Accountability	4.52
Interact with faculty and staff to improve the instructional process	Management of Instruction	4.52
Understand and comply with state, federal, and special education laws in operating a career and technical center	Administration and Supervision of Curriculum	4.52

Internship Competencies	Internship Area	*M*
Develop an understanding of delegating responsibility and authority	Personnel Management	4.50
Evaluate and performance of administrative and support staff	Personnel Management	4.48
Understand the role of the superintendents in the operation of a Pennsylvania career and technical center	Personnel Management	4.48
Understand NOCTI assessments and interpret data for curriculum and instructional improvement	Administration and Accountability	4.45
Analyze academic and career and technical achievement data to improve curriculum, instruction, or professional development	Administration and Accountability	4.45

Note. A mean of five represents very important and one, not important.

The highest overall ranked administrative internship competency was from the Management of Business and Finance category while the actual Management of Business and Finance internship category was ranked 6th of nine categories in the overall study. The competency "Prepare and administer an annual budget for a career and technical center" received a ranking of 4.69 which indicates the respondents believed that this competency was the most internship competency. Cleary, budgetary matters experienced by current directors create a strong belief that fiscal operations are the most important component of a director's job responsibility and without solid fiscal management; the budget process for operating the center will be flawed and inaccurate.

The next highest ranked internship competency for the study was "Maintain ethical standards prescribed by the education profession," at 4.62. The respondents believed that ethical leadership, ethical operations and ethical interactions with students, faculty, and the general public are essential to building trust and making decisions for the right reasons. With a ranking of 4.55, the next item involved collective bargaining and the need to understand the negotiated contract between teacher associations and school boards. "Understand the purpose of articles of agreement for a career and technical center" received a ranking of 4.52, meaning that respondents believed interns needed to clearly know how the articles of agreement govern the operation of the career and technical center. The next competency, from the Management of Instruction category, "Interact with faculty and staff to improve instruction" received a 4.52 ranking, indicative of the priority being placed on instruction and student achievement by administrative directors. Respondents believed that this area was vitally important to the internship experience and was a priority area for prospective administrative directors. Also receiving a ranking of 4.52 was "Understand and comply with state, federal, and special education

laws in operating a career and technical center." Directors must understand how regulatory bodies oversee certain aspects of CTE programming and how those bodies interact in ways that assist students

The next three items are from the Personnel Management category. Respondents believed interns needed experience in observing tasks being delegated to others while emphasizing the need to have others communicate back periodically on the delegated matter. These areas are crucial to administrative director job performance and competencies in these areas are highly important.

Table 3. *Management of Business and Finance Internship Competencies (n=38, M=3.93)*

Internship Competencies	*M*	*SD*
Collaborate with business administrator to prepare and administer an annual budget	4.69	.60
Prepare proposals for Perkins funding, equipment grants, and curriculum grants	4.20	.68
Analyze the cost of operating CTE programs and identify year to year budgetary trends	4.38	.75
Provide and interpret fiscal reports on the operation of career and technical centers to school board members	4.15	.86
Understand different revenue streams for career and technical centers	4.28	.80
Prepare and implement a capital improvement budget	3.93	1.07
Understanding procedures for purchasing and accounting for CTE supplies, equipment, and services	4.21	.96
Describe the purpose of and interpret the final results of local and state audits	3.60	1.00
Understand the different type of financial accounts used in CTE	4.14	.86
Understand the relationship of Act 1 to CTE	4.07	.92
Describe the role of a business administrator in a career and technical center	3.72	1.06
Understand and maintain an approved accounting system	3.72	.99
Understand how to file for CTE program state subsidy	3.66	1.33
Understand the relationship of Act 1 to CTE	3.61	.92
Describe the role of a business administrator in a career and technical center	3.55	1.06

Internship Competencies	*M*	*SD*
Understand and maintain an approved accounting system	3.52	.99
Understand how to file for CTE program state subsidy	3.52	1.33

Note. A mean of five represents very important and one, not important.

As can be seen in Table 3, the highest ranked internship competency for the Management of Business and Finance area was "Collaborate with the business administrator to prepare and administer and annual budget" with a mean of 4.69. This ranking was the highest for any competency in the internship experience. The next highest ranked item was the preparation of proposals for Perkins funding, equipment grants, and curriculum grants with at 4.38. These areas represent another opportunity to bring funding into career and technical centers and respondents strongly believed that this area was important to the internship. The competency "Analyze the cost of operating CTE programs and identify year to year budgetary trends" rated a 4.28.

Clearly, the respondents strongly believed that interns need to acquire the ability to understand how budgets change based on trends and program needs. Three additional competencies received rankings above the 4.0 level: 1) "Provide and interpret fiscal reports on the operation of career and technical centers to school boards members" at 4.21; 2) "Understanding different revenue streams for career and technical education" at 4.14; and 3) "Prepare and implement a capital improvement budget" at 4.07.

Table 4. *Administration and Accountability Internship Competencies (n=38, M=4.30)*

Internship Competencies	*M*	*SD*
Explain the purpose of articles of agreement and describe them for a career and technical center.	4.32	.93
Develop an understanding of NOCTI exams and interpret NOCTI data for curricular and instructional improvement	4.45	.74
Analyze academic and CTE student achievement data and explain conclusions that address curriculum, instruction, or professional development needs	4.45	.78
Interpret the achievement of CTE students on academic standardized testing	4.21	1.05
Develop an understanding of the Individuals with Disabilities Act and how it applies to CTE students	4.21	.86
Understand the accountability system that is based on the Federal No Child Left Behind Act	3.97	1.09

Note. A mean of five represents very important and one, not important.

The overall mean for the Administration and Accountability area of internship competencies was 4.30. The highest ranked internship competency for the Administration and Accountability section was "Explain the purpose of articles of agreement and describe them for a career and technical center" with a mean rating of 4.52. The respondents believed that governance was an extremely important concept for interns to understand prior to becoming administrators. The next two highest ranked items at 4.45 were: 1) "Develop an understanding of NOCTI exams and interpret NOCTI data for curricular and instructional improvement"; and 2) "Analyze academic and CTE student achievement data and explain conclusions that address curriculum, instruction, or professional development needs". The importance assigned to both of these items indicates respondents believe interns should have extensive experience in these areas and emerge well skilled in achievement data analysis and developing conclusions from that analysis.

The competency "Interpret the achievement of CTE students on academic standardized testing" earned a ranking of 4.21. This may reflect a realization among directors that being able to understand standardized testing data and enact data driven reforms is a crucial job component of the CTE administrator. The respondents ranked the internship competency "Develop and understanding of the Individuals with Disabilities Act and how it applies to CTE students" at 4.21 as well.

Table 5. *Administration and Supervision of Curriculum Internship Competencies (n=38, M=4.20)*

Internship Competencies	*M*	*SD*
Understand & comply state and federal laws in CTE and Special Education	4.52	.57
Demonstrate a thorough understanding of Chapter 339 of the Pennsylvania School Code which addresses career and technical education	4.48	.78
Incorporate high priority occupations criteria from the state in the scope of CTE programs	4.45	.74
Develop and understanding of the PDE program approval process for CTE programs	4.34	.77
Cooperate with industry to obtain their perception of and support of CTE programs offered at the career and technology center.	4.28	.75
Implement a systematic evaluation of the CTE curricula to facilitate administrative decisions	4.03	.78
Review existing policies and develop new career and technical center policies as needed	3.93	1.00
Project long-range program needs for CTE through labor market analysis and high priority occupations data	3.90	.86

Internship Competencies	*M*	*SD*
Obtain input from occupational advisory committees in establishing or advising a CTE program	3.86	.83

Note. A mean of five represents very important and one, not important.

The category mean for the Administration and Supervision Curriculum section was 4.20. The highest rated internship competency for this section was "Understand and comply with state and federal laws in CTE and special education" at 4.52. This competency received one of the highest ratings for the entire study significantly elevating its importance in relation to the remaining competencies.

The next highest ranked competency "Demonstrate a thorough understanding of Chapter 339 of the Pennsylvania School Code which addresses CTE" received a mean ranking of 4.48. Clearly, respondents believed it important for administrative interns develop a high level of knowledge of the state regulations pertaining to CTE.

The competency receiving the third highest rating was "Incorporate high priority occupations criteria from the state in the scope of CTE programs" with a mean ranking of 4.45. With state regulations requiring that all new CTE program applications be tied to the high priority occupations as identified by the Pennsylvania Department of Labor, it is imperative that future administrative directors develop this understanding. The competency statement "Develop and understand the PDE program approval process for CTE programs" received a rating of 4.34 which indicates that the respondents believed this competency is important to prospective directors.

Without state approval of a CTE program, the career and technology center would not be eligible for Federal Perkins funds, state equipment and curriculum grants, and the state career and technical program subsidy. Respondents also believe that the competency statement "Cooperate with industry to obtain their support of CTE programs" was similarly important with a rating of 4.28. Without industry support and advisory council input, CTE programs risk losing economic and workforce relevance.

Table 6. *Management of Instruction Internship Competencies (n=38, M=3.92)*

Internship Competencies	*M*	*SD*
Interact with faculty to improve instruction	4.52	.75
Evaluate the career and technical education program based on test results, instruction, curriculum, and job placement	4.34	.81
Work with faculty on Individualized Education Plans for special education students	4.28	.80
Assist teachers in curriculum planning	4.21	.82
Instructional coaching conferences	4.10	.82

Internship Competencies	*M*	*SD*
Assist teachers in developing laboratory and classroom management skills	4.07	.80
Assist teachers to develop skills in specially designed instruction	3.97	.63
Understanding industry credentials and industry work performance standards	3.93	.75
Scheduling courses	3.69	1.07
Provide industry based instructional materials	3.66	.67
Assist teachers with student industry placements	3.52	.87

Note. A mean of five represents very important and one, not important.

The mean for the Management of Instruction category of the administrative internship was 3.92. The highest ranked item of the category was "Interact with faculty and staff to improve the instruction process" at 4.52. Respondents believed interns needed experience in working with instructors to improve instruction. The competency "Evaluate the CTE program based on test results, instruction, curriculum, and job placement" received a ranking of 4.34. Internship experiences linked to program evaluation can provide excellent experience in data analysis, cooperative placement, and instructional performance to determine the overall effectiveness of the program. The next competency, "Work with faculty on developing and implementing Individualized Education Plans (IEPs) for CTE students" was ranked at 4.28. With increasing numbers of CTE students needing special education services, respondents believed internship experiences in special education were very important.

"Assist teachers in curriculum planning" was rated at 4.21, and "Conduct a conference with a faculty member for the purpose of instructional coaching" received a rating of 4.10. Clearly, respondents believed internships should have solid experiences in helping teachers with planning, instruction, student management, and developing skills to provide instruction for a diverse student population.

Table 7. *Professional Development and Leadership Internship Competencies (n=38, M=4.18)*

Internship Competencies	*M*	*SD*
Maintain ethical standards	4.62	.78
Participate in professional organizations	4.31	.76
Apply current CTE leadership theory and practice	4.14	.80

Internship Competencies	*M*	*SD*
Craft a professional leadership improvement plan	4.14	.71
Knowledgeable about research in CTE	4.10	.98
Participate in continuing education activities	4.03	.98
Coordinate needs with university expertise	3.93	1.10

Note. A mean of five represents very important and one, not important.

The overall mean for the Professional Development and Leadership category was 4.18. The highest ranked item for this category was "Maintain ethical standards" at 4.62. Respondents deemed this item related to educational ethics vital to the internship experience with the second highest ranking for the entire study. "Participate in professional organizations" was the next highest with a 4.31 rating. These two items combine to create a strong internship component as respondents believed that maintaining an ethical approach to leadership and being involved in professional organizations were essential to the internship experience.

The next two items were both ranked at 4.14 and they include: 1) "Apply current CTE leadership theory and practice"; and 2) "Craft a professional leadership improvement plan. These two items are inter-related in that a professional development plan can, and should, include current leadership and theory and practice in career and technical education. A similarly rated item was "Become knowledgeable about research in CTE" which received a 4.10.

Table 8. *Personnel Management Internship Competencies (n=38, M=4.15)*

Internship Competencies	*M*	*SD*
Comply with laws, rules, regulations, and personnel agreements	4.55	.69
Understand delegating authority and responsibility	4.50	.69
Evaluate the performance of administrative and support staff	4.48	.74
Understand the role of superintendents in CTE	4.48	.87
Determine and meet faculty professional development needs	4.38	.73
Collaborate with districts on CTE issues	4.38	.86
Understand and implement personnel policies	4.24	.74
Develop an understanding of new policy adoption procedures	4.10	.77

Internship Competencies	*M*	*SD*
Understand the employee recruiting and hiring process	4.00	.71
Understand HIPPA, FERPA, and the need to keep medical and personnel records separately	4.00	.86
Prepare job descriptions, for teachers, administrators, and support personnel	3.97	.98
Understand and maintain a personnel salary and benefit structure	3.86	1.01
Understand and maintain an employee handbook	3.79	.98
Understand and maintain personnel reemployment records	3.79	1.01
Understand workers compensation	3.52	1.02

Note. A mean of five represents very important and one, not important.

The category mean for Personnel Management of the administrative internship was 4.15. The highest ranked item within the category was "Comply with laws, rules, regulations, and personnel agreements" at 4.55. Respondents believed that interns needed significant experience in the area of laws, rules, regulations, and collective bargaining as a component of their internship.

The next three highest ranked items were: 1) "Understand delegating authority and responsibility" at 4.50; 2) "Evaluate the performance of administrative and support staff" at 4.48; and 3) "Understand the role of the superintendent of record and member district superintendents" also at 4.48. Respondents believed that intern participants should have experience learning about performance evaluation as well as understanding the different roles that superintendents may have including superintendent of record, evaluator of the career and technical center, and working with the director of program and budgetary planning.

Table 9. *Management of Communication Internship Competencies (n=38, M=4.12)*

Internship Competencies	*M*	*SD*
Articulate CTE with representatives of business and the community	4.41	.87
Present logical, factual, and documented support for recommendations and proposals pertaining to CTE	4.38	.97
Speak in support of CTE to external groups	4.34	.97
Prepare status reports on CTE for the state department	4.21	.90
Work with members of advisory committees	4.18	.90

Internship Competencies	*M*	*SD*
Implement policy for internal/external communication for CTE	4.03	.94
Identify CTE information needs of community groups	3.72	1.07
Develop an understanding of establishing an internet presence for CTE	3.69	1.07

Note. A mean of five represents very important and one, not important.

The category mean for the Management of Communication internship competencies (see Table 9) was 4.12 placing it fifth out of the nine category rankings. The highest ranked item within the Management of Communications category was "Articulate CTE representatives of business and the community" at 4.41. This was followed by the competency "Present logical, factual, and documented support for recommendations and proposals pertaining to CTE" with a ranking of 4.38. Respondents believed that the ability to articulate program needs and present factual support for recommendations to be important components of the internship program. Respondents also believed that internship participants should have experience in speaking with groups by assigning the statement "Speak in support of CTE to external groups" a ranking of 4.34. Additionally, "Preparing status reports on CTE for the state department" was also deemed important by the respondents with a ranking of 4.21.

The next item, "Work with members of advisory committees" received a ranking of 4.18 indicating respondents believed an understanding of advisory committees and their functions to be important components of the administrative internship. Respondents also believed that the internship competency "Implement policy for internal/external communication for CTE" was important by assigning that competency a ranking of 4.03.

Table 10. *Physical Facilities Management Internship Competencies (n=38, M=3.60)*

Internship Competencies	*M*	*SD*
Manage the facility and equipment needs for CTE programs	4.07	1.05
Provide for the security of equipment, personnel, and students in a career and technical center	4.04	1.07
Maintain CTE facilities and equipment in compliance with all codes and regulations	3.75	1.14
Apply policy regarding use of facilities in CTE	3.62	3.75
Understand the complete operations of building infrastructure including electrical, data transfer, voice, climate control, plumbing, and other operating systems	3.55	1.15
Maintain CTE plant and equipment in a safe, clean, and operable condition	3.55	1.30

Internship Competencies	*M*	*SD*
Maintain a system for receiving, storing, and dispensing materials, equipment, and supplies	3.17	1.31
Supervise food service facilities	3.03	1.30

Note. A mean of five represents very important and one, not important.

The mean for the Physical Facilities Management internship competency category (see Table 10) was 3.60, placing it eighth out of the nine category rankings. The internship competency "Management of the facility and equipment needs for CTE programs" received a rating of 4.07, placing it at the top of the internship competencies in this category. The next highest rated competency was "Provide for the security of equipment, personnel, and students in CTE" which received a 4.04. These two internship competencies were almost identical in their ratings indicating the respondents feel strongly that they are of equal importance to the administrative internship experience. The remaining internship competencies within this category were all ranked at less than 4.0.

Table 11. *Management of Student Services Internship Competencies (n=38, M=3.52)*

Internship Competencies	*M*	*SD*
Understand proper methods for building security to protect students and staff	3.86	1.09
Evaluate the total student services program	3.76	1.02
Coordinate recruitment and admissions of CTE students	3.69	0.89
Maintain a system of student behavior expectations and disciplinary regulations	3.62	1.18
Maintain a system of student records in CTE	3.59	1.21
Supervise a system of student placement and follow-up	3.45	0.91
Provide and coordinate a guidance program for CTE	3.38	0.94
Promote the operation of student government in CTE	2.83	1.14

Note. A mean of five represents very important and one, not important.

The mean for the Management of Student Services internship category was 3.52 placing it last in the category mean rankings. The highest rated item in this category was "Understand proper methods for building security to protect students and staff" at 3.86.

CONCLUSIONS AND RECOMMENDATIONS

The highest ranked competency area in the study was Administration and Accountability with an overall mean of 4.30. Given the increasing accountability requirements for academic and CTE student performance on state and national levels, the administrative directors believed this area was the most important for interns. Therefore, the emphasis for this area within the internship should remain high, perhaps retaining priority over other areas that should be minimized in the internship experience. Time allocated by the intern and the participating director should prioritize this area and university faculty overseeing the internship should require evidence that a significant amount of time is being invested in the Administration and Accountability component of the experience. Interestingly, the Administration and Accountability section received the highest mean as a category but the highest ranked item for the entire study came from the Management of Business and Finance area.

"Prepare and administer an annual budget for a career and technical center" received the highest ranking of the study at 4.69. Clearly, budget issues and budget preparation represent a vital component of the administrative director's job and respondents felt it was most important that interns obtain experiences in this area. This item was the only Management of Business and Finance area item in the top twelve.

With Administration and Accountability being the highest ranked category and the budget preparation competency receiving the highest overall ranking, a complex perspective regarding what interns should be expected to learn and do is revealed. The fiscal element of operating CTE programs involves expenditures and management of public funds for specific purposes. Failure to comply could mean immediate reprimand, job loss, and possible legal action. Budget preparation and administration is often the highest priority of the governing school board. That board may also place importance on student achievement but the findings of this study suggest that student achievement is secondary to budget preparation and administration. This potentially creates a dilemma for directors and interns. While state and federal regulations for educational attainment focus on student achievement, it is possible that administrative directors rate the budget management and preparation highest because of its emphasis at the local level, and the severity of consequences that may be inflicted by the legal system to those administrators who are deficient in budget preparation and management. As a result, the internship experience must contain significant experiences in budget management and preparation without sacrificing accountability for student achievement.

Another conclusion of the study relates to the emphasis placed on ethics and collective bargaining by the respondents. The internship competency "Maintain ethical standards" from the Professional Development and Leadership category was ranked at 4.62. The internship competency "Comply with collective bargaining contracts pertaining to employment of personnel" from the Personnel Management category was ranked at 4.55. Both of these competencies were ranked higher than any competency in the Administration and Accountability section that had the highest category mean. Respondents believed that ethical conduct on behalf of administrators was extremely important and that the internship should emphasize ethical leadership. These findings align with recent changes in the administrative director course requirements at Penn State in that a course in workforce education ethics was recently added. Collective bargaining contracts also represent

areas of emphasis that were ranked higher than student achievement and accountability. The internship experience must offer significant experiences in ethical leadership and collective bargaining (which is vital to the local governance of CTE) while not reducing the emphasis placed on student accountability and achievement.

The eleven highest rated competencies (all receiving ratings of 4.45 or higher) included competencies from multiple categories. Four of the top twelve competencies were from the Personnel Management category, and another four competencies were from the Administration and Accountability category. Management of Business and Finance, Professional Development and Leadership, Management of Instruction, and Administration and Supervision of Curriculum were categories with one represented competency in the top twelve. Over half of the highest ranked competencies emerged from Personnel Management, and Administration and Accountability. From this analysis, the internship should emphasize competencies in these areas reflecting the perspectives of the respondents. Additionally, the Management of Business and Finance competency involving the preparation and administration of an annual budget, and the Professional Development and Leadership category competency on ethical leadership, should also receive priority in the internship experience.

Another conclusion of the study is that professional development with administrative directors should be conducted to discuss the findings of the study and ascertain their abilities to provide the experiences that have been highly ranked in this study. Therefore, current administrative directors who agree to serve as mentors should understand the priorities placed on each area of the internship and create strategies to insure that interns working with them attain the experiences rated highest in this study.

A final recommendation is for an additional analysis to determine how these rankings of internship competencies align with those standards identified by the Interstate State School Licensure Consortium (ISSLC) (Council of Chief State School Officers and National Policy Board for Educational Administration, 2008)). While these standards were created for traditional schools, in Pennsylvania, principal and superintendent preparation programs are required by the department of education to be aligned with these standards. The six ISSLC standards address the follow areas: 1) A vision of learning that is shared by the school community; 2) Advocating a school culture conducive to student learning and professional staff growth; 3) Managing operations and resources for a safe, efficient, and effective learning environment; 4) Collaborating and responding to diverse community needs and mobilizing resources; 5) Acting with integrity, fairness, and in an ethical manner; and 6) Understanding and influencing the larger political, social, and legal, and cultural context. While some of the internship competencies directly address one or more of the standards, further refinement and research into how to create alignment among the internship competencies

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A REFORM FOR VOCATIONAL AND TECHNICAL EDUCATION TRAINING TEACHERS IN TURKEY

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ABSTRACT

The Faculty of Technical Education, Faculty of Vocational Education and Faculty of Trade and Tourism Education which used to train teachers for vocational and technical secondary education institutions were closed and new colleges called Faculty of Technology, Faculty of Art and Design and Faculty of Tourism were opened on November 13th 2009 with the decision by Turkish Parliament due to the employability problems that the graduates of those schools have faced in recent years and the suggestions by the Higher Education Council of Turkey (HEC). These new faculties will train engineering students. Additionally, the graduates of these faculties can also become teachers at the technical or vocational high schools if they get pedagogical courses. Thus, in this study the content, and forecast and implications of this recent reform are discussed.

In 1982, according to new legislation all responsibilities and duties related with higher education were transferred to the Higher Education Council (HEC) and teacher training schools were transformed into faculties of education. These faculties were separated from Ministry of Education and adapted to several universities. Thus, training teachers for technical and Vocational education was nominated to universities under HEC framework. The legislation created a well established relation for co-operation among universities and Ministry of Education. In Turkey, vocational and technical education was arranged by law on education numbered 3308. In TVET high schools, subjects both in theory and practice, are thought by technical teachers (Şimşek, 2004). In vocational education most countries distinguish between vocational subject (theory) teachers and practical trainers (Parsons, Hughes, Allinson & Walsh, 2009). However, for vocational subjects Turkey stood out as the only country, which required that vocational teachers, who were to teach vocational subjects both in theory and practice, should graduate from a four year university vocational teacher degree program at a technical and vocational education faculty (Nielsen, 2004).

Teachers who worked in vocational and technical education institutions were trained in technical educational faculties until 2009. There were three kinds of educational faculties, these were: Technical Education Faculties, Vocational Education Faculties, Trade and Tourism Education Faculties. Education and Training Programs, executed in those faculties, were parallel with the goals and organization of Ministry of Education in Turkey. Technical Education Faculties trained teachers for the following TVET high schools:

- Technical Education Schools for Boys, which function under the General Directorate of Technical Education for Boys in Ministry of Education, train young people as semi-skilled labour for national industry. Technical education schools for boys are the secondary education institutions where medium level technical manpower is

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trained for the business areas needed by industry and students are prepared for higher education.

- Technical Education Schools for Girls, which function under the General Directorate of Technical Education for Girls in Ministry of Education, train medium level technical manpower for the business areas needed by industry and students are prepared for higher education.
- Trade and Tourism Schools, which function under the General Directorate of Trade and Tourism and students in Ministry of Education, are prepared for higher education. are the secondary education institutions where qualified manpower is trained for the public and private sectors in areas such as trade, tourism, accounting, computer, finance, marketing, banking, cooperative management, secretarial, real estate commissioning, broker services, insurance services, local governments and communication and students are prepared for higher education (MEB, 2001).

The project aimed to develop national vocational teacher training standards across a range of subjects. These standards were tested in 5 pre-service and 3 in-service courses within the pilot project scheme. The standards acted as examples of excellence.

The proposed revised modular curriculum was implemented and evaluated through up to 20 innovative pilot projects. These projects were developed by university faculties of technical and vocational education, Vocational Secondary and Higher Vocational Schools, industry trainers, commerce and the local community. The projects were selected so as to ensure that all categories of vocational teacher training were covered. Innovation was the key to change and to making a VET TT system that was dynamic and responsive to the changing needs of VET. Issues such as life long learning, professional development, distance learning, e-learning, on the job in school training, consecutive teacher training etc within the new framework could be considered for pilot projects.

To support bids for the funding and development of innovative projects, benefits from this project can be summarized as follows:

- VET TT standards compatible with those within the EU
- VET TT compatible with the need of schools and industry
- VET teachers better equipped to deal with changing roles
- VET teachers trained to implement the outcomes of the SVET project
- Improved learning environment for VET students
- Assistance to VET faculties in the development of new curricula
- Funds to update equipment for VET TT and Turkish VET TT at the forefront of development of VET TT Standards in the region (MVET, 2006).

As an outcome of MVET project, the requirements of vocational areas with the highest employment potential – Automatic Control (CNC), Electronic, Electric, Computer, Airplane Maintenance and electronics, Cooling and ventilation, Communication and information technologies, Entertainment and food technology- were determined to train teachers for TVET according to the determined standards and curricula development.

Since 2004-2005 school terms, those programs with the new standards and curricula were put into action in fourteen Technical Education Training

Faculties throughout Turkey with an in-service education support which cost 8.5 Million Euros. 868 staff 93 of whom were Vocational and Technical High School teachers, 715 university lecturer and 60 representatives of civil clubs were educated in the terms of the project (MEB, 2008).

THE REFORM FOR TVET TEACHERS IN TURKEY

Although many arrangement and project were carried out to develop and up to date vocational and technical teacher training, Technical education faculties in Turkey completed their missions of 1930's and needed to be redefined and given a new sort of title. As a result; technical teachers performed important duties in Turkish industrial life since 1930's but their position was never redefined since then in parallel with the developments. Their title should be redefined considering the recent developments. This will help them contribute more actively to Turkish education system and industry. There are many similar examples in the world. For instance, in Great Britain, technical education graduates are taking the title "engineer". If the person prefers to be called as "technical teacher", then, she or he can be "engineer teacher" after taking necessary pedagogical courses (Şimşek, 2004).

Graduates of technical education faculties in Turkey had the title of "Technical Teachers". They were employed with this title as a teacher at Ministry of National Education or education department of private companies. Due to problems with authority, however, they did not have equal rights with engineers as the work areas remained limited. In this respect people graduated from the technical education faculties have had trouble in finding a job (Tunçalp, 2005).

Technical education faculties had graduates of more than 3,000 every year but, only 5% were employed by, the Ministry of Education. In 2010 70.000 students graduated from technical education faculties were still expecting to be appointed as a teacher for TVET high schools (Egitimsen, 2010). As it is understood from statistics, only few of graduates of technical education faculties could work as VET teachers. Rest of them served in industry. Although the curriculum of Technical Education Faculties (TEF) was focused on engineering subjects, graduates were not given the titled as "Technology Engineer" or "Production Engineer", which would led higher motivation and productivity for graduates (Şimşek, 2004).

Thus, Faculty of Technical Education, Faculty of Vocational Education, Faculty of Trade and Tourism Education which used to train teachers for vocational and technical secondary education institutions were closed down and new colleges called Faculty of Technology, Faculty of Art and Design and Faculty of Tourism were opened on November 13th 2009 by law numbered 15546. By the help of this reform for Vocational Teacher Education in Turkey, the graduates of Faculty of Technology, Faculty of Art and Design and Faculty of Tourism have had a right to get the title of engineer and be employed as an engineer in his or her own study field.

The new model for training teachers for Technical and Vocational High Schools in Turkey which were put into action on November 13, 2009, are seen in Figure 1.

As seen in Figure 1, at higher education level Vocational and technical education is carried out through two-year training in vocational colleges and four-year faculty of technology, faculty of art and design and faculty of trade and tourism education after the reform. Two-year vocational high

schools have been founded to meet technician need of industry requirements. The main objective of Faculty of Technology, Faculty of Art and Design and Faculty of Trade and Tourism which are to give a four year education, is to meet the demand for engineers in industrial work life and teachers with a complimentary pedagogical course in vocational and technical high schools, the main purpose of which are to meet the industry, commerce and service sectors needs of qualified workforce and provide successful transition of students for university.

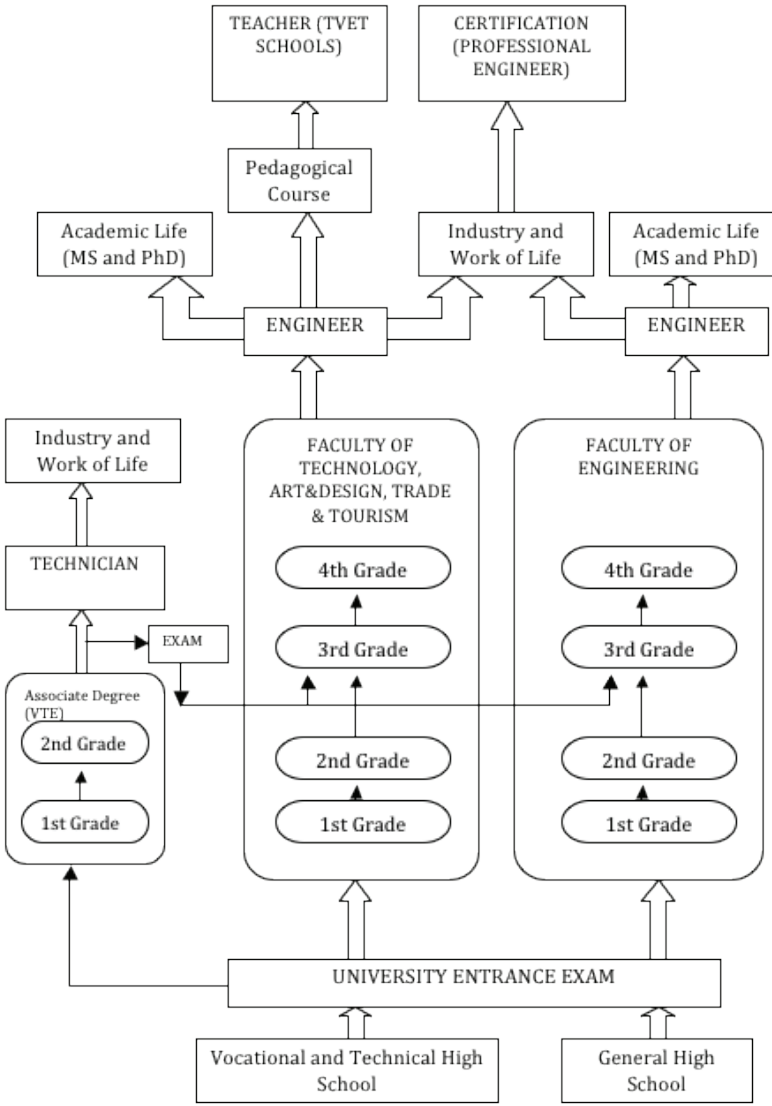

Figure 1. *The Model for TVET teachers after the Reform on November 13th 2009*. Adapted from Altıparmak D. & Gulesin M. (2008). *The reform in technical education faculties*. Ankara: Gazi University.

DISCUSSION, CONCLUSION & RECOMMENDATIONS

Teacher training faculties for vocational and technical education were transformed into new colleges called Faculty of Technology, Faculty of Art and Design and Faculty of Tourism with the decision made by Turkish Parliament due to the employability problems that the graduates of these schools have faced in recent years and the suggestions made by the Higher Education Council of Turkey (HEC).

Table 1. *Number of Schools, Students and Teachers in Vocational and Technical Secondary Education in the Scholastic Year 2010-2011 (MEB, 2011)*

			Number of Teachers	
Type of School	Number of Schools	Number of Students	Total	Per Student
Technical Education for Boys	2,172	752,272	42,765	17.59
Technical Education for Girls	1,124	374,370	21,784	17.18
Trade and Tourism Education	958	400,942	19,204	20.87
Private education	24	1,951	324	6.021
TOTAL	4,278	1,529,535	84,077	18.19
General Secondary Education	3,327	2,002,076	104,473	19.16

As seen in Table 1, the student/teacher ratio is high in Turkey with 18.19 at an average compared to European countries in which the ratio is about 10 at an average and there is a trend to fall down on behalf of students (Nielsen, 2004). The student/teacher ratio in Turkish TVET high schools is nearly twice higher than those of European countries. Although that issue looks a strain, that high student/teacher ratio can be an opportunity for the graduates of Technical and Vocational Education Faculties to be appointed as TVET teachers when taken into consideration the fact that in 2010 in Turkey 70000 people graduated from technical education faculties were still expecting to be appointed as a teacher for TVET high schools. On the condition that all of the 70000 ex-graduates are appointed as a technical and vocational teacher, the ratio will be approximately 10 students per teacher. Thus this arrangement can solve the unemployment problem of ex-graduates of technical and vocational education faculties.

On the other hand, Higher Education Committee (YOK) is authorized to determine these new faculties as application based on the functioning. applied engineering is defined by The Association of Technology, Management, and Applied Engineering (ATMAE) as the field concerned with the application of management, design, and technical skills for the design and integration of systems, the execution of new product designs, the improvement of

manufacturing processes, and the management and direction of physical and/or technical functions of a firm or organization. Applied engineering programs typically include instruction in basic engineering principles, project management, industrial processes, production and operations management, systems integration and control, quality control, and statistics.

Applied engineers are employed in a large and wide-array of industries including: manufacturing, construction, industrial, maintenance, and even management. It is common for industry to use the term "engineer" in their title, except in regions that restrict this. Examples of this use include: Manufacturing Engineers, Process Engineers, Control Engineers, Applications Engineers, Product Engineers, Sales Engineers, Safety Engineers, etc. However, in some regions no one is legally permitted to offer engineering services to the public without becoming a licensed Professional Engineer (ATMAE, 2011). When new faculties are determined as applied engineering faculties, the graduates of those faculties can be employed either as applied engineers in industrial work of life or as a technical and vocational teacher after taking one year pedagogical courses taught by faculties of education in universities.

In conclusion, Vocational and Technical Education Faculties have already completed their mission as training technical and vocational teachers for TVET high schools. The transformation of Vocational and Technical Education Faculties into Technology Faculties for training students as applied engineers is also consistent with applications for the TVET teachers' training in European Countries. The graduates of new faculties will also have a chance to be appointed as a TVET teacher by Ministry of Education with a complimentary pedagogical course.

Additionally, the demand by industry for applied engineers will be met by the graduates of Technology, Art & Design, and Trade &Tourism faculties. The relations between universities and industry will be closer as a result of training applied engineers. The graduates of Technology, Art & Design, and Trade &Tourism faculties will easily find a job in European countries due to accreditation of the programs. The graduates of Technology, Art & Design, and Trade &Tourism faculties will be looked for qualified work force in industry as the ambiguity in their titles is over. That graduates of Technology, Art & Design, and Trade & Tourism faculties are employed as a teacher for TVET high schools will increase the quality of education and training in TVET high schools and in turn this will attract more students to TVET high schools. Thus the enrolment rate to the VET will eventually reach the target, of 9th Development Plan (2007-2013), which investigated that the 65 % of the students are to be enrolled to the VET.

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Book Review

WORK AND EDUCATION IN AMERICA: THE ART OF INTEGRATION

REVIEWED BY HOWARD R. D. GORDON[1]

Barabasch, A., & Rauner, F. (Eds.) (2012). *Work and education in America: The art of integration*. New York: Springer. ISBN 987-94-2271-2

This book is organized as a volume of fourteen chapters each written by contributing authors, including an introduction and conclusion that are written by the editors. Twelve of the seventeen authors are from the United States. The thesis of the book is a broad view of career and technical education (CTE) in the United States. The compilation of authors , chosen by the editors, give an analysis of career and technical education as it relates to the history, legislation, and organization of CTE system and programs.

The first chapter of Work and Education in America begins with an introduction by the editors that is interesting, informative, and gives an extensive overview of vocational education and training (VET)/CTE in the United States. Chapter two discusses the concerns and dilemmas in the design of the United States educational system. The chapter also highlights a number of successful vocational/career training programs in the U. S.

Chapter three reiterates much of the topic presented in chapter two. However, chapter three also describes the importance and structure of CTE education in primary, secondary, and postsecondary education. The developments of career clusters as well as various federal programs, such as Tech Prep, and High Schools That Work, are also introduced.

Chapters four and eleven concentrate on the role of the community college in CTE. In essence, chapter four directs the reader to the history of the community college along with its ability to respond to changes in the workplace. Chapter eleven expands this discussion to include the role of VET in the American community college, and VET evaluation systems.

Chapter five takes a comparative look at the decentralized governance of VET/CTE training in the United States as compared to that of the highly structured, centralized German model. Chapter six also compares the system in the United Statesto that of Germany as it relates to the development of the university system in the U. S., and the effects of "international borrowing" ofeducationbetween the two countries. The primary focus is on the "Education Gospel," or the ideology that higher education improves economic opportunity and the means for upward mobility for individuals.

The American economy has changed in the twentieth century and the demand for postsecondary education has created a "postsecondary education for all" motto according to chapter seven. The growing needs of society have made CTE programs more popular and less stigmatized. The U. S. and Germany CTE programs and their values are again compared in chapter eight. Chapter nine explores the important elements, goals, and practices of career

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guidance and counseling and its role in assisting students in achieving their educational and career goals.

In chapter ten the authors focus on apprenticeships in the U. S. and its role in credentialing the American workforce via the formal Registered Apprenticeship system and the cooperative education programs of secondary and postsecondary institutions. The authors raise various points that college is not for everyone, there are gaps in the employment system between high school and college, and that general education may be the downfall for some CTE programs.

Chapter twelve reviews the controversy between CTE teachers versus general subject teachers in high schools and community colleges. Many CTE teachers take an "alternate route" to obtain their license. This usually includes years of in-field experience and obtaining appropriate degrees.

The last chapter focuses on improving the shortcomings of the American VET/CTE system. The editors make several propositions concerning structural changes needed to improve the U. S. VET/CTE system; such as the development of a research infrastructure, centralizing CTE governance, establishing a comprehensive VET/CTE legal framework, and structuring VET/CTE reforms around the "best–practices" of existing successful American VET/CTE models.

The comprehensive nature of the book is one of its primary strengths. Each chapter had a specific focus and delivered the intended material clearly. The perspective is from outside of the United States, which allows interested and invested individuals in career and technical education fields, to view the system from afar. This distant perspective should be helpful in providing focus to the future of CTE in the United States. While the book covers a variety of issues, some arguments were repetitive in nature. Also, selected chapters of this book appear to consist of dated material at the time of publication. According to the editors, the intended audience is scholars from outside of the United States or anyone interested in the development and current status of VET in the United States.

The book is an inclusive body of work as it relates to the issues in career and technical education in the United States. While some of the views expressed by the authors were at times difficult to confront, the global viewpoint should encourage persons vested in CTE in the United States to take note. This publication also provides the basis for additional research opportunities in the field of career and technical education. Many flaws and shortcomings were noted in the current system; however few solutions, outside the German model, were suggested.

The contribution of this book to career and technical, postsecondary education, and the training community is an important one. The comprehensive overview of the state of career and technical education in the United States is important in the edification of persons directly and indirectly involved with CTE. The implications for economic success and its connection to CTE have been well delineated, and should serve as a basis for the national conversation to continue to support and improve career and technical education and training.

The index is well done and enables the reader to go back to the key items one may want to look over again. Overall, it is an outstanding book and career and technical teacher educators in general will find it of interest and importance.

The editors were astute at selecting the following authors to provide chapters for this book: David Boesel, Cass Dykeman, Kimberly A. Green, W. Norton Grubb, Jeff King (Deceased), Simone R. Kirpal, Steve Klein, Pradeep Kotamraju, Marvin Lazerson, Robert I. Lerman, Richard L. Lynch, Carsten Schmidtke, Philip L. Smith, James Raymond Stone III, and Chris Zirkle.

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