

**R511 Team Paper**  
**Team Wiseguys**

Kari Johnson  
Matthew Smith  
Shen-Yi Cheng  
Jason Skocilich  
Jill Davidian

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## Rationale

Our team choose to create an HPT model for the J.J. Mak School of Business at Fictitious State University. The model will be implemented by the Human Performance Consulting Team at the school, who generally possess a high level of competence (most likely a Masters Degree) in the field of Human Performance Technology. We have designed our model to be utilized when addressing gaps between actual and desired academic performance of students. We combined elements that we felt were important from Fundamentals of Performance Technology's "Human Performance Technology Model" and Pershing and Molenda's "Strategic Impact Model" to provide us with an overall basis for the model we created. The new model was then tailored to fit the organization in which we are working.

The Strategic Impact Model and Wile's Taxonomy were utilized to produce our list of categories for causal factors, which were customized to best fit the organization. The focus of our model is not on the instruction within the J.J. Mak School of Business, but rather the entire scope of possible causal factors of performance problems within the school, ranging from such things and insufficient computer technology to inadequate instructor training.

The first part of our model involves conducting an academic performance analysis to identify if there is a gap between desired academic performance and actual academic performance (measured by the factors discussed in the narrative below). We chose to include this component, because we felt that measuring desired and actual academic performance would reveal if any gap existed and would help the human performance technologists to know where to focus their causal factors analysis.

The second part of the model, the causal factors analysis, was created after brainstorming to produce a list of many possible causal factors that would lead to a gap

in academic performance. Once the list had been created, these were placed into categories based on Wile's Taxonomy of Human Performance. The categories were tailored to fit the specific organization, leading to categories such as Student Support.

After a causal factor is identified for a given gap, the ASIE loop is then used to analyze this factor, find a solution, and implement it. During each stage of the ASIE loop, formative evaluation will determine if the analysis, solutions, and implementations generated were successful, accurate, and feasible. For example, if the business school arrived at a solution to buy more computers for the students, the formative evaluation would be conducted after the computers were bought to determine if the amount of space that was available was enough for the new computers without crowding anyone or if the amount of staff allocated to man the labs was sufficient. Depending on the result of the evaluation during the ASIE loop, it may or may not take place again. The ASIE loop may need to be an iterative process as solutions may need to be reanalyzed and refined.

We chose to create our own cycle for this portion of the model, instead of utilizing the ADDIE model. We felt that design and development would not need to be separated into two steps for a non-training situation, and instead combined those into the "solution" step of our model. Evaluation is in the middle of the loop, because evaluation will be an integral part of Analysis, Solutions, and Implementation and is necessary at each step.

The ASIE loop was then connected back to the first step in the model, the academic performance analysis, to allow for summative evaluation. If the formative evaluations conducted during the ASIE loop prove to be successful, another summative analysis would then need to be conducted to see if the solution and implementation bridged the gap between actual and desired academic performance.

## Narrative Explanation

Looking at the model at the end of this document, reading from left to right, we begin with a depiction of the current state (Actual Academic Performance) as related to our goal (Desired Academic Performance) and the area that falls between Actual and Desired, which is identified as the “Gap”. In working through this model, Academic Performance Analysis would be done as the first stage, to identify that there is, indeed, a gap between Desired and Actual Academic Performance. Analysis of the following factors may be used to identify the existence of a gap: satisfactory course completion rate (majority of students should achieve a grade of C or higher in core courses), completion of the Bachelor of Science program in Business (not changing majors), satisfactory average Grade Point Average of students, and time required for completion of degree (most students should finish in four years). If analysis shows that there is a gap between Actual and Desired Academic Performance, then one would move to the next stage of the model, which is Causal Factors Analysis.

In the Causal Factors Analysis stage, further analysis should be done to determine the cause of the gap. Using the Wile taxonomy for guidance, we identified several possible causes for the gap, and then grouped the causes into five major categories. The first category is Organizational Systems, which involves the overall setup of the undergraduate business curriculum. Examples of **Organizational Systems** issues would be Course Design, Workload, Program Sequencing (the order in which courses must be completed), Clear Explanation of Goals, and Competence of Faculty. Category two is labeled as **Incentives**, which are tangible items that may encourage a student to perform at a higher level. Examples of incentives would be scholarships, grants, and acceptance into Honor’s programs. The third category is called **Student Support**, which addresses the emotional and physical well-being of a student. Examples of Student Support would be academic assistance, academic advising, religious or counseling

support, extra-curricular sporting or recreational activities, societies, clubs, fraternities, sororities, and physical and mental health services. Category four is entitled **Facilities, Resources, & Physical Environment** (grouping two of Wile's categories – Tools & Physical Environment), which addresses the more tangible aspects of an educational system. Examples of causal factors from this category would be computer/information technology resources (hardware/software availability, connectivity from home, access to computers outside of class time, IT support, etc.), Library/research facilities and resources, and classroom facilities (noise levels, sight lines, room temperature, occupancy/size, instructional media, etc.). The final category is **Inherent Ability**, which addresses the natural abilities of the students. Examples of causal factors from this category would be motivation, and selection criteria (admissions standards).

It is important to note that while Wile's HPT model/taxonomy uses the additional category, Skills/Knowledge, the J.J. Mak School of Business HPT model has consciously chosen to omit that category. The reasoning for doing so is based on the context in which this model will be used. In a university setting, the performers are students, and their primary purpose for attending a university is to gain skills and knowledge. We thought it more logical to address students' Skills/Knowledge issues (specifically study habits or research skills) under the category of academic assistance in the student support category of the taxonomy. In a corporate setting, the Skills/Knowledge category is most definitely appropriate and entirely necessary, but in the university context we feel it would be redundant. We do recognize that there may be causal situations in which training may be a viable solution, but we believe that in the context of a university, those situations are already incorporated within the six categories that make up our Causal Factors Analysis. For example, in the event of an issue with faculty competence, it may be necessary to implement a training course to address that issue, but this falls under the category of Organizational Systems. If analysis shows that

students are lacking the necessary skills or knowledge to complete a certain course, then that might indicate a problem with the program sequencing that could be addressed by implementing pre-requisite courses, which again falls under Organizational Systems.

Upon completion of the Causal Factor Analysis, one or several factors may be identified as the cause of the gap. After determining the category of the Causal Factors, one would then follow the arrows to the Solution stage identified as the ASIE Solution Loop (**A**nalysis, **S**olution, **I**mplementation, and **E**valuation). The user would complete further analysis on the identified Causal Factors. This analysis may include Content Analysis, Learner Analysis, Context Analysis, or any other analysis or combination of analyses as necessary. From the analysis, a solution would be determined. Once the solution is ready, it would be implemented. The implementation would be followed by a formative evaluation of the implemented solution. The reason we have designed ASIE as a loop rather than a linear model, is that the evaluation step will likely lead back to the analysis and a repetition of the ASIE cycle. It should be noted that WCKG had considered using the ADDIE model at this stage, but decided that Design and Development may not be a part of all non-training solutions.

After completing the ASIE Solution Loop for each of the Causal Factors, one would follow the loop of the model back to Academic Performance Analysis by way of Summative Evaluation. In the Summative Evaluation stage, one should repeat the Academic Performance Analysis after a solution has been implemented to determine if the solution bridged the 'gap'. If the gap between Desired and Actual Performance still exists or has not diminished, then a repeat of the cycle would be necessary.

## Narrative Example

Let us consider an example where the academic performance analysis identifies that student's are failing to complete computer-heavy courses at an acceptable rate.

Suppose that, after a thorough causal factor analysis, it is determined that the students do not have sufficient access to computer resources outside of their class periods (in which to practice skills or complete assignments). This causal factor, "insufficient access to computer resources" would then be fed into an ASIE loop for solution.

Continuing the example, suppose that after analyzing this factor, we discover that to eliminate the gap, we have to set up more computer labs and change lab use policies to ensure maximum employment of the labs we already have. This solution would be implemented in conjunction with a formative evaluation to tell us whether total student access to computer resources outside of class has indeed increased or not. Even if the formative evaluation shows increased access and usage of computers by the students, we don't know if the ASIE loop can be considered to have done its job until we gauge the result on the bottom line...closing the gap. Through summative analysis, we can determine if the ASIE loop solution indeed increased the rate at which students successfully complete these courses. If the gap is indeed closed by this solution, then we only need to monitor that it remains closed. If the solution does not close the gap (or does not close it at an acceptable cost), the HPT team would need to revisit their academic performance and causal analysis to find out which other factors continue to cause the problem of insufficient course completion rate.

## Sources Cited

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