



## Human Processes

**Keith Harrison-Broninski**

CTO Role Modellers ([www.rolemodellers.com](http://www.rolemodellers.com))

[khb@rolemodellers.com](mailto:khb@rolemodellers.com)

## Human Interaction Management and Learning

I thought that BPTrends readers might be interested in a short paper I wrote this month on **learning**, so it is reproduced here with some additions for a business audience.

### Overview

**Human Interaction Management**, or HIM, ([3]), is a set of management principles, patterns and techniques complementary to Business Process Management, or BPM. HIM provides process-based support for innovative, adaptive, collaborative human work and allows it to be integrated in a structured way with more routine work processes that are often largely automated via BPM systems or other technologies.

HIM has been described as:

- "the next logical step in process-based technology" (Chair of the Workflow Management Coalition);
- "set to produce the first fundamental advances in personal productivity since the arrival of the spreadsheet" (Information Age);
- "the breakthrough that changes the rules of business" (Peter Fingar, author of "Business Process Management: The Third Wave", "Extreme Competition", etc);
- "the overarching framework for 21st century business technology" (BP Trends).

HIM is now widely taught in MBA and Computer Science courses, and is the subject of books, theses and articles in several languages.

HIM has an associated methodology called **Goal-Oriented Organization Design**, or GOOD ([5]). GOOD emphasizes effectiveness over efficiency, and combines various approaches:

- **Top-down:** "Process Architecture" defines business strategy via a network of interacting high-level processes;
- **Middle-out:** "Levels of Control" separate process governance into Strategic, Executive and Management;
- **Bottom-up:** "Stories" represent collaborative work processes that the participants evolve on-the-fly as part of the work itself.

The reference implementation of a Human Interaction Management System (HIMS) is the software **HumanEdj**, which is available as a Web application and as a desktop client on all modern computing platforms.

HIM takes the view that:

- Learning is a process you do, not a process that is done to you ([11]);
- Education should be a lifelong enterprise, a process enhanced by an environment that supports to the greatest extent possible the attempt of people to “find themselves” throughout their lives ([2]).

GOOD is a methodology for the creation of organizations that are empowered by learning – organizations in which learning is the driving force for all business processes - see “Learning in HIM Practice” below.

HIM regards learning as the basis of all human working activity, recognizing that learning is not only part of all work, but that much work is learning-centred - see “Learning in HIM Theory” below.

### Learning in HIM Practice

HIM and the associated GOOD methodology provide a way to define, implement, monitor and adjust organizational goals and strategies – a way that integrates different levels of management both within and across organizations into a dynamic process network driven by learning. This is accomplished by defining plan templates for projects, processes, ventures, etc. The plan templates are used to generate “plan instances” – i.e., executable business processes that may cross organizational boundaries.

Each “plan instance” is configured appropriately for the requirements of the situation – including the requirements for learning, which depend on the gap between the skills of the participants and their perceived goals (both personal and organizational). The configuration is adjusted throughout its life by the participants themselves, as they collaborate to evolve the definition of the plan instance in response to external circumstances and internal progress.

A plan instance acts not only as a mechanism for learning but, once complete, as a source of learning materials. On a personal level, plan instances from a repository show how other people dealt with problems of a certain type. On an organizational level, a plan template may change to more closely match its most successful instances.

With regard to assessment of learning results, plan instances are self-monitoring – they include automatic feedback mechanisms both within the plan and across plans to higher management levels. Taking part in a plan instance in itself both measures and provides evidence of achievement. Plans may also use external services to provide:

- Learning materials customized for the plan instance
- Standardized evaluation of learning progress
- Trusted competency assessment
- User profiles.

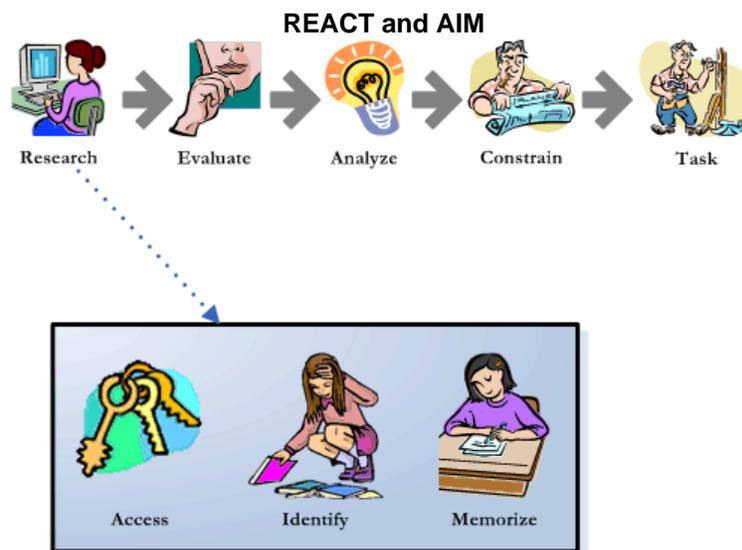
Information within a plan instance automatically has semantic markup, as do all communications between participants. This markup can be sent to external services to help streamline the results (for example, the contents of automatically generated course material).

HIM not only integrates learning into work naturally, but provides the same fully-fledged process support to learning activities that it does to other forms of working activity.

## Learning in HIM Theory

Drawing from and extending Role Activity Theory ([1], [6], [7], [8], [9], [14], [15]), HIM theory provides a modelling framework for describing collaborative human working behaviour in process terms ([4]), and identifies patterns that underlie any form of human activity (whether collaborative or not), patterns that demonstrate how learning is the core of all collaborative work.

Some important HIM patterns are described below.



REACT is the basic structure for all human work. Out of 5 stages, the first 3 are wholly (and the remaining 2 partly) learning-oriented. The first stage, Research, is so critical that it is separated into 3 sub-stages.

Discussing the stages of REACT in turn:

### Research

Map out the terrain, investigate the principles, talk to those in the know, locate potential threats, and so on, in order to gain information from external sources, and turn it into personal knowledge. The external sources may be close at hand – members of a “community of practice,” for example, as discussed below. Alternatively, information may be acquired from an impartial expert in the field, a textbook, or a search on the Web. The details are different every time, but the principle is the same. Before you can start to work on something, it is only common sense to find out what you are getting yourself into.

### Evaluate

Step back and consider the knowledge thus acquired. Internalize it, in a sense, by making connections between different opinions or facts. Once you have discovered the general lay of the land, you then need to familiarize yourself with it. You may need to carefully read a pile of papers on your desk, or to mull over some advice that you don’t yet understand. This stage may take minutes or years, but it is crucial: There is no point doing an investigation unless you make an effort to take on board the information you gathered.

**Analyze**

On the basis of your new-found understanding, decide on an approach to the problem. In general, the approach you settle on may result partly from applying logic to reduce the problem to more manageable sub-problems – and partly from an intuitive judgment on what feels “right.” The balance varies both with the type of problem and with the type of person trying to solve it. However you arrive at a conclusion, though, the decisions made at this stage are not necessarily a final say on the matter; they are simply a way forward for now, enough to let you proceed further with the work in hand. Sometimes it is hard to be sure whether you are doing the right thing, so you might choose a way forward that hedges your bets – following multiple paths at the same time, in the hope that at least one will work – or decide only on the first few steps, and leave decisions about other steps for later. But you have to make some kind of decision at this point, at least on how to start.

**Constrain**

Divide the work into separate chunks, and organize them. This may be simply a matter of deciding an approximate order to do them in, or it may be a huge task involving all the techniques of project planning: dependency and impact analysis, critical path definition, re-resource allocation, budgeting, contingency planning, and so on. However, you are dealing with human-driven processes here, in which people rarely do things in the order laid down, and rightly see it as part of their work to determine how things should proceed. So this stage is not about defining “workflows,” in the sense of ordering activities into strict sequence; it is about laying down the constraints that govern the chunks of work, insofar as they can be understood at this point. Typically, constraints are of rather vague form – “Before you can promise a delivery date for a product, make sure the component suppliers can meet it” or “It is okay in principle to take on contract staff, as long as you’ve made a reasonable effort to resource the project internally first.”

**Task**

You have determined how to break the work into chunks, and handed out these chunks to appropriate people (including yourself, perhaps), so now all those concerned can get on with the tasks at hand. For a small job there might only be one chunk, and you might do it yourself. For a large one, this stage may involve many different people and organizations working together to deliver a product or service.

The first stage of REACT, Research, is further broken down into a sub-pattern AIM, which describes the stages of any research activity:

**Access** discovery services

Decide where you will go to obtain information, and obtain any necessary authorization. This might be permission to contact someone, login details for a database, or funds to use some kind of finder agency.

**Identify** resources required

From the service(s) above, choose resources likely to be of interest. At this stage, you will have only cursory understanding of their content - what matters is that they seem likely to be useful.

**Memorize** information obtained from particular resources

It is important to focus on committing information to memory, even if the information is only the outline of an idea you will use later. Unless you have memorized information gathered at this first stage of REACT, it will be of no use in the following stage, Evaluate, for you cannot synthesize ideas you have forgotten, or would need to look up in order to understand. This stage is all about internalizing the ideas in question.

Similarly to the way REACT describes human work in general, AIM describes the particular activities of information discovery.

Taken together, the REACT and AIM patterns describe all human working behavior. The patterns capture the way that people respond to an assignment, fulfill a responsibility, achieve a goal – the way they react to the work they take on. REACT and AIM help simplify complex situations since the patterns can be repeated, overlapped, and nested in order to reduce any work assignment to the same fundamental stages.

### Collaborative Transaction

An archetypal structure for describing a stage of collaborative work – a project phase, for example. The structure includes initiating and concluding Interactions, each including any number of Roles, which are used to set terms for the work and wrap it up. The bounding Interactions are separated by work Activities divided amongst several Roles. Collaborative Transactions can be nested. The Interaction structure allows knowledge gained during one phase to guide the definition of learning structures and work packages for the next phase.

### Levels of Control

A natural division of responsibility and authority between Strategic, Executive, and Managerial Roles. In brief,

- **Strategic Control** is about identifying goals and measures to drive an agile organization;
- **Executive Control** is about identifying key Roles and Interactions necessary to support empowered work processes;
- **Management Control** is about constructing, implementing, supporting, and reporting on executable processes that evolve from within.

### Conclusion

Do you seek to become a “Learning Organization” that facilitates the learning of its members and continuously transforms itself ([9], [11])?

If so, we learn from Senge that a Learning Organization has five main features ([12]):

1. Systems thinking
2. Personal mastery
3. Mental models
4. Shared vision
5. Team learning.

These features are nowhere to be found in BPM (or in BPMS technology). However, they form a fundamental driver for HIM, which shows us how to:

1. **Manage Commitments**  
The offer, acceptance, decline and transfer of responsibility
2. **Structure Messaging**  
The exchange of information via purposeful interactions

3. **Control Documents**  
The creation, flow, update and management of knowledge
4. **Deliver Value**  
The visibility, execution and tracking of strategic objectives
5. **Negotiate Next Steps**  
The agreement, sharing and implementation of a way forward

HIM allows your organization to *structure work around learning*, resulting not only in improved performance as a whole but in a more fulfilling workplace for the individual.

### Author

Keith Harrison-Broninski has been regarded as an IT and business thought leader since publication of his book "Human Interactions: The Heart And Soul Of Business Process Management" (Meghan-Kiffer Press, 2005 - "a must read for Process Professionals and Systems Analysts alike", BPM Group). Building on 20 years of research and insights from varied disciplines, his theory of Human Interaction Management (HIM) provides a new way to describe and support collaborative human work.

Conference organizers around the world regularly invite Keith to give keynote lectures to business, IT and academic audiences at national conferences, most recently in Poland, India, the Netherlands, the UK, Finland and Portugal.

Keith is CTO of Role Modellers, whose mission is to develop understanding and support of human-driven processes - the field that Keith has pioneered. Role Modellers' software product, HumanEdj, leads the industry in computerized support for innovative, collaborative human work.

Keith stays active as a business consultant and software architect, via which activities he continues to refine and extend HIM theory.

More information about Keith and his work is available online ([18].)

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