

Implementation Quotient

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Implementation Quotient

The benchmark for Full Implementation is to have 50% of all the practitioners in an organization providing services that meet fidelity criteria. While this is a difficult criterion to meet, it also means that half of the practitioners are functioning at less than fidelity standards. Thus, overall, the recipient outcomes for the organization will be vastly improved at the 50% mark but still fall short of what could be achieved if all practitioners were functioning at high fidelity. Given turnover and length of time to reach fidelity, having 100% of the practitioners meeting fidelity standards is not likely to be achieved in interaction-based human services. Yet, provider organizations and systems should work to approximate 100% fidelity to maximize benefits to recipients.

The Implementation Quotient measure was developed to provide an organization level assessment of fidelity that takes competency development and turnover into consideration (Fixsen, Blase, Naoom, & Wallace, 2006).

At a given point in time (e.g. June 30 and December 31 each year in the example below), an Implementation Quotient on that day is calculated using the formula below.

Determine the number of practitioner positions allocated to the eventual use of the innovation in the organization (Allocated Position N = ____).

At a point in time:

Assign a score to each allocated practitioner position:	<u>Score</u>
Practitioner position vacant	= 0
Practitioner in position, untrained	= 1
Practitioner completed initial training	= 2
Practitioner trained + receives weekly coaching	= 3
Practitioner met fidelity criteria: as of this month	= 4
Practitioner met fidelity criteria: 10 of past 12 months	= 5

Sum the scores for all practitioner positions (Practitioner Position Sum = ____).

Divide the Practitioner Position Sum by the Allocated Position N.

The resulting ratio is the “Implementation Quotient” for that innovation in that organization.

In the calculations above, note that the focus is on the practitioner *positions* and the current occupant of each position. This requires a statement at the beginning of the process about the intentions of an organization regarding the use of an innovation. In the example shown in Figure 1, the organization consisted of 41 group homes and the intention was to use the innovation (the Teaching-Family Model) in each group home (Fixsen et al., 1978; Wolf, Kirigin, Fixsen, Blase, & Braukmann, 1995). In another example, there were 48 clinical positions in an organization and the plan was to have practitioners begin to use the innovation sequentially, with 12 in a cohort. Full Implementation (6 of the 12 or 50% meet fidelity) had to be achieved with one cohort before the organization began training and coaching for the next cohort. In that case (data not shown), 48 was the Allocated Position N for the organization since the intention was to have all 48 positions occupied by practitioners using the innovation in the organization.

Figure 1 shows the use of the Implementation Quotient for 10 years to track implementation progress in one organization. In this example, 41 is the “Allocated Position N” at every point in time. The use of the innovation was supported by a competent Implementation Team that began working with two group homes in November 1975 and used that experience to inform a range of changes in the organization to eventually support all 41 group homes. The data in Figure 1 begin in December 1975, just after the Teaching-Family Model began to be used in two group homes in the organization.

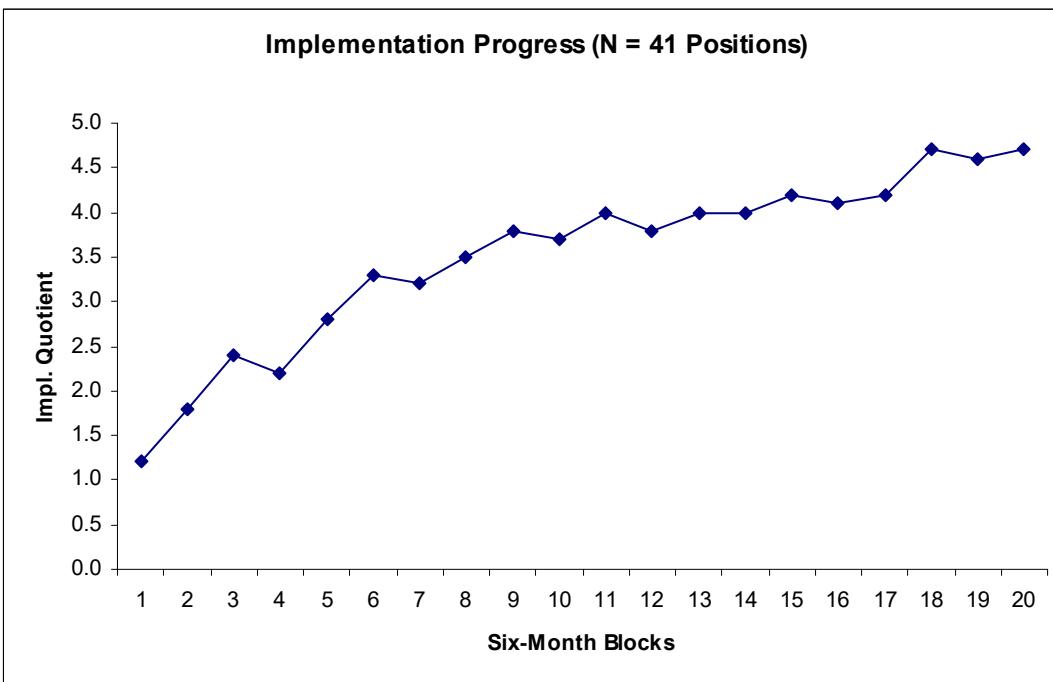


Figure 1. Implementation quotient for 10 years in one organization. Data from Fixsen and Phillips, used with permission.

As shown in Figure 1, the Implementation Quotient improved from an organization wide average of about 1.0 (practitioner in position, untrained) to a score of 4.5 (practitioner met fidelity criteria: as of this month) after about 8 years. The score of 4.5 was sustained for 18 months at the end of the 10-year period data collection period shown in the graph.

By July 1977, the Decision Support Data System was established and stable in the organization (Fixsen, Collins, Phillips, & Thomas, 1982). An outcome measure was derived from the Decision Support Data System and included a mix of youth behavior in the community and school grades and attendance. Outcomes for individual measures were transformed to a 7-point scale where a score of 7 indicates zero occurrence of problem behaviors (e.g. runaway, police contact) or outcomes in the top quintile for all 41 group homes for positive behavior in the community and at school. The results for each group home were summed and averaged across the 41 group homes. As shown in Figure 2 the implementation quotient and outcome scores were calculated every 6 months on the last day of the month from 1977 through the end of data collection in 1985. A Spearman rank correlation of 0.95 was found between the Implementation Quotient and the summary outcome scores for youths calculated over 15 six-month blocks.

With respect to Figure 2, a total of 152 Teaching-Parent couples staffed the 41 Teaching-Family group homes over the 7.5 years where Implementation Quotient and youth outcome scores were available. An accurate count of youths is not available, but an estimate is over 2,000 different youths resided with the 152 Teaching-Parent couples who staffed the 41 group homes during the 7.5 years. By 1984 nearly all of the original leaders and initial Implementation Team staff had been replaced by new staff.

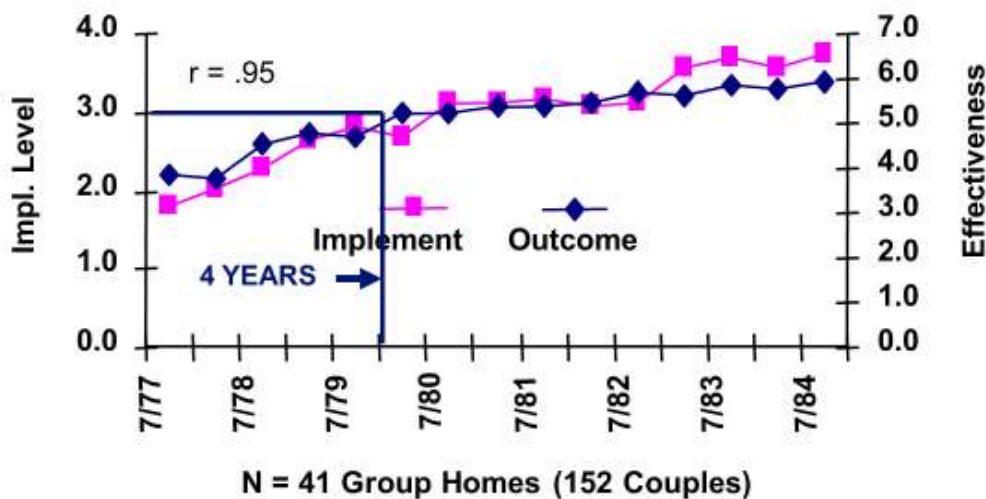


Figure 2. Implementation quotient and youth outcomes in one organization. Data from Fixsen and Phillips, used with permission.

In early 1980, about four years after beginning to use the innovation in the organization, over 50% of the practitioners (22 out of 41) met fidelity criteria in a given month (the definition of Full Implementation). As shown in Figure 2, at that time the average Implementation Quotient score for all 41 group homes was 3.0 (practitioner trained and receives weekly coaching).

The value of the Implementation Quotient is that it serves as a reminder that the work is not done even when Full Implementation is reached. At the point where 50% of the practitioners meet fidelity criteria, the remaining 50% do not meet criteria and outcomes for the organization are still not what they could be. For example, in the 41 group homes the score for youth outcomes did not reach 6 on the 7-point scale until 1984, at the point when the Implementation Quotient score exceeded 4.0.

Outcomes for a whole population are difficult to improve when the practitioners and recipients come and go with regularity. The value of the Implementation Drivers is made apparent as constant adjustments are made to reduce the impact of transitions. The goal is to maintain treatment and outcomes in the midst of “starting over” with each transition of staff or recipients. The Implementation Quotient is a reminder of implementation outcomes in service to realizing innovation outcomes.

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