

## LONG-TERM FOLLOW-UP METHODS AND RESULTS\*

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This report covers procedures and results which were reported in a symposium at an earlier convention (LoCascio and Super, APA Convention, Philadelphia, 1963). They are reviewed here in order to present a comprehensive picture of the Career Pattern Study research now being written up.

### The Initial Contact: 1951-52

The Career Pattern Study is a longitudinal investigation of vocational development. It first made contact with its 142 high school freshman, all of the boys of that grade in Middletown, New York, in the academic year 1951-52, as shown in Table 1. The boys constituted a complete socioeconomic cross-section of the community. There were then virtually no problems in securing cooperation since the school authorities supported the project. Some of the boys may not have felt free to refuse to cooperate, in spite of the statement to them and to the school authorities that individual participation in the study was strictly voluntary. Occasional later comments did reveal this feeling of compulsion in some boys. However, long-term effects of real or imagined pressure were insignificant, as is indicated by the high percentage of subjects who, as will be seen, continued to cooperate after leaving high school.

### The First Follow-up: 1955

The research design called for a first follow-up during the

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\*Supported in part by the U.S. Office of Education Cooperative Research Contract No. 1393. Presented at American Personnel and Guidance Association Convention, Washington, D.C., April, 1966.

senior year in high school, when the boys would be about 18 years old. It was assumed that during the intervening years they would have been coping with the vocational development tasks of the early years of exploration, e.g., crystallizing and specifying a vocational preference, and that most would soon, at the time of leaving high school, be confronted with the task of implementing a vocational preference. As in the ninth grade, plans called for a battery of questionnaires, inventories, tests, and an interview. Information was sought concerning the subjects' vocational development during the preceding three years.

Collecting data from the 106 boys who were still in attendance at the high school proceeded smoothly enough. Of the remaining subjects, one had died, leaving 35 not in school to be accounted for. As a result of letters to the principals of schools supposed to have received transfer students, newspaper articles, and the aid of two local interviewers, data were collected from 16 more boys for a total of 122, or 86% of the 141 surviving original ninth graders. At least partial data were obtained on the remaining 19 subjects, from the high school records.

#### The Second Follow-Up: 1958

Plans called for a second follow-up three years after the boys, now young men, would have graduated from high school and would be 20 or 21 years old. It was hypothesized that during this period most young men deal with the task of implementing a vocational preference: either implementing high-school-leaving preferences or specifying and

beginning to implement new preferences as a result of experience. Partly because of confidence in questionnaire methods for collecting relevant data, and partly for economy reasons, this follow-up was done by mail.

The questionnaire used consisted of 70 pages concerning vocational development since high school. While most subjects would be required to complete less than half of the 70 pages, which were arranged to make selection of appropriate sections easy, the task could conceivably take the least literate two or three hours. Partly to compensate for the time required and partly to provide an incentive to cooperate, it was decided to pay each subject five dollars for completing the questionnaire. Two dollars were mailed with the questionnaire and a covering letter which stated that an additional three dollars would be mailed when the completed questionnaire was returned.

After two letters and a postcard reminder, 106 questionnaires or 76 percent, were returned from the original ninth grade group. As a result of a field follow-up, 17 more completed questionnaires were returned, for a final total of 123, or 88 percent of the surviving original ninth graders. This is 2 percent more than the number cooperating in 1955 when most of the subjects were a captive group in high school.

Of the remaining 17 subjects, 13 were uncooperative, and 4 could not be located. It is worth noting here that at the next data collection, four years later, all 4 lost subjects were located, tested, and interviewed, while only 6 of the 13 uncooperative subjects again

refused to cooperate. Instead of attrition, we experienced retrieval.

The Third Follow-Up: 1962

The third follow-up was planned for approximately age 25, 10 years after the original contact in the ninth grade, 7 years after the first follow-up at age 17 or 18 and four years after the second follow-up at age 20 or 21. Theory has it that, by this time, the majority of subjects would have virtually completed the developmental tasks of vocational exploration and would be dealing with those of establishment. A three-year grant from the Cooperative Research Program of the U.S. Office of Education, added to the project's regular budget from the Horace Mann-Lincoln Institute of School Experimentation, made intensive data collection possible. An all day meeting with each subject was decided upon, during which he would complete relevant questionnaires as a basis for a personal interview, and take several tests and inventories.

The data collection period was to be April and May, 1962. To assure community support, the project director and the coordinator of the third follow-up visited Middletown in November, 1961. Meetings were held with the superintendent of schools, the executive vice-president of the chamber of commerce and the president of the local community college; all voiced their interest in, and support of, the study. Meetings were also held with the principal and appropriate staff members of the senior high school, who later provided offices for collecting data from subjects who preferred to be seen in Middletown rather than in New York City. In order to alert the local

community and to aid in obtaining the subjects' cooperation, the local newspapers printed an article about the study and ran two appropriate pictures during the period of data collection.

In December, 1961, a letter was sent to the subjects, alerting them to plans for a personal meeting in April or May, explaining that all expenses including compensation for their time would be paid, and stressing the importance of their help. In late January, 1962, a more detailed letter was mailed. It reminded subjects that the project would pay all travel expenses (if they lived east of the Mississippi River) plus \$25 to compensate them for the day. A one-page appointment questionnaire was enclosed with the request to complete and return it for use in making arrangements for travel and the interview. Special letters were written to those who had not cooperated four years earlier.

In April and May, 1962, 82, or 59 percent of the surviving 140 subjects, were tested and interviewed as scheduled by correspondence. Subsequently, as a result of more routine meetings, trips to the Gulf, and West Coast, visits while overseas on other matters, and persuasion in the field with hard-to-gets, data were collected from 50 more subjects. The final number interviewed and tested was 132, or 94 percent of the 140 survivors of the original ninth grade group of 10 years earlier. This was 6 percent higher than the number cooperating at the second follow-up and 8 percent higher than the number cooperating at the first follow-up. The remaining 8 were classified as uncooperative, although only 4 seem definitely to be in this category. I might add that, in 1963, we were able to interview

and test 94 percent of another Career Pattern Study group who entered the ninth grade in Middletown High School in 1952-53 and whose careers we have been following since they were eighth graders during the academic year 1951-52.

#### Status of Ninth Grade Boys at Age 25

What was the status of the ninth grade boys ten years later, at about age 25? Table 2 shows that if military and student subjects are excluded, 91 percent were in the Northeast, and 87 percent were within easy reach of Middletown. Despite the fact that these subjects were reaching the period of establishment, with most of their uprooting educational and military experiences behind them, most of them had not moved very far from home.

Table 3 shows that 85 percent (of the 132 subjects from whom data were collected) had received high school diplomas or the equivalent. Forty-six percent had gone on to some kind of higher education (about twice that which characterized classes when there was no local community college), but only about half of these finished two years. This high junior college drop-out rate deserves study. The four year college graduates constitute 17 percent of the original ninth grade group.

Table 4 shows that 103, or 74 percent of the 140 survivors of this class of 1955, had graduated from high school by 1957; 37 subjects, or 26 percent, were dropouts. But if we count high school equivalency diplomas won by examination in later years, the dropout rate is cut by over one-third; 116, or 83 percent (of the total group of 140), held some kind of high school diploma by 1962. It seems clear that motivation to complete

high school changes during the years after dropping out.

Table 5 suggests that a higher proportion of high school dropouts than graduates were in military service. Of 10 career military men, 8 were dropouts; 5 of the 8 had secured equivalency diplomas, suggesting that for many dropouts, a military career is used as an opportunity to facilitate vocational development rather than to stagnate.

Table 6 gives the occupational levels of the 95 men in classifiable civilian occupations. The distribution is normal and typical, except for the lack of higher level professional and managerial occupations, as might be expected in a group of young men. It is noteworthy that the dropouts, of both types, unlike the graduates, are limited generally to the lowest levels.

Table 7 reports fields of employment. Again, the dropouts are severely limited as to fields of work.

Table 8 gives the data on the self-estimated occupational and career success of the men for whom such data were relevant. It should be noted that occupation is here defined as by Shartle, and that career means the sequence of educational and occupational positions held. That this distinction was successfully made by the subjects was due to a planned sequence of questions and is demonstrated by a correlation of .46 between the two ratings. About two-thirds of the total group, and of graduates and dropouts alike, considered themselves as successful as the average man their age in their occupations, and one-tenth or fewer considered themselves less successful than the average. But whereas only one-twelfth of the graduates believed that they had not handled their careers well, more than one-fourth of the dropouts

considered that they had handled their career development badly, figures which have to be viewed with caution because of small numbers. In summary, occupational success tends to be rated as average by graduates and dropouts, but there appears to be a tendency for graduates to rate career success more favorably and for dropouts to rate career success less favorably than their occupational success.

### Conclusions

Several important generalizations concerning the conduct of longitudinal studies and the career development of young men appear to follow from what has been reported in this paper:

- 1) Attrition should not be expected or accepted in a longitudinal study, even when the subjects constitute an intellectual and socioeconomic cross-section. On the contrary, the retrieval of many lost and uncooperative cases can be expected with the passage of time.

- 2) The bringing to bear of appropriate financial resources and methods, plus perseverance and tact, can insure returns from all but an insignificant number of subjects.

- 3) Geographic mobility during the years following high school and college leaving is not substantial and presents no great difficulty in such a follow-up other than that of causing delay and expense in reaching subjects.

- 4) When a community college is accessible, the percentage of students continuing education beyond high school increases greatly, but many of these students do not complete two years.

5) After the lapse of several years, the high school drop-out rate is substantially reduced by changed motivation and by the resumption of educational endeavors.

6) Military service provides an opportunity for vocational development for a substantial proportion of dropouts.

7) The occupational opportunities of dropouts are severely limited as to both level and field when compared to those of high school graduates, by the time they have attained the age of about 25.

8) It is possible, by use of appropriate methods, to get even the less educated subjects to make a useful distinction between occupation and career.

9) Dropouts consider themselves as successful in their occupations as high school graduates do in theirs, most members of each group considering themselves as successful as others in their occupations. But dropouts believe that they have handled their careers less effectively than do graduates. More dropouts believe that they have entered blind alleys or have prematurely reached the excessively low ceiling of their careers, and more tend to devalue career success ratings rather than to inflate them as do graduates.

LONG-TERM FOLLOW-UP METHODS AND RESULTS  
IN THE CAREER PATTERN STUDY

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Cooperative Research Contract No. 1393

American Personnel and Guidance Association Convention  
Washington, D.C., April, 1966

Table 1  
FOLLOW-UP METHODS AND RESULTS IN THE CAREER PATTERN STUDY

	Procedure	Instruments	N Sought %	Attempts	N Secured %
First Contact 1951-52 Age 14-15	Interpretation to school officials, community leaders, boys, parents, public	Tests and questionnaires (2 days), interviews (4 periods).	142 100	Routine testing and interviewing in school.	142 100
First Follow-Up Spring 1955 Age 17-18	Interpretation again, as above.	Tests and questionnaires (2 days), interviews (1 period), school records. Parent questionnaires.	141 100 (one death) 106 in MHS 9 transfers 10 in service 7 lost 9 other dropouts	Tested in school. Field visits to dropouts.	122 106 122 86 75 86
Second Follow-Up Spring 1958 Age 20-21	Addresses from files, directories, return postcards; certified letters; school staff; local psychologist field visitor.	Mailed questionnaire: 70 pages, in topical sections, accompanied by \$2 and promise of \$3 more when returned.	140 100 (2nd death) 4 lost 6 refusals 7 failed to cooperate	Location 1st class letter re address. 2nd letter. School officials. Data Collection Questionnaire, certified mail. Postcard reminder. Letter and same questionnaire. Visits by local psychologist.	123 76 111 140 74 99 106 123 88 54 79 100 53 71 76 88

(continued)

Table 1 (continued)

Procedure	Instruments	N Sought %	Attempts	N Secured %
Third Follow-Up Spring 1962 Age 24-25	Interpretation to school officials, community leaders, subjects, and the public. Addresses as for 2nd Follow-Up, plus inquiry of armed forces, former employers, newspaper files. Alert letters, appointment questionnaires, expense plus \$25 pay promised.	140 0 lost 8 refusals, of whom 4 are hopeless	Accounted for: location, occupation, complete data. Appointment Questionnaires 138 certified letters, re appt. 43 phoned. 35 sent 1st class letter. 16 sent letter.	140 100 132 94 75 53 92 66 106 76 111 79 88 63 118 84 130 93 132 94
			Data Collection Routine Middletown or N.Y.C. Visits to homes. Trips to Gulf, West Coast. Overseas.	

Table 2  
Location of Surviving Career Pattern Study Subjects  
At About Age 25

Location	No. of individuals				Percent	
	Military	School	Other*	Total	Other*	Total
Northeast	1	10	96	107	91	76
Middletown and vicinity	-	1	80	81	76	58
So.N.Y., No.N.J., East Pa.	-	2	12	14	11	10
No.N.Y., So.N.J., West Pa.	-	6	1	7	1	5
New England	1	1	3	5	3	4
South	10	1	4	15	4	11
East North Central (Ind., Mich., Wisc.)	-	2	1	3	1	2
West (Ariz., Calif., N.Mex.)	2	-	4	6	4	4
Overseas	9	-	-	9	-	6
Total	22	13	105	140	100	99

\* Includes all those not in military service or away at school.

Table 3  
 EDUCATION: HIGHEST LEVEL ATTAINED  
 BY CPS SUBJECTS AT AGE 25

<u>Level</u>	<u>No. of Individuals*</u>	<u>%</u>	<u>Cum. %</u>
1. Graduate 1 (M.D., Ph.D., LL.B., etc.)	-	-	-
2. Master's degree plus some work toward higher degree or equivalent (high level on-the-job training), but pre-M.D., Ph.D., LL.B., etc.	3	2	2
3. Graduate 2 (Master's degree or equivalent level on-the-job training).	2	2	4
4. Bachelor's degree plus some work toward higher degree or equivalent (on-the-job training), but pre-Master's degree.	9	7	11
5. College, 4 years: graduation.	8	6	17
6. College, junior college, technical institute (granting an Associate degree): completion of 2 years but less than 4 years of college; junior college or technical institute graduation.	12	9	26
7. College, junior college, technical institute; less than 2 years.	27	20	46
8. High school graduation plus apprenticeship, on-the-job training, or technical school (business or trade; diploma or certificate awarding school).	16	12	58
9. High school graduation.	35	27	85
10. Some high school plus apprenticeship or on-the-job training.	5	4	89
11. Some high school.	15	11	100
Total	132	100	100

\*Excludes 8 from whom cooperation was not obtained, and 2 deceased.

Table 4  
 EDUCATIONAL ATTAINMENT OF MIDDLETOWN HIGH SCHOOL  
 FRESHMEN OF 1951-52 STILL LIVING IN 1962

Total	Graduated MHS 1955 or 1956	Dropped Out Returned-Grad.	Total MHS Graduates	Transfers Graduates	Total Grads. by 1957
140	95	2	97 69%	6	103 74%
	Dropouts				
	Rec'd Equivalency Diploma	Non- Diploma	Total	Total Diploma Recipients by 1962	
	13 9%	24 17%	37 26%	116	83%

Table 5  
 EMPLOYMENT STATUS OF MIDDLETOWN HIGH SCHOOL FRESHMEN  
 OF 1951-52 IN THE SPRING OF 1962

Status	Total		Grads		Equiv. Diploma	Dropouts
	N	%	N	%	N	N
Employed by others	92	65	68	66	7	17
Self-employed	4	3	4	4	0	0
Job hunting	7	5	6	6	0	1
Not-in-labor-market	13	11	13	13	0	0
Military service	24	16	12	12	6	6
Total	140	100	103	101	13	24

Table 6  
 OCCUPATIONAL LEVELS OF GRADUATES AND DROPOUTS,  
 FRESHMEN OF 1951-52 INTERVIEWED WHILE EMPLOYED IN 1962

Level	Total		Grads		Equiv. Diploma	Dropouts
	N	%	N	%	N	N
Prof'l-Mgr'l (Higher)	-	-	-	-	-	-
Prof'l-Mgr'l (Reg.)	6	6	6	8	-	-
Semi-Prof'l-Mgr'l	25	26	23	32	-	2
Skilled	29	31	24	34	1	4
Semiskilled	27	28	13	18	4	10
Unskilled	8	9	5	7	2	1
Total*	95	100	71	99	7	17

\*Excludes those not in civilian jobs (students, military, etc.) and 1 self-employed who could not be classified.

Table 7  
 OCCUPATIONAL FIELDS OF GRADUATES AND DROPOUTS,  
 FRESHMEN OF 1951-52 INTERVIEWED WHILE EMPLOYED IN 1962

<u>Field (Roe)</u>	<u>Total</u>		<u>Grads</u>		<u>Equiv. Diploma</u>		<u>Dropouts</u>	
	N	%	N	%	N		N	
Service	10	11	10	14	-		-	
Business Contact	11	12	10	14	-		1	
Business Organiz.	16	16	12	17	2		2	
Technology	47	50	28	39	5		14	
Outdoor	5	5	5	7	-		-	
Science	1	1	1	1	-		-	
General Culture	5	5	5	7	-		-	
Arts & Entertain.	-	-	-	-	-		-	
<b>Total*</b>	<b>95</b>	<b>100</b>	<b>71</b>	<b>99</b>	<b>7</b>		<b>17</b>	

\*Excludes those not in civilian jobs (students, military, etc.) and 1 self-employed who could not be classified.

Table 8  
 SELF-RATED OCCUPATIONAL AND CAREER SUCCESS  
 FRESHMEN OF 1951-52 IN 1962

<u>Occupational Success</u>	<u>Total</u>		<u>Grads</u>		<u>Equiv. Diploma</u>		<u>Dropouts</u>	
	N	%	N	%	N	%	N	%
Above Average	31	26	22	26	4	29	5	28
Average	75	64	55	65	9	64	12	67
Below Average	11	9	9	10	1	7	1	6
<b>Total*</b>	<b>118</b>	<b>99</b>	<b>86</b>	<b>101</b>	<b>14</b>	<b>100</b>	<b>18</b>	<b>101</b>

\*Excludes 8 uncooperative subjects, 11 who did not rate occupational success because of student status, and 3 unscorable responses.

Career Success

Above Average	56	43	44	45	5	33	7	44
Average	53	41	42	43	6	40	5	31
Below Average	20	16	12	12	4	27	4	25
<b>Total*</b>	<b>129</b>	<b>100</b>	<b>98</b>	<b>100</b>	<b>15</b>	<b>100</b>	<b>16</b>	<b>100</b>

\*Excludes 8 uncooperative subjects and 3 unscorable responses.