A COMPREHENSIVE LITERATURE REVIEW OF RESEARCH ON THE GED DIPLOMA TO CLARIFY CONFLICTING CONCLUSIONS ARISING FROM ASYNCHRONOUS HYPOTHESES AND STUDY DESIGNS

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An initial literature review of 23 published studies on the GED diploma program over its successful life span of nearly 60 years yields inconsistent conclusions through analyses conducted at different times with different populations and different methods. Inasmuch as an hypothesis, an epistemological inquiry into what one wants to know, is a "dictatorship of the research question" (Tashakkori & Teddie, 1991, p. 21), it appears conflicting conclusions may result from an asynchrony between a research question and the study design. To serve as a guide to sort out whether a conflict exists in a study, this researcher collated the a) experiential; b) theoretical; and c) data dimensions of a study into quantitative and qualitative research paradigms. Use of time as a unifying element in this review divides the GED research into its 4 editions/generations. This device prompts the notion of time elements surrounding each hypothesis-- a fourth dimension. Thus, in addition to a personal learning time for the researcher, each hypothesis occurs in an historical time; a theoretical time; and a contextual or societal time. The scope of this paper is to briefly highlight the research reviewed according to its generation, research paradigm, notions of time, and future hope for the field.

GED Research

Educational research-- and adult education research is no exception, is no more than who wants to know what, when does one want to know it, and how shall one find out? The overriding objective is to emphasize that learning and knowledge acquisition occur in a continuum-- not in a vacuum and not totally independent. One is thus alert to the "package" of research on a topic and the appropriateness and uniqueness of each contribution to that package of knowledge.

First Generation Research

In historical time, research on the GED tests labeled first generation research for purposes of this study is undertaken from 1942 through 1977. Earliest research centering solely on World War II veterans is not included in this review. The contextual-social time of this generation as described by Auchter (1998) "reflects an industrial era, when high school education was sufficient for many jobs. Content knowledge was assessed in a traditional manner". The societal-contextual time in which "over 40% of the test takers took the tests for employment reasons indicating that this level of education qualified people for many entry-level positions" (Auchter) did not lead to research studies in the workplace. On the other hand the societal-contextual time of "37% [who] indicated that they planned further study (p.1) did prompt research in academia.

First generation quantitative research. The quantitative studies conducted during the first generation of the GED program that are selected for inclusion and review are Byrd (1973); Rogers (1977); Wolf (1980); and Wilson, Davis & Davis (1981). Overall, the hypothesis and study design are synchronous.

Table 1

A Guide to Adult Education Research: Research Hypothesis + Synchronous Study Design = Consistent Conclusions.

Investigative Paradigm	Quantitative	Qualitative
	Experiential Dimension	
1. Orientation	Institutional Enterprise: Academic/Vocational	Human Enterprise
2.Purpose	Benefit to institutions	Benefit to individuals
3. Focus	Looks [at the GED]	Looks [at the GED graduate]
4. Researcher orientation	Analytical data	Field work
5. Loss of control	Reception	Observation
6. Results	Based on statistical analysis	Based on descriptive method
	Theoretical Dimension	
1. Reasoning	Deductive (Garrison)	Inductive (Garrison)
2. Purpose	Action research	Participatory research
3. Philosophy	Positivist/empirical/analytic	Post-modern interpretive, can be critical when transformative/humanist
4.Limitation	Cannot see what will happen to any individual	Findings do not generalize to the population of interest
5. Results	Confirmatory theory	Grounded theory building
6. Voice	Passive	Active
7. Attitude	Countered with qualitative	Compliments quantitative
8. Hegemony	Supports it	May counter it
9.Viewpoint	Exclusive	Inclusive
	Data Dimension	
1.Source	Official records	Self-reported, e.g. surveys, case histories
2.Purpose	Condensation of facts (Merriam & Simpson, 1995)	Open-ended
3. Kind	Hard data	Soft data
4. Use	Can be quantified	Can be qualified
5. Viewpoint	Objective	Subjective
6.Acquisition	Databases	Field work
7. Procedures	Statistical analysis	Descriptive method

First generation qualitative research. The studies conducted during the first generation of the GED testing program which are selected for review are: the first of three studies by Swarm (1973); and a study by Johnson, Shearon and Britton (1974). Swarm's study seeks to find out

about conditions among GED diploma graduates in their post-graduate milieu in the United States. Johnson et al. looks at recidivism rates for women prisoners with GED diplomas compared to those without. The societal-contextual time of the 70s reflects the “me” generation and new societal emphasis on the individual and the outcomes of the GED on a personal level. Have we fallen into the assumption that any study not overtly quantitative is qualitative?

In an attempt to reach a fit for this study, this researcher scanned Table1 crossing back and forth between the quantitative and qualitative paradigms. Johnson et al. is an example of cross-discipline research with sociology. The orientation is a dual institutional-human one. The data does use official records. Most significantly it looks at the GED graduates' behaviors. Operationally it is heavily quantitative; it is not exclusively qualitative. Rather, the paradigms are mixed.

Is Swarm's study qualitative? It's conducted for an institutional enterprise, and benefits other than the individuals. Swarm’s study has value as a baseline descriptive study that gives insight into the sociospheric conditions occurring at the time of the research. It is a database that should generate ideas for future research about the GED diploma or GED diploma recipient. It more closely fits Kerlinger's (1986) explanation of descriptive research the "purpose [of which] is not to give value to sets of relationships but…to systematically describe the facts and characteristics of a given phenomenon, population, or area of interest" (p. 91). Thus, there is no qualitative research in the first generation of the GED tests.

Second Generation Research

The second generation of the GED focused on tests given from 1978-1987. The contextual-societal time comes on the “closing cusp of the industrial age" (Auchter, 1998, p. 2).

Second generation quantitative research. The quantitative studies conducted during the second generation of the GED program are similar to those of the first generation. These studies set in academia are included for review: Colert (1983); Clark (1987); Klein & Grise (1987); Owens (1989); and Schillo (1990). As in the first generation, they consistently follow the dimensions of the quantitative paradigm.

Second generation qualitative research. These studies conducted during the second generation of the GED program are selected for inclusion and review: Ayers (1980); Cervero & Peterson (1982); Ladner (1986); and Swarm’s second and third studies (1978 & 1981). The setting of Ayers and Swarm are post-graduate regional academic milieu. Cervaro et al. is set in a national post-graduate milieu.

Again, without Table 1 guidelines, assumptions may be made that these are qualitative studies inasmuch as they are not quantitative. This researcher posits that qualitative research evolved to answer society’s question about individuals and any effects on individuals. Tabulation of traits, attitudes, and employment history as in descriptive research does describe and inform about the individual and may in some instances even advance practice but do not establish a relationship. The introduction of data in the form of the survey was interpreted by many as a criterion indicative of qualitative research.

These studies are important for grounded theory for what they introduce about GED graduates in a societal-contextual time: Ladner and the Early Exit category of GED test taker; Swarm and the incidence of use of the GED for practice with English as a second language. In contrast to itemizing demographic trends as did Swarm, Cervero et al. looked at the affective levels of

expectations of GED diploma graduates but for the same reasons aforementioned are not considered as qualitative research.

In the workplace, Grise & Klein fail placement in the quantitative paradigm with soft data that do not fit the criteria for qualitative research.

Third Generation Research

Research on the third generation of GED centers on tests given from 1988 until 2002. In Megatrends, Naisbitt and Aburdene (1982), created a heightened awareness of the shift from an industrial to an information-based society which created a shift in emphasis to the workplace.

Third generation quantitative research. Studies chosen for 3rd generation quantitative studies are Hamilton (1998); McElroy (1990); Murnane, Willett and Boudett (1995); O'Neill (1995); and Soltz (1996). All are set in academia except for Murnane, et al. in a vocational setting. There is grounded theory in O'Neill's study undertaken on the category of high-risk community college students in a low socio-economic area of New York.

In the contextual-societal time, the question of whether the GED credential will benefit adults going directly into the workplace without further education and training must be scrutinized. The results were inconclusive but did reveal a grounded theory that GED diploma graduates are likely to go to proprietary school before entering the workplace.

An important result of Hamilton’s research is the grounded theory piece in identifying the home-schooled students taking the GED tests. Hamilton's study did not pass the test for quantitative research according to Table 1.

Third generation qualitative research. During the third generation of the GED, researchers are slowly evolving into the qualitative paradigm evaluating workplace benefits and effects in Hayes (1993), the Iowa Graduates (1992), and Tyler (1998). To date, a good example tof the use of qualitative research is found in Hayes (1993). In the experiential dimension, this study is oriented toward both a quantitative and qualitative purpose. In the human enterprise, the study desires to assess the broad impact of the effect of the GED diploma on its recipients. Hayes hypothesized that non-vocational benefits are taken less seriously but should not be underestimated.

Fourth Generation Research

The paradigm wars belong to the last century. The need for triangulation is obvious as research objectives and dimensions expand. Cross-discipline research will be fostered by this peace accord. When the personal learning level of researchers embraces the third "methodological movement "(Tashakkori & Teddie, 2003), research hypothesis + synchronous study design will = consistent conclusions.

Fourth generation quantitative research. GED 2002 provides a good opportunity to follow futurists' theoretical insights into research practices. In unifying the results of these studies in the nonexperimental quantitative paradigm, and to facilitate meta-analytic thinking, as well as supplement understanding the studies as a useful “package”, Thompson (2002) makes these recommendations on results reporting based on the APA Task Force on Statistical Inference which influenced the fifth edition of the APA Publication Manual: a) report effect sizes; b) report confidence intervals; and c) use graphics to enhance interpretation and communication of

results. Wilkinson (1999) also prefers “comparing effect sized directly with the effects reported in related prior studies” (p. 599) rather than describing effect size as benchmarks.

Fourth generation qualitative research. Futurists should hasten the evolution toward new forms and new paradigms of educational research by: (a) engaging in more cross-discipline inquiry; (b) increasingly viewing all of adult education with curiosity and in hypotheses frames; (c) thinking in research designs that can be measured with appropriate analyses; (d) using best practices in reporting and reviewing research; and (e) guarding against “seeking relentlessly to achieve predictable outcomes measured by new technology…” (Jackson, 2002, Introduction).

References

Auchter, J.C. (1998). The value of the GED tests. NCAL Connections, Fall-Winter, 1-4.

Ayers, C. V. (1980). An educational and employment growth study of general educational development (GED) graduates of Surrey Community College. Unpublished doctoral dissertation, Nova University. (ERIC Document Reproduction Service No.ED196472)

Byrd, F., Hayes, E., Hendrix, J., Simpson, D. & Boone Cluster (1973). A comparison of the educational success of GED recipients and traditional high school graduates in selected areas at Wilkes Community College (Practicum presented to Nova University, ERIC Document Reproduction Service No. ED100439)

Cervero, R.M. & Peterson, N.L. (1982, November). After the GED tests: Employment and training activities of GED examinees. (GED Research Brief No.4).Washington, D C: American Council on Education (ERIC Document Reproduction Service No. ED272754)

Clark, R. S. (1987). Academic achievement of GED graduates of a community college of Allegheny County. University of Pittsburgh, Department of Education. (ERIC Reproduction Document Service No.284050)

Colert, S. (1983, December). High school equivalency and high school diploma students at Brandon University: A comparison of academic success (GED Research Brief No.5). Washington, DC: American Council on Education.

Garrison, D. R. (1994). Research perspective in adult education. Malabar, FL: Krieger.

Hamilton, J. (1998). First time students entering a two-year public college with a GED: Fall 1991 to Fall 1996.Georgia: Gainesville College, Office of Planning and Institutional Research (ERIC Document Reproduction Service No. ED415938)

Hayes, E. (1993). Graduates’ perceptions of the benefits of GED graduation: A more comprehensive assessment. Adult Basic Education, 3 (1), 3-26.

Iowa State Department of Education. (1992). What has happened to Iowa’s GED graduates? A two, five, and ten-year follow-up study. Final Report. (ERIC Document Reproduction Service No. ED344047)

Jackson, P. W. (2002). John Dewey and the philosopher’s task. New York: Teachers College Press.

Johnson, D. C., Shearon, R.W. & Britton, G.M. (1974). Correctional education and recidivism in a women's correctional center. Adult Education, 24,121-129.

Kerlinger, F. N. (1986). Foundations of behavioral research (2nd ed.). New York: Harcourt Brace College Publishers.

Klein, J. D. & Grise, P.J. (1987, September). GED and traditional high school diploma holders attending Florida's community colleges: A comparison of academic success. (GED Research Brief No.12). Washington, DC: American Council on Education.

Ladner, R.A. (1986, July). Educational and occupational activities of GED and conventional high school graduates in Florida. (GED Research Brief No.8). Washington, DC: American Council on Education.

McElroy, C. (1990). GED certification and college success. Illinois: Kankakee Community College. (ERIC Document Reproduction Service No. ED339273.)

Merriam, S.B. & Simpson, E.L. (1995). A guide to research for educators and trainers of adults (2nd ed.). Malabar, FL: Krieger.

Naisbitt, J. & Aburdene, P. (1990). Megatrends 2000: Ten new directions for the 1990s. NY: Morrow.

O'Neil, S. P. (1995). A study of the academic progress of high-risk GED graduates enrolled in an urban community college. Adult Basic Education, 5, 28-36.

Owens, D. K. S. (1989). First semester college performance of GED graduates at the University of Alaska Anchorage. University of Alaska Anchorage, Adult Learning Center. (ERIC Document Reproduction Service No.345014)

Rogers, G.W. (1977). First semester college performance of GED testees. Northern Kentucky University, Testing and Psychological Services. (ERIC Document Reproduction Service No.ED145857)

Schillo, P.A. (1990). A comparison of the academic success of GED certificate students and high school graduates at Lorain County Community College. Bowling Green State University. (ERIC Document Reproduction Service No. ED324076)

Soltz, D.F. (1996). The achievements of community college students with GED certificates: A longitudinal perspective. Community College Journal of Research and Practice, 20, 269-276.

Swarm, C.C. (1971-1981). Three studies of general educational development (GED) students (Kellogg Fellowship Report). Chicago (ERIC Document Reproduction Service No. ED211696)

Tashakkori, A. & Teddie, C. (2003). Handbook of mixed methods. Thousand Oaks: Sage Publications.

Thompson, B. (2002). What future quantitative social science research could look like: Confidence intervals for effect sizes. Educational Researcher, 31 (3), pp. 25-32.

Tyler, J.H. (1998). Results from a new approach to studying the economic benefits of the GED. [Electronic version]. Focus on Basics, 2, B, 1-7.Retrieved January 26, 2001,from tp//gseweb.harvard.edu/ncsall/fob/1998/tyler.htm

Wilkinson, L. & APA Task Force on Statistical Inference. (1999). Statistical methods in psychology journals: Guidelines and explanations. American Psychologist, 54, 594-604.

Wilson, R.C., Davis, P. D. & Davis, J.C. (1981, April). The success of high school diploma and GED equivalency students in vocational programs at Lake City Community College, Florida (GED Research Brief No.4). Washington, D.C.: American Council on Education.

Wolf, J.C. (1980, March). Predictive validity of the GED tests for two-year college study South Plains College, Texas. (GED Research Brief No. 1). Washington, DC: American Council on Education.

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