COMET®
Assessments • Outcomes • Accountability

Introduction to COMET: Web-based solution for improving outcomes for children

The problem

You may be a school administrator responsible for the performance of your students. Or, perhaps you administer an after-school program to help children improve performance at school. Maybe you run a Head Start program. Imagine collecting reams of data on thousands of children to gauge a programs' impact on children's outcomes, only to receive the necessary reports too late to help a child before a program ends. This is frequently the case with paper assessments and in situations where the collected data reside on disparate and unconnected databases.

Now, imagine a web-based application that can collect thousands of childhood variables for each child. Imagine an application that can take a large quantity and variety of assessment data and quickly convert the data into meaningful information to help drive the improvement and outcomes of students, teachers, and programs.

The solution

The COMET® System (COMET), a web-based data management tool developed by Children's Institute and their technology partner SophiTEC, was created to solve the problem of data being processed and analyzed too slowly to help children. COMET was designed to help children succeed by assisting parents and professionals who serve children and youth to become more effective. Now a product of COMET Informatics LLC, COMET provides a number of benefits over paper-based systems, or systems with unconnected databases. These benefits include the ability to:

- Gather, store, and organize data from hundreds of assessment instruments and offer hundreds of easily understandable reports.

- Link data from various assessments, allowing teachers and other providers to get a full picture of each child, from academic progress and skill levels, to social and emotional factors.

- Instantly show information on individual children, classrooms, programs, and organizations.

- Provide immediate feedback, allowing teachers, directors, and administrators to make informed decisions on improving children's outcomes using current information.

About COMET

COMET integrates assessment processes, including attendance (dosage), assessment instruments, and technology into a single system that captures and manages the large volume of data required for each child/youth, across years, in educational institutions and other public and private organizations that serve children and families. COMET monitors the performance, outcomes, and success of children, providers, programs, and organizations.

COMET provides individual and aggregate reporting, making it useful to early educators, teachers, and after-school staff, who conduct educational planning and interventions for specific students. Administrators, who need to evaluate results of programs, and funders, who need to determine the return on investment, also benefit.

COMET delivers assessments **of** learning *and* **for** learning. Assessments **of** learning provide tools to assess learning, such as how much students have learned, whether standards are being met, and whether educators are helping students learn. Assessments **for** learning refers to "all those activities undertaken by teachers–and by their students in assessing themselves– that provide information to be used as feedback to modify teaching and learning activities."[1] COMET provides continuous and real-time feedback in the teach-and-learn cycle.

COMET works in conjunction with existing information technology. It is designed for actionable research and evaluations across multiple domains such as social and emotional health, learning, physical health, mental health, and academic skills. COMET is designed to collect data from thousands of instruments and generate both generic and customized reports to meet the needs of customers. Our professional staff can design and customize both assessment and evaluation solutions to support individuals, organizations, and systems. With training, users can also customize reports.

How COMET works

COMET delivers valuable services to our customers. The Snapshot Module collects and presents student information from multiple sources. The monitoring capability assesses the current status of an individual, program, or organization. The administration capability maintains a high level of security, adds new instruments and reports, and offers online training, activity scheduling, email reminders, and more.

Instrument Completion

The COMET user constructs the first component of a student snapshot by completing an instrument such as a survey, test, or questionnaire. Instruments typically have three separate parameters: a single subject, a single observer, and a single point in time. Over time, COMET collects numerous snapshots representing the points of view of many observers and parameters.

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[1]Black, P.J. & Wiliam, D. (1998). Inside the Black Box: Raising standards through classroom assessment. King's College, London.

Analytical Reports

COMET uses its analytical and reporting capabilities to create meaningful charts, graphs, and narrative descriptions to help you understand data in a useful context. COMET helps you determine the status of each child or program and whether there has been improvement or deterioration.

Instrument Building

The Snapshot Module includes an "Instrument Builder" feature, which allows you to create and deploy your own instruments within COMET. Effective, responsive, and friendly customer support is always available. You can easily export your data to external systems including reporting tools, existing databases, statistical packages, and electronic dashboards.

Monitoring

Monitoring of activities, programs, or interventions in real time is critical to achieving any of the following objectives:

- Intervention adjustments and continuous improvement;

- Data-driven decision-making;

- Outcome measurement and accountability.

Attendance Tracking

The monitoring capabilities of COMET include the ability to measure intervention fidelity and pre and post outcomes. An attendance feature provides practical, administrative attendance tracking, and, more importantly, provides reliable data regarding dosage or the extent to which children are exposed to the program or intervention.

How the Rochester City School District uses COMET

As of the end of the 2010 school year, the single largest user of COMET was the Rochester City School District (RCSD). COMET interfaces with RCSD's data management system. RCSD chose COMET to reduce the time and cost of handling data and attendance for all of its 30 Universal Prekindergarten programs, which serve nearly 2,000 students. Additionally, COMET manages all of the district's cognitive screening for kindergarten and student assessment collection for programs like Primary Project. This coming year, high school students will use COMET to complete the Youth Risk Behavior Survey. COMET is now tracking over 20,000 students within RCSD.

Research and development

We continue to develop COMET to help improve outcomes and performance for children. Research and development efforts are focused on refining technologies that will create individualized success plans for every child, including children with difficulties.

In the next five years, new modules will be introduced: the Data Portrait, which will describe multiple dimensions of children's development; and the Intervention Recommendation, which will examine strengths and needs revealed by the Data Portrait, suggest specific targets, goals, and objectives, and offer options for interventions matched to students' characteristics and needs, with assessments to measure desired intervention outcomes.

COMET Informatics LLC

Formed in 2011, COMET Informatics LLC provides an informatics system that accumulates, stores, organizes and analyzes data to foster individualized success plans and to enhance the learning experience and overall development of each person served.

About the developers of COMET

Children's Institute is a national not-for-profit organization that works to improve the lives of children by strengthening their social and emotional health. Through sound research and evaluation, the organization develops and promotes effective prevention and early intervention programs, materials, and best practices for children, families, schools, and communities. Children's Institute is affiliated with the University of Rochester and has served the community for over 50 years.

With over 20 years of experience in software development, **SophiTEC** designs develops, and deploys customized databases and expert systems to meet corporate, school, governmental, and not-for-profit customers' needs.

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