

Future Union Leadership: A Promising & Intense Immersion Model

John S. Gaal, Ed.D.,
Director of Training & Workforce and Development
Carpenters' District Council of Greater St. Louis & Vicinity
Adjunct Professor
Labor-Management Relations
Webster University

Future Union Leadership: A Promising & Intense Immersion Model

Abstract

The intent of this practitioner-based research study was to determine if the 98th session of the Harvard Trade Union Program (HTUP)—held January 12 through February 20, 2009—had a positive impact on future labor leaders' attitudes and beliefs covering a wide range of pertinent leadership topics. Two surveys were administered over the course of the program in an attempt to ascertain whether or not the six-week experience played a part in changing participants' attitudes and beliefs related to progressive union leadership. The participants of this program came from public and private sector unions and represented six countries.

Introduction

About the program—The HTUP has existed since the early 1940s and is held one time per year for promising union leaders from across the globe. It is an intense immersion model that utilizes top-notch faculty from a variety of first-rate universities, including but not limited to Harvard, Northeastern, MIT, Boston College, Boston University, and the University of Massachusetts. These professors—many of them who are renowned in their profession—represented schools of arts and science, education, law, business, government, history, public health, and medicine. The HTUP is a selective program that requires students to attend classes for six weeks—Monday through Friday from 9 am to 5 pm. Most students are chosen and sponsored by their respective unions. Students are expected to read a variety of books, cases, articles, etc. related to issues pertinent to labor's causes and challenges in preparation for each day's class. Class discussions often follow the famous Harvard Case Study discussion format and, therefore, students must come prepared to participate! A weekly event typically involves a recent author lecturing on a timely labor-related topic followed by a dinner with a question and answer session.

Methodology

The author identified several core leadership topics and developed survey questions based on recent books, documentaries, academic and professional journal articles, and industry reports related to a range of leadership issues (including but not limited to empowerment, outsourcing, education, diversity, and strategy). A Likert scale was utilized ranging from 1-strongly disagree to 4-strongly agree for participants' responses. The data was collected in a paper and pencil format and then transferred to an electronic survey tool (www.SurveyMonkey.com) mainly for the purpose analyzing the raw data in a quick and orderly format. In addition, statistical analysis was performed—on SPSS—utilizing a one-tailed t-test for paired samples. (Notes: Due to the small population studied, census data [N = 30] were used as opposed to sample data. And, in order to maintain privacy, participants' names were not requested. Rather, participants were asked to provide the last four digits of their cell phone numbers as a unique identifier for purposes of pairing responses during the data analysis stage. To avoid a conflict of interest, the author did not respond to either survey.)

Procedures

Under the guidance of the HTUP's director, Dr. Elaine Bernard, the author distributed the first (Pre) survey early in the first week of the six-week program at Harvard Law School. Herein, 38 surveys were issued and 34 were returned (89 percent response rate). Near the end of the sixth week, the author distributed 38 (Post) surveys (these contained the same questions as in the Pre but the order was scrambled) and 31 were returned (82 percent response rate). However, for the purposes of this study, only 30 paired surveys were identified for data analysis (79 percent response rate). The data from the 30 pairs of Pre and Post surveys were entered into an online electronic survey tool upon the author's return from the HTUP.

Demographics

Briefly, of the 30 survey participants: 70 percent were male, 77 percent were above 39 years of age, 73 percent reside in the USA, 47 percent represent multiple industrial sectors, 63 percent serve in mixed-role positions, and 50 percent hold a bachelor's degree (See Appendix A for more details).

Results

The results of this study are displayed and/or described in the following two parts: Part I—Disaggregated Responses to the Pre and Post survey questions with narratives and Part II—Aggregated Data Analysis utilizing a statistical model for comparing means.

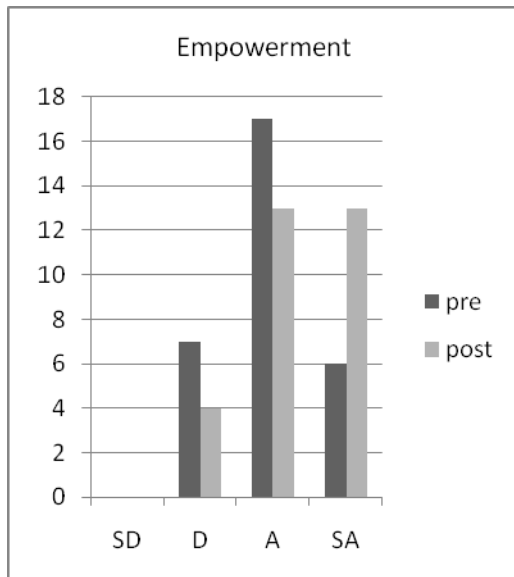
Conclusion

This study concludes with recommendations based on overall findings.

Results

Part I: Disaggregated Responses to the Pre and Post survey questions with narratives:

- 1) Pausch (2008, p. 110) notes that as a professor he could trust his bright students with “the keys to his kingdom.” As a union leader, I believe that it is “never too early to delegate.”



Reflection: Bernard (2009) professes that in order to build capacity unions must move from staff-centered organizations to member-centered organizations... wherein, leaders light fires versus put out fires. Empowerment occurs in an atmosphere of trust but this does not require blind loyalty on behalf of the membership. Therefore, two-way open and honest communication is a vital building block. Consequently, Green (2000, p. 277) asserts, “Unlike the old guard, the new-age leaders seem less afraid of mobilizing their members, less afraid they will be replaced by rank-and-file insurgents.”

Commentary: The graph above reveals a 38 percent positive Post survey (PPS) change in these leaders’ attitudes and beliefs concerning the issue of empowerment (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders interested in the sustainability of their unions by suggesting the need to experiment with approaches less traveled. Today’s generation (tomorrow’s leaders) is tech savvy and it is incumbent upon organized labor to harness their energy in exploring these technologies for the benefit of workers.

Note:

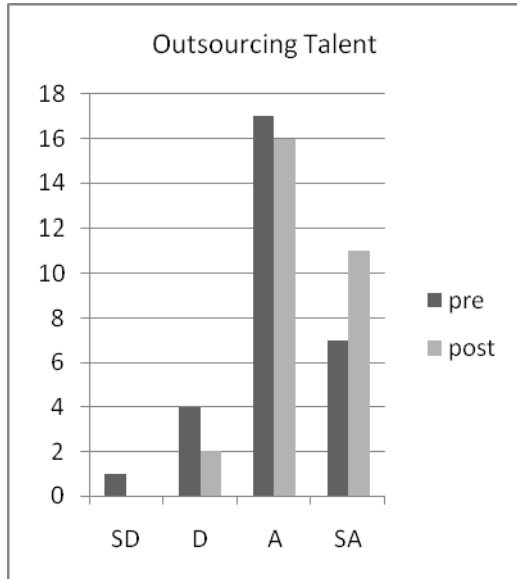
SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree

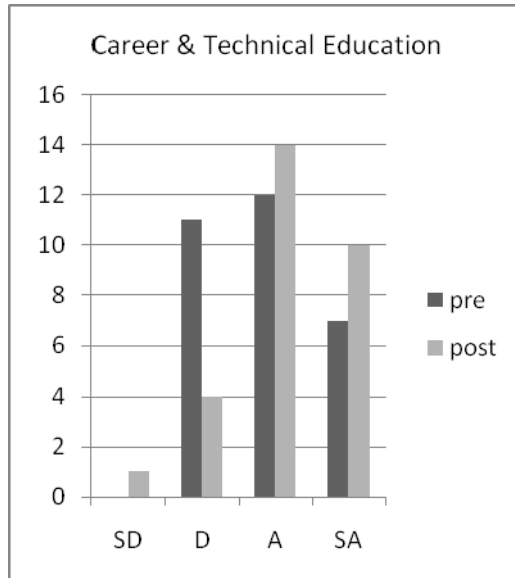
- 2) Pink (2006, p. 46) suggests that today’s automation is impacting knowledge workers (i.e., white-collar workers) “...in much the same way that blue-collar workers were a generation ago.” As a union leader, I feel today’s workers need to “master abilities that can’t be shipped overseas.”



Reflection: Greenhouse (2008, p. 211) cites, “The defenders of free trade decry many critics as alarmist, saying not to worry, that globalization and offshoring increase a nation’s wealth and well-being by increasing efficiency.” Meanwhile, Bluestone and Harrison (2000, p. 21) posit, “Surely, real prosperity should be based on something more durable than volatile capital markets and the bankers, financial managers, and hedge fund speculators who run them.” To these ends, workers are forced to do more with less not only at work but during their free-time so as to constantly reposition themselves and stay relevant in the marketplace.

Commentary: The graph above reveals a 32 percent PPS change in these leaders’ attitudes and beliefs concerning the issue of outsourcing talent (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders positioned to clearly define career pathways that offer potential members living wages and benefits. This cannot be accomplished by merely rearranging existing job titles and educational offerings. Most states have departments that perform labor market analysis. These data should be utilized to anticipate and prepare union members for the jobs of the future.

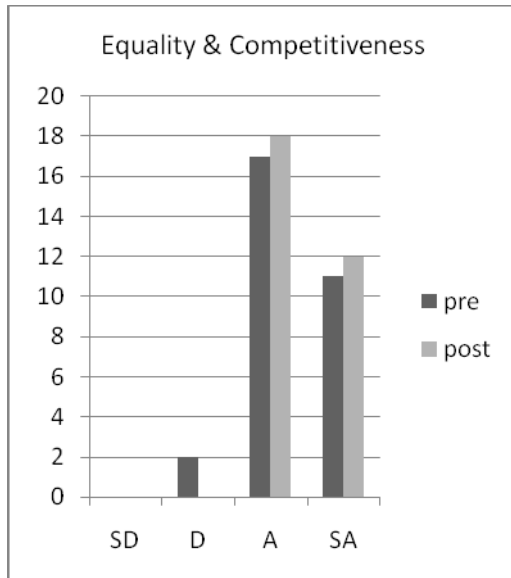
- 3) Murray (2008, p. 149) indicates “high schools ignore the skills that employers of high school graduates do value.” As a union leader, since “nearly two-thirds of our students are work-bound,” I think the school systems should devote more attention to career and technical education versus academic education.



Reflection: Bluestone and Harrison (2000, p. 223) propose, “...investments in physical capital and technical innovations cannot achieve their full potential if the workers who must utilize these tools and techniques lack the skills to do so.” Recently, President Obama addressed Congress and indicated that nearly 75 percent of tomorrow’s jobs will require something more than a high school diploma. Please note he did not say a college degree! Thusly, McGinn (2009) advocates that in a fast-paced world, relationships close the deal. Therefore, day-to-day negotiations are important!

Commentary: The graph above reveals a 138 percent PPS change in these leaders’ attitudes and beliefs concerning the issue of career and technical education (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders positioned to engage the K-12 school systems in order to ensure that both theory and practice are woven into the curriculum to better prepare students for a globally competitive marketplace that requires lifelong learning. Concurrently, efforts must be made to ensure that counselors and parents accept and promote CTE as a post-secondary educational option...not an alternative or, more specifically, something less than a college degree!

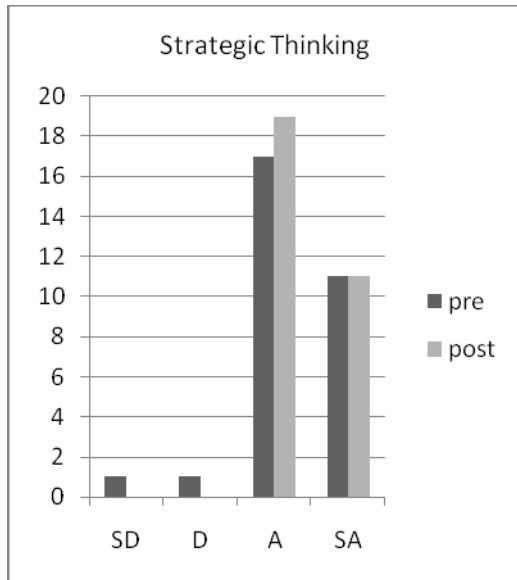
- 4) Zakaria (2008, p. 192) claims when it comes to education, “America is a large and diverse country with a real inequality problem.” As a union leader, I presume this country will be facing a competitiveness problem “if we cannot educate and train a third (i.e., poor and minority students) of its working population to compete in a knowledge economy.”



Reflection: Greenhouse (2009) proclaims one sign US workers are being squeezed is evidenced through the decline in 25-29 year olds holding bachelor's degrees. If, in fact, the US seeks to remain an innovative country that stakes its future on intellectual property rights, access to post-secondary education must be available and, more importantly, affordable. Fittingly, Zinn (1995, p. 498) remarks, "...many women, among the poor, did as they always had done, quietly organized neighborhood people to right injustices, to get the needed services."

Commentary: The graph above reveals a 15 percent PPS change in these leaders' attitudes and beliefs concerning the issues of equality and competitiveness (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders interested in playing a significant role in convening community leaders and identifying high-growth areas. Equality and competitiveness issues can be tackled by designing post-secondary scholarships around the needs of the community. However, serious thought should be given to the purpose of the scholarship beyond the life of the award. Merely, awarding a scholarship to a needy high school graduate based a one-time essay related to labor history will not reap the future benefits of programs that require yearly progress reports...revealing how this scholar has integrated labor-friendly and high-tech concepts into course projects.

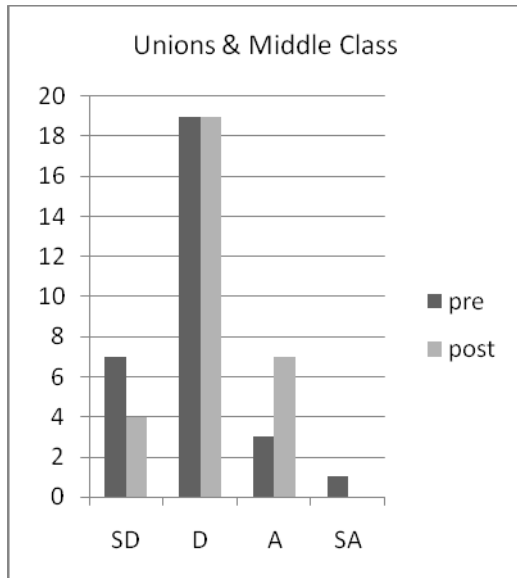
- 5) Compton (2008) posits that high school is a time for students "to prepare for long-term career aspirations" and that US, Chinese, and Indian high students spend approximately "two million minutes" during this 4-year journey. As a union leader, I prescribe to the notion that "the way in which a society allocates those two million minutes has implications on a country's economic future."



Reflection: Weil (1997, p. 130) claims, "...union leaders face difficulties similar to those public sector elected officials face: the best choices are not always the most politically palatable." The US K-12 school system is based on an agrarian society that existed over 100 years ago. Moving towards German or Singaporean models requires leadership to withstand institutionalized forces that seek to preserve the status quo. In view of that, Kaboolian (2009) advises leaders must change consciousness...one cannot solve tomorrow's problems utilizing yesterday's thinking.

Commentary: The graph above reveals a 15 percent PPS change in these leaders' attitudes and beliefs concerning the issue of strategic thinking (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders positioned to take the lead when it comes to school reform. This opportunity is not so much about control but rather the long term impact of molding the young minds of future members and/or social activists. Furthermore, in an era of accountability, allowing the "reformists" to entirely shape the agenda in hopes that the reform movement is merely another phase that may pass is a misguided and dangerous strategy.

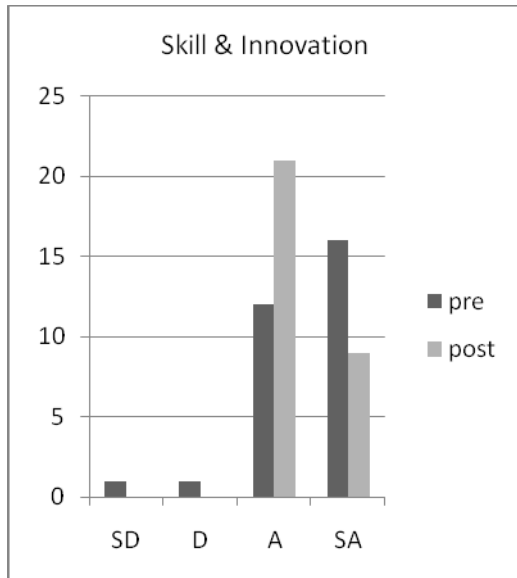
- 6) Dine (2008, pp. 251-252) proclaims, "For decades after WWII...Collective bargaining gains set standards that reverberated well beyond union ranks." As a union leader, I suspect that "A powerful labor movement that once moved workers into the middle class is now powerless to prevent people from falling out of it."



Reflection: Kochan (2009) suggests that the biggest policy challenge facing the Obama administration is a job's strategy. Herein, labor can play a vital role by ensuring that the economic recovery investments are complemented with workforce and workplace innovations needed to achieve good jobs, good wages, and high productivity...all while creating and maintaining a positive labor-management environment. Trade unions are often called upon whenever communities are seeking their assistance in erecting public structures (i.e., playgrounds, accessibility ramps, etc.). It is high time this same public insists that training providers and/or contractors who tap into the economic recovery funds operate within industry-based standards for the greater good of the communities they serve. Correspondingly, Freeman (2007, p. 125) asserts, "One way in which the shared capitalist systems overcome free-riding is through greater willingness of workers in such systems to intervene with fellow employees who are not doing the job properly."

Commentary: The graph above reveals a -27 percent Post survey change in these leaders' attitudes and beliefs concerning the issue of outsourcing talent (See the FIG Formula in Appendix B for details). Therefore, the HTUP was not able to play a part in transitioning those union leaders positioned to leverage the value they add in their communities in an effort to improve the standard of living. Nonetheless, most trade unions have federally-registered apprenticeship programs that are required to follow strict guidelines in their delivery. These outcomes-based accountability measures and practices should be transferred to the CBOs and FBOs that seek to utilize federal stimulus funding. With the decline of well-paying manufacturing jobs, union construction apprenticeships may be one of the few pathways to the middle class for the vast majority of non-college bound students or displaced workers.

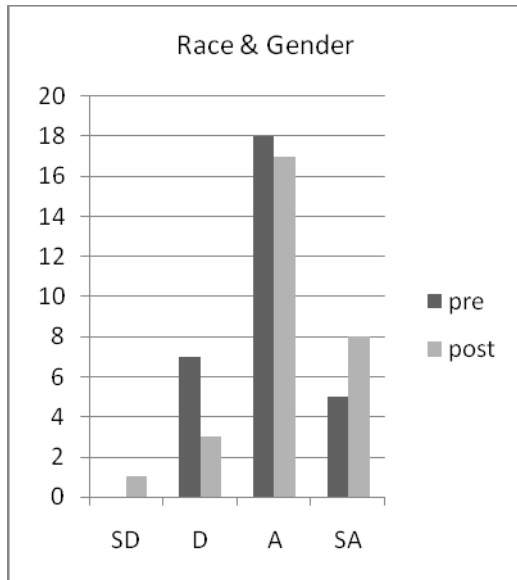
- 7) Gladwell (2008, pp. 138 & 150) proclaims, "Even the most gifted of lawyers, equipped with the best of family lessons, cannot escape the limitations of their generation." As a union leader, in order to "...tackle the upper reaches of a profession..." I sense one must, "...work hard enough and assert yourself, and use your mind and imagination..."



Reflection: Richardson (2009) proposes that change is happening in every industry—it will accelerate and remain constant...therefore, the only way to predict the future is to create it! Technology impacts nearly every aspect of one’s life: entertainment, transportation, communication, work, etc. It would be remiss on the part of union leadership to discount the importance of integrating technology into every aspect of the organization for the benefit of its members. Hence, Freeman (2007, p. 49) observes, “There is some evidence that the new technology favors skilled workers. Earnings are higher for workers who use computers, and the more-educated are more likely to use a computer than the less-educated.”

Commentary: The graph above reveals a 15 percent PPS change in these leaders’ attitudes and beliefs concerning the issues of skill and innovation (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders positioned to model and encourage lifelong learning in order for their members to meet the ever-changing needs of the global marketplace. This requires union staff to commit to on-going professional development not merely for personal satisfaction but rather to improve the efficiency and effectiveness of the entire organization. In essence, members who seek to play a vital role in changing the organization are more likely to emulate a learning organization’s culture than not.

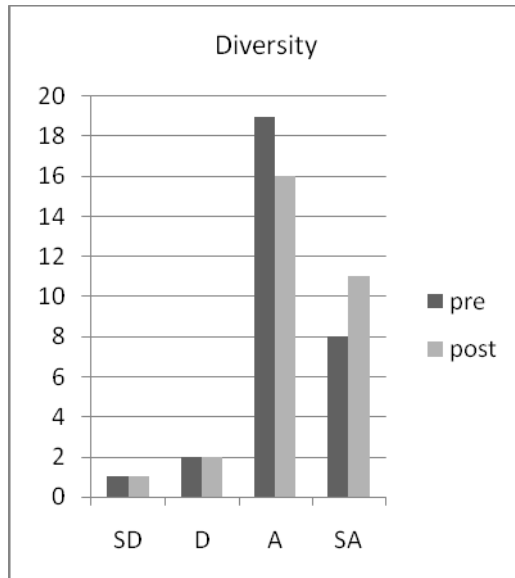
- 8) Paap (2008, pp. 372 & 389) maintains, “...union representatives often appear challenged in their abilities to ensure and protect a nondiscriminatory and harassment free environment.” As a union leader, I feel these race and gender-related divisions “offer dim predictions for the future of the labor movement if they are not addressed.”



Reflection: Kohler (2009) notes that while African-Americans began migrating from rural to urban areas in 1943, they were concurrently engaged in fighting Germans overseas—to protect Jews—despite their less-than-favorable treatment back home. Some may find it interesting that the very organization(s) put in place to protect citizens (workers) perpetuate further unfair conduct whenever it fails to address matters head-on. To this end, Fletcher and Gapasin (2008, p. 179) maintain, “Both race and gender have been successfully incorporated into and influenced by the development of modern capitalism.”

Commentary: The graph above reveals a 31 percent PPS change in these leaders’ attitudes and beliefs concerning the issues of race and gender (See the FIG Formula in Appendix B for details). Therefore, the HTUP played a part in transitioning those union leaders positioned to observe their board rooms and make concerted efforts to move beyond the pale, male, and stale atmosphere that has helped in its macro- and micro-organizational demise. Fear of new faces, new technologies, new thinking must be overcome in order to successfully navigate the future!

- 9) Swanstorm (2008, pp. 2 & 37) proclaims, “Construction is one of the few industries where workers with relatively little formal education can acquire the skills necessary to earn incomes that can support a middle-class lifestyle.” As a union leader, I think, “Construction companies and unions need to recruit new workers and diversify their workforces if they are to meet future needs.”



Reflection: Fletcher (2009) insists that since labor unions tend to avoid race and gender discussions, whenever possible, it is incumbent upon these affected groups to take action and be prepared to make sacrifices. Therefore, meeting future needs by reaching out to non-traditional workers will require attitudes to change from top to bottom in most construction-related unions. Accordingly, Weil (1997, p.256) proclaims, “If the labor movement survives as a vital force in US society, it will have done so because leaders creatively adjusted to myriad changes...and became responsive to the needs and aspirations of workers from a wide range of backgrounds.”

Commentary: The graph above reveals a 0 percent Post survey change in these leaders’ attitudes and beliefs concerning the issue of diversity (See the FIG Formula in Appendix B for details). Therefore, the HTUP was not able to play a major part in transitioning those union leaders who must not ignore the obvious: Immigrants have been the backbone of this country for centuries. Nevertheless, now is the time to actively seek solutions dealing with the “legal versus illegal” impasse. If, in fact, the construction industry faces a shortfall of skilled workers by 2014, can an appropriate solution be crafted by properly incorporating some of the +12 million illegal immigrants currently in this country?

- 10) Green (2008-2009, pp. 30 & 32) advises that union veterans, “...want young people to study the contributions that generations of union activists have made to democratizing and humanizing its often brutal workplaces.” As a union leader, “I am confident that an honest examination of labor’s untold story will show that, overall, unions have been far more democratic than other private institutions and less exclusionary than business or other professions.”



Reflection: Chomsky (2009) argues that things do not happen in isolation...while management tries to destroy democratic institutions unions serve as a democratizing force. Now, hardly a day goes by that the Employee Free Choice Act (EFCA) does not make a newspaper’s editorial page. As opponents predict dire results that will make the US another France...proponents find that EFCA presents the first serious opportunity to provide employees with a legitimate voice—within the confines of industrial democracy—since pre-Taft-Hartley. To that end, Freeman (2007, p. 84) indicates, “The workers who want unions want them to deal with workplace problems that they believe management does not resolve adequately or fairly.”

Commentary: The graph above reveals a 0 percent Post survey change in these leaders’ attitudes and beliefs concerning the issues of labor and democracy (See the FIG Formula in Appendix B for details). Therefore, the HTUP was not able to play a major part in transitioning those union leaders who must embrace transparency. Needless to say, no longer can deals be made in the back room and the rank-and-file be expected to rubber stamp such outcomes. Today’s generation seeks to be involved and will not tolerate being marginalized!

Part II—

The data for the 30 paired samples reveal:

| | Mean | Std Dev |
|------|--------|---------|
| Pre | 29.467 | 2.529 |
| Post | 31.100 | 2.695 |

For the sake of comparing means, the author utilized a one tail t-test for paired samples.

$$H_A: \text{Mean}_{\text{POST}} > \text{Mean}_{\text{PRE}} \quad \sum X_1 = 884$$

$$t = 3.005 \quad \sum X_2 = 933$$

$$t_{\text{CRIT}} (.01, 29) = 2.462 \quad \sum D = 49$$

$$3.005 > 2.462 \quad \sum D^2 = 337$$

$$\text{Reject } H_0: \text{Mean}_{\text{POST}} = \text{Mean}_{\text{PRE}}$$

Conclusion

As the disaggregated analysis of the data reveals in Part II, the HTUP played a part in impacting union leaders' attitudes and beliefs in seven of the 10 contemporary leadership topics while having no impact on two of the 10 topics, and being negatively impacted in one of the ten topics. It is apparent that there is work still to be done in the topical areas of diversity, labor and democracy, and, more importantly, unions and the middle class.

However, as the above statistical analysis (t-test) reveals in Part III, overall, the leadership attitudes and beliefs of the 30 union leaders who participated in the 98th Session of the Harvard Trade Union Program (HTUP) were significantly different as evidenced by the aggregated data collected and analyzed from the Pre and Post surveys. To be sure, the author acknowledges that an experimental or longitudinal approach may suggest other findings and would be interested in performing further research.

In closing, Zinn (2009) argues that, long ago, workers had to organize and strike in order to establish a democracy that reflected people's interests versus those of the government and business only. Additionally, Bobo (2009, p.76) proclaims, "Workers did not organize unions for some vague ideological belief in unions. Rather...they thought they would have a better chance to improve their working conditions if they joined with their colleagues than by doing things on their own." As the future of organized labor hangs in the balance, union and non-union workers continue to yearn for day-to-day workplace fairness as well as visionary leadership. Often, traditional union leaders are accused of making decisions based on anecdotes or "gut" feelings. This study provides the first attempt to establish empirical evidence that supports current union leaders' decisions for sending promising union leaders to Harvard's intense immersion model for trade union leadership. Consequently, HTUP's past, present, and future graduates owe it to all workers to take the lead!

References

- Bernard, E. (2009, February 17). *Union leadership and organizational change*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- Bluestone, B. & Harrison, B. (2000). *Growing prosperity: The battle for growth with equity in the 21st Century*. Berkeley, CA: University of California Press.
- Bobo, K. (2009). *Wage theft in America: Why millions of working Americans are not getting paid—and what we can do about it*. New York, NY: The New Press.
- Chomsky, N. (2009, January 23). *Understanding power*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- Compton, R. (2008, October 10). *2 million minutes*. Presentation at the ACT Annual Board Meeting, Iowa City, IA.
- Dine, P. (2008). *State of the unions: How can labor strengthen the middle class, improve our economy, and regain political influence*. New York, NY: McGraw-Hill.
- Fletcher, W. (2009, January 22). *Solidarity divided*. Presentation at the Labor & Worklife Forum, Cambridge, MA.
- Fletcher, W. & Gapasin, F. (2008). *Solidarity divided: The crisis in organized labor and a new path toward social justice*. Berkeley, CA: University of California Press.
- Freeman, R. (2007). *America works: Critical thoughts on the exceptional US labor market*. New York, NY: Russell Sage Foundation.
- Gladwell, M. (2008). *Outliers: The story of success*. New York, NY: Little, Brown & Co.
- Green, J. (2008-2009, Winter). Why teach labor history? *American Educator*, 32, 30-37.
- Green, J. (2000). *Taking history to heart: The power of the past in building social movements*. University of Massachusetts Press: Amherst, MA.
- Greenhouse, S. (2009, February 12). *The big squeeze: Tough times for the American worker*. Presentation at the Labor & Worklife Forum, Cambridge, MA.
- Greenhouse, S. (2008). *The big squeeze: Tough times for the American worker*. Alfred A. Knopf: New York, NY.
- Kaboolian, L. (2009, January 30). *Strategic public sector labor relations*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- Kochan, T. (2009, January 13). *Union strategies for a post Employee Free Choice Act world*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- Kohler, T. (2009, February 3). *The duty of fair representation*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- McGinn, K. (2009, February 11). *Shutdown on the waterfront*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- Murray, C. (2008). *Real education: Four simple truths for bringing America's schools back to reality*. New York, NY: Crown Forum.
- Paap, K. (2008, December). How good men of the union justify inequality: Dilemmas of race and labor in the building trades. *Labor Studies Journal*, 33, 371-392.
- Pausch, R. (2008). *The last lecture*. New York, NY: Hyperion.
- Pink, D. (2006). *A whole new mind: Why right-brainers will rule the future*. New York, NY: Riverhead Books.
- Richardson, C. (2009, February 2). *Bargaining over workplace change*. Presentation at the Harvard Trade Union Program, Cambridge, MA.
- Swanstorm, T. (2008, September 30). *The road to good jobs: Patterns of employment in the construction industry*. Transportation Equity Network: Public Policy Research Center-University of Missouri, St. Louis.
- Weil, D. (1997). *Turning the tide: Strategic planning for labor unions*. Ann Arbor, MI: Copley.

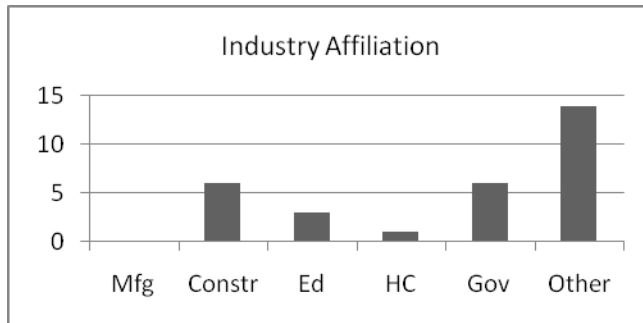
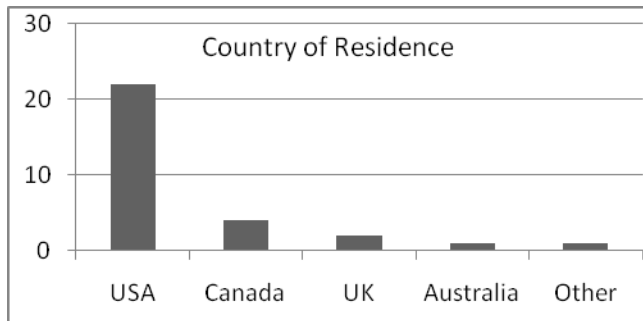
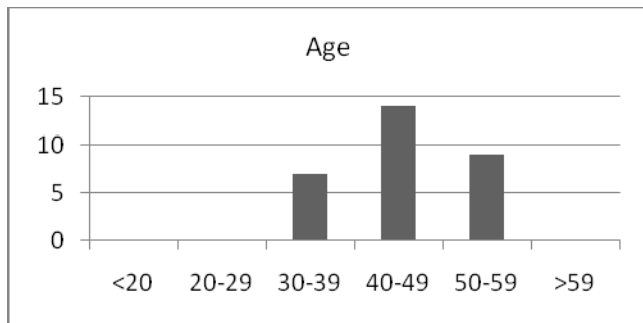
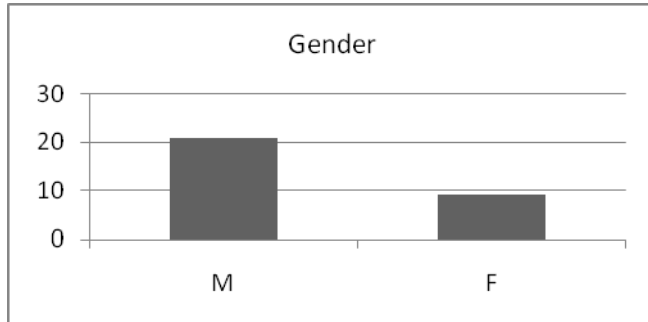
Zakaria, F. (2008). *The post-American world*. New York, NY: W.W. Norton & Co.

Zinn, H. (2009, February 6). *A people's history of the United States*. Presentation at the Harvard Trade Union Program, Cambridge, MA.

Zinn, H. (1995). *A people's history of the United States: 1492—present*. New York, NY: Harper Perennial.

Appendix A—

Below are graphic overviews of the demographics of this study’s population:



Mfg = Manufacturing

Constr = Construction

Ed = Education

HC = Health Care

Gov= Government

("Other" indicates one’s particular industry was not described or a mix of industries described are covered by these individuals’ organizations.)



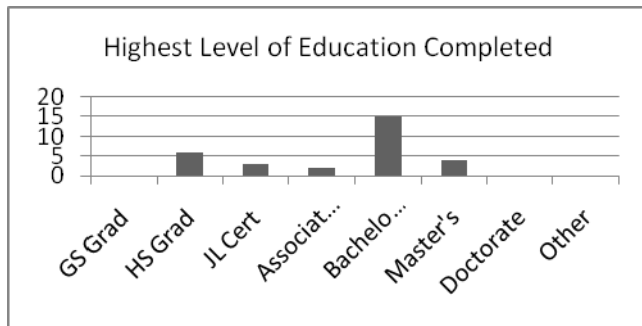
Bus Rep = Business Representative

Bus Mgr = Business Manager

Orgr = Organizer

Train/Ed = Trainer or Educator

(“Other” indicates that one’s particular position was not described or a mix of job duties described are covered by these individuals’ positions.)



GS Grad = Grade School Graduate

HS Grad = High School Graduate

JL Cert = Journeyworker Certification

Associat... = Associate Degree

Bachelo... = Bachelor’s Degree

Appendix B—

The “FIG” Formula: Designed to determine changes in pre and post Likert scale survey data (Based on raw count data):

Percent Change =

$$100 \times \left[\frac{\{(SA_{POST} + A_{POST}) - (D_{POST} + SD_{POST})\} - \{(SA_{PRE} + A_{PRE}) - (D_{PRE} + SD_{PRE})\}}{(SA_{PRE} + A_{PRE}) - (D_{PRE} + SD_{PRE})} \right]$$

$$Q1: (22 - 16)/16 = .375 = 38\%$$

$$Q2: (25 - 19)/19 = .3158 = 32\%$$

$$Q3: (19 - 8)/8 = 1.375 = 138\%$$

$$Q4: (30 - 26)/26 = .1538 = 15\%$$

$$Q5: (30 - 26)/26 = .1538 = 15\%$$

$$Q6: (16 - 22)/22 = -.2727 = -27\%$$

$$Q7: (30 - 26)/26 = .1538 = 15\%$$

$$Q8: (21 - 16)/16 = .3125 = 31\%$$

$$Q9: (24 - 24)/24 = 0 = 0\%$$

$$Q10: (23 - 23)/23 = 0 = 0\%$$