

Summary of Literature Review

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APA (2010) Reference: A review of career Interventions from an educational prospective: Have investigations shed any light?, Prideaux, L.; Creed, P. A.; Muller, J. ; Patton, W., (2000), Swiss Journal of Psychology; Volume 59; Issue 4; Page: 227-239.

Personal Relevance: I wanted to become current on all the published meta-analysis on career interventions, and found only two meta-analysis reviews using keywords of "intervention or transition", "school-to-work or job coach" and "meta-analysis". This is the more recent of those two reviews by two years, and cites the earlier review: Effects of career education interventions: A meta-analysis (Baker, S.G; Taylor, J.G. , 1998), The Career Development Quarterly (1998), Vol: 46 issue: 4 page: 376 -385.

Gall, et al (2007), pg. 185, discusses how researchers discover that "they could learn more by studying other cases" but have already set up their research project and all accompanying permissions, and thus have the obligation to continue with their original resources. Ironically, I am finding that to be true in my case. As my focus matures from the rescue fantasy of single-handedly upgrading the career interventions available, all things considered, my focus would be better reduced to what could improve these career interventions on a local level within my teacher friends and school contacts, assuming my research can prove credible enough to earn an opportunity. So, my research project for this class has changed, with my bite smaller and hopefully more digestible. I still want to eat the entire elephant, both as an educator and as a parent in distress, but my prospective is becoming more prudent, wiser and less emotional. I don't think you would say that there is room in research for excess emotion, would you, Dr. Goetz?

Focus: Prideaux, et al (2000) sets out to document and measure the various published school-to-work interventions, to determine if they were theory-based, if they were efficient in preparing workers for their future jobs, and if the interventions and findings could be replicated. In their gathering process, the authors selected studies based on "potential capacity for application with large groups of school-aged children" (page 227). Thus, they excluded studies that had narrow focus, and instead, chose only the studies that cast a wide net with their sampling. Examples of studies excluded were students who were gifted or with special needs, individual case studies, or anything of a "short-term, corrective focus" (page 227). Any rehabilitation studies weren't considered. However, some at-risk, low-income ethnic minorities were included, because their study was considered preventative. Overall, the authors kept the preventative but excluded the rehabilitative. There is an exception to excluding the rehab

learners: Prideaux, et al (2000), page 233, "and male youth offenders with learning disabilities (Munson, 1994)", where n = 42 high school students.

Rationale: The authors admit that many of the studies included in this review do fall short on the theoretically-sound and theory-grounded requirements for quantitative research. These flawed studies still represent some measured success of these interventions. The authors discuss how these interventions were relevant for continued, on-going professional (educational) practice, given their flawed quantitative research compliance. The authors excluded many "investigations involving particularly narrow populations" (Prideaux et al, 2000, page 227), as outlined in the previous Focus section. This review acknowledges that while "there appears to be a general acceptance of the need for investigations to have a sound theoretical foundation" (Prideaux et al, 2000, page 229), many of their studies didn't. The authors spend many paragraphs describing all the non-compliance to this "sound theoretical foundation", so much so that I wonder why they picked these studies. Was the wide net cast only able to find these 30 studies as the best data available in published meta-analyses of school-to-work intervention documentation? The authors ultimately say there is much to overcome and yet much promise in documenting future career interventions if these papers are reviewed in a "systematic and judicious manner" (Prideaux et al, 2000, page 237) and improved upon. That means there is much to overcome and much to be gained by improving these school-to-work interventions. More learning theories can be integrated, better data collection discipline can be exercised, and more precise questions can be asked. The authors imply how important this field of educational research is, and admit they found it sadly sub-par.

Theoretical Background:

At least 2 categories here: 1. Geographical location 2. Curriculum

1. Geographical location: One of the factors in casting the wide net of studies was they attempted to show no bias, but the studies had a net strong U.S. showing. The authors conclude that this over-representation of the U.S. in the studies could be due to more time, energy, money, and attention given to preventative and developmental programs in the U.S., whereas the other nations (U.K., Europe, Australia, Canada), the corrective or counseling programs might have been emphasized. So you might say this is built-in bias, due to the sample selection of studies, and ties back into the hypothesis specifics.
2. Curriculum: In some studies, there is no specific curriculum. In others, the authors found various canned programs identified in the study. In the Findings section, I will discuss briefly the Social Cognitive Career Theory (SCCT), which seems to get the highest marks from Prideaux, et al.

As far as disputes, the lack of testing standardization is the issue that bubbles up constantly. Some studies have no control group, no pre- or post-testing, a wide disparity of ages in the sampling, and a gaping variance in the size of n (the range is 1 to 22,964). I would even argue that their early decision to exclude more narrowly-focused studies insured that standardization would prove elusive. The more-narrowly focused (the excluded) studies could easily have

been performed with more care and attention to detail because they were precisely more narrowly-focused. One of the included research projects, Lapan et al (1997), tested 22,964 high school students in Missouri. Brook (1992), another included research project, sampled 1 adult, and Gilles et al (1998) sampled 107 junior high school students in Australia. That is a mixed bag, and yet, because they weren't narrowly-focused, they made the team.

Type and Organization:

1. Type - This literature review is a meta-analysis, though by the standards set in this course, I would say "just barely". It is more a narrative review to my novice-researcher brain absorbing its message. Prideaux, et al (2000), page 230, presents Table 1, Summary of career intervention studies. Of the 30 studies compiled, one has no sample, and the rest of the 29 list the number of measures used but do not list any specific statistic measurements. The range of measures (methods?) used goes from 1 to 8, but it never says what kind of measurements (replications, pre-tests, post-tests, re-tests, mean, median, etc.).
2. Organization – This review has specific topics:
 - Theory and practice
 - Interventions
 - Meta-analysis of career education interventions (CEI)
 - Research methodology and CEI
 - Evaluations of CEI
 - Well-validated instruments and CEI
 - Diversity of CEI
 - Replication of CEI
 - One section on the favored CEI of Social Cognitive Career Theory (SCCT)
 - Conclusion

The authors quasi-apologize for the lack of: hard statistics, consistent control groups, and lack of consistent theory-based replications. The concluding sentence, which I will repeat later, is that in spite of these shortcomings "the future of career intervention programming and research holds considerable promise." And don't we hope that? Surely this isn't the best that educational research can document on the effectiveness of school-to-work interventions, for the sadness of that probability is too great to bear. I would give the authors a high mark for taking so many disparate studies and doing their best to draw conclusions and summarize this quilt of studies. They may have wanted to abandon their research and begin afresh, but something valuable would have been lost had they done that. Gall et al (2007) quotes Wilcox, R.R. (1998) on page 126, "How many discoveries have been lost by ignoring modern statistical methods?" I would say this applies even to apples-and-oranges, quilt statistics.

Coverage: This review was published in Switzerland, and used studies with samples from various countries; U.S., U.K., Australia, and Canada are mentioned specifically. The authors cite the narrow populations they excluded (see Focus above), and it seems like they used every other available study, almost apologetically.

I searched the PsycINFO database, with the keywords "transition or intervention", and "school-to-work or job coach", and under Methodology, checked "Literature Review" and "Meta-analysis". I found this review and the other meta-analysis by Baker and Taylor, 1998, which is one of the 30 studies referenced in this review. Ironically, Baker and Taylor (1998) is the one study where $n=0$, and is the only outlier to statistically-acquired new data. Using the same search parameters, my searches also found more recent reviews of school-to-work interventions, published since 2000, which obviously didn't make this 2000 study. I found some pre-2000 reviews which would have been included but for the narrow-focus exclusion by the authors.

I specifically was looking for a wide net to catch me up on the effectiveness of historical interventions, and with the meta-analysis requirement, was left with two choices. I chose the 2000 review because it included the 1998 review.

In my current searches in PsycINFO, there are 22 peer-reviewed meta-analysis reviews, 16 of them being post-2000, but they are individual studies, not meta-analysis reviews covering decades. When I also add in the keyword "meta-analysis" to the other mentioned keywords, and also check "meta-analysis" under Methodology, the same search yields only the 2 peer-reviewed journal pieces: this review and Baker and Taylor (1998). So by process of elimination, it was an easy choice to make.

Documents Found: The two reviews mentioned in the previous paragraph came from the Swiss Journal of Psychology and the Career Development Quarterly, respectively. The larger search result (without key word "meta-analysis") came primarily from Career Development for Exceptional Individuals, Education and Training, Career Development Quarterly, Journal of Mental Health Administration, Education & Training in Mental Retardation & Developmental Disabilities, and Journal of Vocational Rehabilitation. This larger search result (22 peer-reviewed journals, same key words) was requested of the PsycINFO database. I was surprised how limited was the amount of research published, and as an indicator of the amount of research conducted, it was very small. I was expected more results. I was also expecting more current research available as an overview. If the guiding words of Prideaux, et al (2000) were that the future "holding considerable promise" (page 237), then why isn't there more since 2000?

Research Procedures: Not a lot of statistics were discussed. When they were, the topic was simple calculations. Prideaux, et al (2000), page 234 sets a low expectation by acknowledging that in Table 1, the only numbers presented, had a "precarious" theoretical foundation. The page goes on to say that they gave a represented study a passing grade if their "use of theory was referred to at all" when related to their program design. This is a very low bar, and makes the overall conclusions even less sound. Perhaps there would be nothing to review if they had made reasonable analysis demands. All the studies could have been eliminated? In many ways, this feels more like a qualitative review than a quantitative one. Some groups had no explicit theory documented, no pre-test, no post-test and no control

group. The sampling ages were an inconsistent pattern. Of the 30 studies compiled: 2 groups were adults, 8 groups were university students, 3 were junior high, and 17 were high school. The sample sizes were without consistency also: n varied between 1 and 22,964. One sample group was described as ethnic minorities with low income (how they dodged the "narrow focus" bullet and made the review list is unexplained, other than it was a preventative study).

Findings: The authors claim little about any major findings unearthed by their research. They did cite many programs identified and studied, but found one dominant school-to-work program that was implemented and measured. That is the Social Cognitive Career Theory (SCCT). Four studies indexed "the statistical strength of hypothesized" meta-analysis investigations. Four other qualitative reviews produced a "great deal of supportive evidence" of this program. The authors speak the most highly of this curriculum, compared to any others.

To elaborate a bit about SCCT, [here is one item from a bing.com search](#). To paraphrase this resource: <http://www.osra.org/itlpj/smithfall2002.pdf>, the student ultimately has to accept the responsibility for his or her decisions. SCCT sounds worthy of further investigation as an effective, meta-cognitive, intrinsic motivator for young learners preparing for their futures. The authors conclude this is the strongest curriculum found within this review. Prideaux, et al (2000), page 231, says that some conclusions "could not be drawn due to the faulty design. Hopefully, more studies of this nature will be conducted, using a control group and larger samples." That is about as powerful as their conclusions get.

Implications: The authors agree more innovation, more energy, more measuring and more theory-based interventions are needed. On page 229 and 230, they conclude two points:

1. There is a need for investigations to have a "sound theoretical foundation".
2. Regarding methodology, there is a "vital" need for studies to be designed properly for "inferences to be made and sound conclusions to be drawn".

As previously mentioned, the authors think there is more to be done with SCCT. Prideaux, et al (2000), page 231, criticizes some of their selected reviews as too descriptive, and states that some researchers gleaned more from the participants' feedback and evaluation sheets than they gleaned from mathematical measuring and statistical analysis. Prideaux et al (2000), page 231, mourns this loss of replication opportunity.

Evaluation: Prideaux, et al (2000), page 232, says that these compiled studies show how diverse career interventions are and how differently they have been taught and measured. The various school-to-work programs "differ in content and process" and show "the diversity of approaches used to measure their effectiveness." Again, Prideaux, et al, do highlight SCCT as an intervention to get more out of and measure better.

SCCT is derived from Albert Bandura's social cognitive theory using 3 "building blocks" of career development: (<http://www.osra.org/itlpj/smithfall2002.pdf>)

1. Self efficacy
2. Outcome expectations
3. Personal goals

Prideaux, et al (2000) also points out on page 237 that they have no conclusion at what optimal age(s) these work-to-school interventions should occur for maximum effectiveness, and state that this conclusion is yet to be determined. "However, if the findings of the papers reviewed here are advanced in a systematic and judicious manner", what can yet be made of career intervention programming and consistent research procedures "holds considerable promise".

I, of course, agree. For its lack of compliance, I learned much by reviewing this compilation of research in my field. I will refine my research problem so that it builds on what I learned here. I feel also that my future work in education will continue to be in this field of school-to-work intervention and training.

References

Smith, S.M., (2002), The role of social cognitive career theory in information technology based academic performance, *Information Technology, Learning, and Performance Journal*, Vol. 20, No. 2, Fall 2002.