SOAR and Motivation as Mediators of the Relationship between Flow and Project Success

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Abstract

Flow refers to a behavioral state of optimal human experience. This study investigates flow in predicting the success of SAP projects among a sample of 109 SAP professionals. Mediation analysis using SEM found strengths-based strategic thinking of SOAR (strengths, opportunities, aspirations, and results) and motivation explain flow impact on project success. Results imply that flow, when enhanced with the principles of SOAR, presents a framework that aligns the organization and the individual’s needs in a positive constellation to encourage optimal performance.

Keywords: flow, project management, SOAR, mediation analysis, appreciative inquiry, strategic thinking, motivation

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Introduction

Organizations have been increasingly using projects to achieve their strategic objectives in today’s complex and uncertain socio-economic environment (Anbari, Bredillet, & Turner, 2009). Projects are used by organizations to implement their overarching strategies, and the importance of strategic thinking, planning, and implementation is crucial to positive organizational change. Of significance in the realm of strategic organizational change is the growth of Enterprise Resource Planning (ERP) projects which are designed to improve operational efficiency and productivity of business processes for the enterprise (Soja, 2008). ERP projects are examples of “whole systems” which, due to their broad organizational invasiveness and complexity, are particularly prone to difficulty during implementation. One of the leading providers of ERP solutions is SAP – Systems Applications and Products in Data Processing. In response to the challenges of project delivery, we address a concept known as flow and study its relationship to SAP project success among a sample of SAP professionals from a strengths-based positive perspective.

Flow is concerned with a state of optimal performance, and a person in a state of flow has awareness of actions but not of the awareness itself (Csikszentmihalyi, 1988, 1990). Flow is rooted within
the theory and practice of Positive Organizational Scholarship (POS) and Appreciative Inquiry (AI) which recognizes that dysfunctional organizational behavior does exist; however, by examining theoretical contributions to organizational success, such as solution-seeking, strategic thinking and whole-system change, POS and AI ask practitioners to apply theoretical findings to better facilitate organization development (Cameron, Dutton, & Quinn, 2003). Growing out of both POS and AI is SOAR (strengths, opportunities, aspirations, and results), a profoundly positive framework for strategic thinking, leading, and planning that supports an organization to construct its future through collaboration, shared understanding, and a commitment to action (Stavros, Cooperrider, & Kelley, 2007). Also related to the study of flow is intrinsic motivation, which is concerned with the performance of some task when there is no apparent reward for the performance except the activity itself and the feeling of satisfaction or enjoyment which is derived from completing the activity (Van Yperen & Hagedoorn, 2003).

This study was designed with three purposes in mind. First was to measure perceptions of flow and project success in SAP professionals and investigate the positive effect that flow has on project success. Second was to use mediation analysis to investigate SOAR and motivation as explanatory variables of the positive effect that flow has on project success. Third was to support practices that may encourage flow and aid professionals and the project teams they engage to improve project success rates and to most effectively deal with the complex challenges encountered in project delivery.

**Review of the Literature**

**Projects**

Project management is an evolving discipline, and the study of projects in organizations has contributed a great deal to the field of management with several researchers suggesting that an organization’s strategy is implemented through projects (Archibald, 1987; Beck, 1983). Project implementation drives new strategies and creates opportunities for significant and lasting change in organizations (Jamieson, 2005). Project management applies five process groups to meet project requirements: initiating, planning, executing, monitoring, and controlling (Project Management Institute, 2008). Nevertheless, project management is far from prescriptive, and project situations demand managers who can promote and manage change while insuring that fundamental business processes are safeguarded. Often this requires a transactional leadership style to encourage employee creativity, motivation, and the cultivation of flow (Bateman & Porath, 2003).
Flow

The concept of flow refers to behavior that reflects a state of optimal human experience that is rewarding in and of itself (Csikszentmihalyi, 1990). When people are in a state of flow they become immersed in their activity, and they experience disconnection from the temporal world. Their surroundings, time, and conscious awareness seem to enter a new dimension. After an individual eventually regains awareness of his surroundings, hours may have passed—a condition referred to as timelessness. Csikszentmihalyi (1988, p. 33) defines flow as:

The self is fully functioning, but not aware of itself doing it, and it can use all attention for the task at hand. At the most challenging levels, people actually report experiencing a transcendence of self, caused by the unusually high involvement with a system of actions so much more complex than what one usually encounters in everyday life. When all these elements are present, consciousness is in harmony, and the self which is invisible during the flow episode emerges strengthened.

Elements of flow. Csikszentmihalyi (1990) utilized qualitative case study methodology to discover important characteristics of flow: “The first surprise we encountered in our study was how similarly different activities were described when they were going well” (p. 48). Csikszentmihalyi (2003) proposed eight common elements of flow:

1. Clear goals – in order for a person to be deeply involved in any activity the person must know precisely what tasks must be accomplished on a moment-by-moment basis;
2. Immediate feedback—the sense of total involvement of the flow experience is derived from the ability to give immediate objective feedback to oneself;
3. Concentration deepens—When we respond to an opportunity that has clear goals and provides immediate feedback, our concentration deepens;
4. Balance between opportunity and capacity—Flow occurs when both challenges and skill capacity are high and equal;
5. The present is what matters—When in a state of flow, the task at hand demands complete attention and focus;
6. Remaining in control—When in a flow experience, there is a strong sense of being in control;
7. Sense of time is altered—A typical element of the flow experience is that our sense of time is altered towards either precision or the loss of time accuracy depending on the activity; and
8. Loss of ego—When immersed in the experience of flow, the transcendence of individuality that flow makes possible provides a rare chance to take an active involvement in something larger than self.

Flow in organizations. The concept of flow has spread from the individual to the organization (Mackey & Strong, 2006). For example, organizations
such as Microsoft, Ericsson, Patagonia, and Toyota have identified flow in the workplace as an optimizer that creates environments satisfying to employees and conducive to increasing high quality and high productivity (Sherr, 2012). Similarly, the Gallup Organization monitors flow by sending an email to 1000 employees each day asking them to rank their level of positive energy on a scale from one to five – flow scores of five assume the organization has been successful in promoting worker enjoyment, and improving productivity, health, and wellness.

SOAR

The literature on SOAR underscores its development through the theory and practice of both POS and AI (Stavros & Hinrichs, 2009). Instead of asking questions in a negative sense, which may drive a correspondingly negative reality, AI involves the practice of asking questions in a positive manner that strengthens a system’s capacity and promotes positive potential by planting the seeds for upward spiraling (Cooperrider, Whitney, & Stavros, 2008). SOAR is important to project success because it builds on AI to create a framework for strategic thinking, planning, and leading focused on the organization’s strengths, values, shared vision, and mission of those who maintain a stake in the organization’s success or failure, its stakeholders (Stavros & Cole, 2013).

Motivation

Motivation is the activation of goal-orientated behavior and is said to be either intrinsic, which is satisfying in its own right or extrinsic, which is motivated by external factors (Broedling, 1977). Intrinsic motivation occurs when the self is fully engaged and functioning but not aware of itself performing at the most challenging levels. Csikszentmihalyi (1988) identifies intrinsic motivation as a key element when an individual is in a state of flow, and people in this state report experiencing a transcendence of self. Motivation is important to project success since it plays a major role in the performance of employees and serves to energize, direct, and sustain work-related behavior (Steers, Mowday, & Shapiro, 2004).

Method

We used a cross-sectional survey design in this study to test two hypotheses regarding the relationship among flow, project success, SOAR, and motivation. Hypothesis 1: Flow has a positive effect on project success such that project teams embracing the use of flow concepts are predicted to have increased project success. Hypothesis 2: Flow has an indirect effect on project success through the mediators SOAR and motivation, such that the relationship between flow and project success is mediated by SOAR and motivation.

Glovis, Cole, and Stavros
Participants

A total of 109 SAP professionals (68% men), ranging in age from 29-77 years (Median = 43) participated in the study by completing a survey administered via SurveyMonkey, an internet-based survey. Confidentiality of research participants was protected according to the guidelines established by Lawrence Technological University’s Institutional Review Board. For inclusion, participants had to have been engaged in at least one SAP project during the past five years—43% of the sample were members of Americas’ SAP User Group (ASUG). The educational level of participants was significantly distributed across high school (5.5%), Bachelor’s (50.5%), and Master’s degrees (43.1%). Approximately 61% of the sample reported working for more than 10 years in their profession, 18% worked for 6-10 years, 16% worked 3-5 years, and 5% worked for 0-2 years.

Research Instrument

The study research instrument measured four constructs: project success, flow, SOAR, and motivation. Project success was measured via one original item scored on a 7-point Likert scale: 1 = project was considered a general failure, 7 = project was considered a great success; flow was measured via 9 original items scored on a 4-point Likert scale: 1 = Strongly Disagree, 4 = Strongly Agree; SOAR was measured by an 8-item scale developed by Sprangel, Stavros, and Cole (2011) that scored SOAR along a 3-point Likert scale: 1 = No, 3 = yes; and motivation was measured by a 6-item scale adapted from Xiaomeng and Bartol (2010) in which items were scored along a 4-point Likert scale: 1 = Never, 4 = Always. The survey also measured demographic characteristics of the sample and contained four open-ended questions that asked participants to describe flow experiences during their most memorable SAP project.

Data Analysis

Descriptive statistics, Pearson correlations, and Cronbach’s alpha were conducted in Minitab 16. Confirmatory factor analysis under full information maximum likelihood estimation and hypothesis testing via structural equation modeling (SEM) with bias corrected bootstrapping to define the confidence intervals for mediation effects (MacKinnon, Lockwood, & Williams, 2004) was conducted in Mplus 7. SEM with bias corrected bootstrapping was selected because it has several advantages over the traditional hierarchical multiple regression approach to meditational analysis of Baron and Kenny (1986), including ability to investigate flow, SOAR, and motivation as latent variables, ability to control for the underestimation of mediation effects, and the ability to include SOAR and motivation as multiple mediators of the effect that flow has on project success (Cheung & Lau, 2008; Preacher...
In addition to using hypothesis testing, our study involved the analysis of qualitative data via the thematic analysis method advocated by Boyatzis (1998). Thematic codes were drawn from theory, input from SAP professionals and the literature.

Table 1 presents the psychometric properties of Flow, SOAR, and motivation as evaluated by construct reliability (Cronbach’s alpha test of internal consistency) and construct validity (confirmatory factor analysis under full information maximum likelihood estimation). To evaluate construct reliability, alpha measures of 0.7 or

<table>
<thead>
<tr>
<th>Construct and Indicators</th>
<th>Mean^1</th>
<th>SD^2</th>
<th>α^3</th>
<th>FL^4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow^a</td>
<td>3.20</td>
<td>.45</td>
<td>.792</td>
<td></td>
</tr>
<tr>
<td>Clear project goals</td>
<td>3.18</td>
<td>.75</td>
<td>.677</td>
<td></td>
</tr>
<tr>
<td>Honest and timely feedback</td>
<td>2.74</td>
<td>.86</td>
<td>.696</td>
<td></td>
</tr>
<tr>
<td>Deep concentration on project</td>
<td>3.44</td>
<td>.68</td>
<td>.536</td>
<td></td>
</tr>
<tr>
<td>Engaged in project when tasks were challenging</td>
<td>3.44</td>
<td>.68</td>
<td>.351</td>
<td></td>
</tr>
<tr>
<td>Completed tasks</td>
<td>3.18</td>
<td>.68</td>
<td>.574</td>
<td></td>
</tr>
<tr>
<td>Performed tasks in the present</td>
<td>3.21</td>
<td>.68</td>
<td>.365</td>
<td></td>
</tr>
<tr>
<td>Felt in control of responsibilities</td>
<td>2.97</td>
<td>.81</td>
<td>.772</td>
<td></td>
</tr>
<tr>
<td>Did not notice passage of time</td>
<td>3.34</td>
<td>.72</td>
<td>.405</td>
<td></td>
</tr>
<tr>
<td>Proud to be involved in a project larger than self</td>
<td>3.32</td>
<td>.79</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>SOAR^b</td>
<td>2.26</td>
<td>.57</td>
<td>.869</td>
<td></td>
</tr>
<tr>
<td>Stakeholder planning team estabished</td>
<td>2.67</td>
<td>.74</td>
<td>.731</td>
<td></td>
</tr>
<tr>
<td>Organizational values created by planning team</td>
<td>2.29</td>
<td>.86</td>
<td>.710</td>
<td></td>
</tr>
<tr>
<td>SAP program vision created by planning team</td>
<td>2.45</td>
<td>.83</td>
<td>.779</td>
<td></td>
</tr>
<tr>
<td>SAP mission created by planning team</td>
<td>2.50</td>
<td>.77</td>
<td>.732</td>
<td></td>
</tr>
<tr>
<td>SAP governance infrastructure available</td>
<td>2.30</td>
<td>.89</td>
<td>.666</td>
<td></td>
</tr>
<tr>
<td>SAP annual benchmarking conducted</td>
<td>1.76</td>
<td>.79</td>
<td>.458</td>
<td></td>
</tr>
<tr>
<td>SAP quarterly reviews conducted</td>
<td>2.33</td>
<td>.80</td>
<td>.646</td>
<td></td>
</tr>
<tr>
<td>Environmental reduction initiatives implemented</td>
<td>1.82</td>
<td>.76</td>
<td>.506</td>
<td></td>
</tr>
<tr>
<td>Motivation^c</td>
<td>3.35</td>
<td>.42</td>
<td>.712</td>
<td></td>
</tr>
<tr>
<td>Problems identified and corrective action taken</td>
<td>3.46</td>
<td>.56</td>
<td>.640</td>
<td></td>
</tr>
<tr>
<td>Risks, issues and opportunities identified</td>
<td>3.29</td>
<td>.69</td>
<td>.573</td>
<td></td>
</tr>
<tr>
<td>Support myself and my team</td>
<td>3.24</td>
<td>.72</td>
<td>.647</td>
<td></td>
</tr>
<tr>
<td>Find myself subconsciously engaged in project</td>
<td>3.26</td>
<td>.63</td>
<td>.484</td>
<td></td>
</tr>
<tr>
<td>Generate solutions and evaluate alternatives</td>
<td>3.42</td>
<td>.62</td>
<td>.592</td>
<td></td>
</tr>
<tr>
<td>Achievement obtained by implementing solutions</td>
<td>3.44</td>
<td>.68</td>
<td>.184</td>
<td></td>
</tr>
</tbody>
</table>

Note. n = 109. ^aTests of model fit for confirmatory factor analysis (CFA): χ2 = 33.38, df = 23, p = .075; RMSEA (90% CI) = .066 (.000-.112); CFI = .955. ^bTests of model fit for CFA: χ2 = 21.18, df = 18, p = .270; RMSEA (90% CI) = .045 (.000-.109); CFI = .988. ^cTests of model fit for CFA: χ2 = 4.11, df = 6, p = .662; RMSEA (90% CI) = .000 (.000-.108); CFI = 1.000. ^dMean of items within scale (see text for scale description). ^eStandard deviation. ^fCronbach’s alpha reliability measure of internal consistency. ^gFactor loading scores from CFA (all significant at p < .05).
higher serve as a reference for acceptable reliability (Hinkin, 1998), and to evaluate construct validity, three goodness-of-fit indices with the following criteria are considered as evidence of acceptable validity (Bentler, 2007): ratio of the chi-square statistic to the degrees of freedom ($\chi^2/df$), where ratios less than 2/1 are preferred; the comparative fit index (CFI), where values that are greater than .80 are preferred; and the root mean square error of approximation (RMSEA), where values less than .08 are preferred. In the study sample we used, acceptable construct reliability was found for flow ($\alpha = .792$), SOAR ($\alpha = .869$), and motivation ($\alpha = .712$). Similarly, construct validity was demonstrated for all three scales.

Table 2 shows the intercorrelations between the study constructs in which the zero order correlations between flow, SOAR, motivation, and project success were significant. The matrix reveals that the correlation between flow and project success was the strongest ($r = .445, p < .01$).

### Table 2: Intercorrelations Between Study Constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow</td>
<td>3.20</td>
<td>.45</td>
<td>1.00</td>
<td>2.26</td>
<td>.81**</td>
</tr>
<tr>
<td>SOAR</td>
<td>2.26</td>
<td>.57</td>
<td>.82**</td>
<td>1.00</td>
<td>.281**</td>
</tr>
<tr>
<td>Motivation</td>
<td>3.35</td>
<td>.42</td>
<td>.281**</td>
<td>1.00</td>
<td>.281**</td>
</tr>
<tr>
<td>Project Success</td>
<td>3.37</td>
<td>1.25</td>
<td>.281**</td>
<td>.281**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: $n = 109$

1. Mean of construct (see text for description of construct measurement).
2. Standard deviation of construct.
3. $p < .05$, **$p < .01$ Pearson product-moment correlation.

### Hypothesis Testing

Table 3 and Figure 1 present the results of hypothesis testing linking flow (the independent variable) to project success (the dependent variable) through SOAR and motivation (the mediating variables).

Hypothesis 1. In support of hypothesis 1, flow positively predicts project success, with the unstandardized $\beta$ coefficient (95% CI) = 1.222 (.747-1.762), $Z = 5.184$, $p < .01$. Flow accounts for approximately 20% of the variation in project success ($R^2 = 19.8\%$, data not shown).

Hypothesis 2. In support of hypothesis 2, the total and direct effects of flow on project success are $\beta = 1.222$ (path $c$) and $\beta = .932$ (path $c'$, $Z = 3.564$, $p < .01$), respectively. The difference between the total and direct effects is the unit-free index of strength of the mediated effect of flow on project success through the two mediating variables SOAR and motivation, given by the total indirect effect, $\beta = .290$. The Sobel test (Sobel, 1982; $Z = 2.054$, $p < .05$) and the use of bootstrapping (bias corrected) 95% CI (.057-.716) found the indirect effect to differ significantly from zero, which suggests a significant mediated path. Further analysis of the specific indirect effects found SOAR rather than motivation is a mediator ($\beta = .183$, $Z = 1.995$, $p < .05$), suggesting that SOAR plays a more prominent role in explaining the effect that flow has on project success than motivation.

### Thematic Analysis

Thematic analysis of the four open-ended survey
questions found the emergence of 15 themes. Each set of themes is presented next to its corresponding open-ended questions. Each theme is following by exemplary participant responses.

Table 3: Mediation of the Effect of Flow on Project Success through SOAR and Motivation Background Factors

<table>
<thead>
<tr>
<th>Background factors</th>
<th>β</th>
<th>Product of Coefficients</th>
<th>Bootstrap (BC 95% CI) Lower</th>
<th>Bootstrap (BC 95% CI) Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow</td>
<td>.122***</td>
<td>.236</td>
<td>5.184</td>
<td>.000</td>
</tr>
<tr>
<td>SOAR</td>
<td>.322***</td>
<td>.138</td>
<td>3.055</td>
<td>.002</td>
</tr>
<tr>
<td>Motivation</td>
<td>.359***</td>
<td>.119</td>
<td>3.006</td>
<td>.003</td>
</tr>
<tr>
<td>SOAR</td>
<td>.133**</td>
<td>.195</td>
<td>2.220</td>
<td>.026</td>
</tr>
<tr>
<td>Motivation</td>
<td>.299</td>
<td>.331</td>
<td>.903</td>
<td>.367</td>
</tr>
<tr>
<td>Flow</td>
<td>.932**</td>
<td>.262</td>
<td>3.564</td>
<td>.000</td>
</tr>
<tr>
<td>SOAR</td>
<td>.183*</td>
<td>.092</td>
<td>1.955</td>
<td>.023</td>
</tr>
<tr>
<td>Motivation</td>
<td>.107</td>
<td>.131</td>
<td>.816</td>
<td>.414</td>
</tr>
<tr>
<td>Total</td>
<td>.290*</td>
<td>.141</td>
<td>2.054</td>
<td>.020</td>
</tr>
</tbody>
</table>

Note. 5,000 bootstrapping samples; BC = bias corrected; CI = confidence interval. Dependent variable = project success; predictor = flow; mediating variables = SOAR, motivation. *p < .05, **p < .01 unstandardized coefficients.

Figure 1: Path Coefficients for the Multiple Mediation Analysis of Flow, SOAR, Motivation and Project Success

**Q #1: Describe project experience that cultivates flow.** Five first-order themes emerged related to encouraging an environment that cultivates the eight elements of flow: Project Management/Leadership, Principles of SOAR, Effective Communications, Goal Setting, and Management Challenge.

**Project management/leadership.** Project management requires leadership skills and by their nature, SAP projects require both transformational and transactional leadership.

“The project leadership is involved with the success of the project and is supportive of the team’s well-being encouraging flow.”

“Executive level sponsorship that is perceived to be honest and capable of articulating clear goals to the team is key to the team perception of ‘clear goals.’”

**Principles of SOAR.** The SOAR framework builds on strengths, opportunity, aspirations, and results. SOAR encourages an atmosphere that provides clear goals and manages expectations both of which promote the occurrence of flow.

“Celebrate the successes and don’t dwell on the failures.”

“The strengths of the project allow it to be a success and flow.”

**Effective communication.** Effective communication stresses the individual’s ability to relate to others, and helps the organization to better understand the world in which it is operating.

“Frequent project communication and team building activities allow the team members to learn about each other outside of specific project tasks.”

“Strong communication creates an environment and builds the team to allow it to experience the flow elements.”

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**Goal setting.** Clear project goals contribute to the experience of *flow*. Difficult goals lead to enhanced performance in that they encourage people with high goals to seek out new information or develop new skills in response.

“It was important for me that the business recognized my competence and contribution to the success of the project.”

“I feed on the belief that I had the full support of the business and that the project team was meeting its goals.”

**Management challenge.** Challenges require careful management of resources. *Flow* is maximized with skill level matches task difficulty.

“Goals were clear, feedback/collaboration was consistent and every day presented a new challenge and opportunity. However, team members frequently experienced loss of control over work and time, with many staying well past 8 pm on daily basis”.

**Q #2: Describe the type of motivation experienced in the project.** Three first-order themes emerged related to the type of motivation experienced in the project: *Intrinsic Motivation*, *Extrinsic Motivation*, and *Anxiety*.

**Intrinsic motivation.** *Flow* occurs when an individual is engaged in a task for the sake of doing the task without expectation of external or material reward.

“Completing tasks was rewarding enough; no one was told of any financial rewards for completion of the project.”

**Extrinsic motivation.** Material rewards, recognition, and related behaviors that feed the ego are indicators of extrinsic motivation.

“It was important for me that the business recognized my competence and contribution to the success of the project.”

“I feel on the belief that I had the full support of the business and that the project team was meeting its goals.”

**Anxiety.** Anxiety is an emotional state, which occurs when a person believes that his action opportunities are too demanding for his capabilities.

“Project was chaotic due to many scope changes by the customer.”

“It was hard to be motivated with all the changes.”

**Q #3: Describe circumstance during which team was challenged.** Three themes emerged related to team challenge: *Team Transcendence*, *SOAR/Governance*, and *Team Dysfunction*.

**Team transcendence.** The characteristic of a team that has demonstrated the ability to overcome obstacles, challenges, and constraints in their achievement of project deliverables has demonstrated team transcendence.

“All of our team had never seen a functional spec and were not too familiar with all the terms and concepts, but we all pulled together, worked during lunches and were able to complete the functional specs in a timely manner.”

**SOAR/governance.** Focused on a strengths-based, whole system approach, SOAR addresses organizational and project alignment, governance and strategic initiatives with a vision for the future.

“Our team was constantly challenged by the project because we played the role of senior management’s eyes and ears in the project.”
“We had to constantly and consistently provide reliable supporting evidence that upheld our decisions.”

**Team dysfunction.** Teams which lack cohesiveness and the willingness to get things done are dysfunctional. All teams have the potential for dysfunctional behavior. Dysfunctional teams present both a challenge and opportunity for project management.

“We had to constantly and consistently provide reliable supporting evidence that upheld our decisions.”

**Altered time.** A typical element of the *flow* experience is that time is altered. While some individuals constantly worry what time it is, others come to learn how to control the subjective experience of the passage of time in order to more effectively experience *flow*.

“Time definitely flew as we were working 18-hour days for almost two weeks straight. We had lost all perception of time.”

**Skill development.** *Flow* occurs when both challenges and skills are high and equal to each other. A good *flow* activity is one that offers challenges at several levels of complexity. When faced with challenges, skill will ratchet upwards – this is *flow*.

“Team members fought, yelled at one another; quit, and were probably one of the most unprofessional groups I’ve had to work with.”

**Q #4: Describe any intense moments of flow during the project.** Four themes emerged related to the experience of *flow*: Project Challenge, Clear Goals, Altered Time, and Skill Development.

**Project challenge.** Project challenge refers to the broad array of situations including technical, commercial, and personnel issues that can surface at any time during a project.

“There is no magic bullet in SAP projects!”

“Time definitely flew as we were working 18-hour days for almost two weeks straight. We had lost all perception of time.”

**Clear goals.** In order for a person to be deeply involved in an activity, the person must know precisely the tasks to accomplish on a moment-by-moment basis. Clear goals help an individual *flow* in the immediacy of the moment.

“Time definitely flew as we were working 18-hour days for almost two weeks straight. We had lost all perception of time.”

“Project members fought, yelled at one another; quit, and were probably one of the most unprofessional groups I’ve had to work with.”

“Clear goals.** In order for a person to be deeply involved in an activity, the person must know precisely the tasks to accomplish on a moment-by-moment basis. Clear goals help an individual *flow* in the immediacy of the moment.

“We understood the need to look at a clear blueprint of the solution and get business sign-off and then realized that solution and gave the business a sustainable solution that met and exceeded their expectations.”

“Skill development.** *Flow* occurs when both challenges and skills are high and equal to each other. A good *flow* activity is one that offers challenges at several levels of complexity. When faced with challenges, skill will ratchet upwards – this is *flow*.

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**Discussion**

This study is one of the first attempts to empirically examine the concept of *flow* in an SAP project environment. The focal point of the study was the convergence of *flow*, SOAR, and motivation on the success of complex SAP system integration projects. Quantitative study results found *flow* was a significant positive predictor of project success, and SOAR was a mediator of the impact that *flow* has on project success. Results of qualitative thematic analysis provide support for the results of
hypothesis testing via participant responses to open-ended questions.

The Importance of Flow in the Delivery of Successful Projects

Empirical support that flow has a positive influence on project success has important implications. First, results support hypothesis 1 that successful projects exhibit a higher level of flow than less successful projects. SAP projects force organizations to understand their business requirement and replace inefficient processes so that an “As Is” philosophy is changed to a “To Be” philosophy. Such actions often challenge an organization’s ability to accept change. Flow’s unique importance in organization development is alignment of stakeholders in the realization of corporate strategy and corresponding intrinsic motivation. Second, results imply that individuals who are not operating in a state of flow are behaving below their optimal level; they may lapse by degree into less positive states of boredom, anxiety, or eventually surrender to apathy. Third, these results may be used to improve project success in other project delivery initiatives beyond SAP projects since projects demand the learning of new skills in response to ever-increasing challenges.

The Importance of SOAR in Mediating Flow’s Impact on Project Success

Mediation models in organization development and change research help to explain how an effect occurred by hypothesizing a causal sequence such that the predictor variable causes the mediating variable, and the mediating variable causes an outcome variable (MacKinnon, Coxe, & Baraldi, 2012). In the current study, examining the presence of mediators in relationships between flow and project success contributes to our understanding of the processes underlying these organizational phenomena, and allows us to move our understanding of flow beyond making predictions of project success, to explaining the presumptive sequence of effects that lead flow to have a positive impact on project success and subsequently organization performance.

Our hypothesis that there would be a significant indirect effect of flow and project success through the combined set of SOAR and motivation as multiple mediating variables was significant. These findings suggest that one potential sequence of causal events by which flow impacts project success is that professionals engaged in projects first enter a state of flow, next they experience strengths-based strategic thinking, planning, and leading (SOAR) combined with the activation of goal-oriented behavior (motivation), and then they experience project success (the outcome variable).

In further analyzing the distinction between SOAR and motivation as multiple mediating
variables, results found a significant specific indirect effect through SOAR rather than motivation. This finding underscores the importance of a dynamic, modern, and innovative approach to strategic thinking, planning, and leading in explaining flow’s positive impact on project success. Furthermore, by inviting a broad representation of stakeholders into the strategy formulation and implementation process, SOAR enhances the inclusiveness of flow to reach all organizational members involved in a project (Stavros & Cole, 2013).

**Recommendations for Practitioners**

This study recognizes the nature and importance of individuals experiencing flow, the fundamental elements that promote this optimal experience, and the value of further study in organization development. The implications of this study support practices that encourage flow in the quest to promote worker positivity, creativity, improved project success rates, and increased worker capacity. In practice, these derivatives of flow can aid individuals and the project teams they engage to deal with the complex challenges encountered in the delivery of System Integration (SI) projects.

For the practitioner audience, the findings of the study provide additional components for consideration when planning, managing, and delivering projects. In practice, senior leadership would do well to consider a reward mechanism that encourages project success. In tandem, senior leadership should consider and establish actions to create an environment that encourages and harmonizes the elements that promote flow, SOAR principles, and intrinsic motivation.

The SOAR framework is a means for organizations to develop and promote positive strategy and strategic capacity in the achievement of planned results. Figure 2 illustrates the potential of linking flow with SOAR. In an optimal environment, individuals who form the backbone of an organization will incorporate the concepts of flow and SOAR organization development efforts to increase successful project delivery that positively impacts performance at the individual, team, or organization level.

**Study Limitations and Future Directions**

The first limitation is the selection of SAP projects as the research focus. Conceivably, an analysis of any project type could have provided a research basis related to the determination of the impact of flow in projects. The decision to study only SAP projects considered their complexity and unique importance in the implementation and adoption of best practices, innovation, and corporate strategy. Second limitation is the sample size. Since this study is one of the first of its kind to link flow, SOAR, and motivation with project success, future research should replicate the proposed
multiple mediation model with a larger sample, and with professionals in other areas of business and management for which project success is an important outcome. A third limitation is that participant’s experiences were measured at different intervals during the study period. Recommendation for internal snapshots could be at random moments at milestones, interventions, or the incidence of an exogenous event.

A fourth limitation concerns knowledge of the participant’s experience with flow and SOAR. Future research could establish flow workshops and compare the results of a control group to a coached group to determine implications of coaching flow and SOAR. SOAR provides a roadmap to positively connect the stakeholders from all levels to a positive strategy while flow captures their hearts, minds, and creativity. In such an environment, the individual’s capacity is nourished by the ratcheting effect of challenge and skill whereas SOAR provides the framework to focus the organization’s values, vision, and mission in formulating and implementing a positive strategy. A proposed future study would explicitly link the SOAR framework with the eight elements of flow to investigate impact on projects and project success. The expected outcome of incorporating flow elements into the SOAR framework would be that stakeholders would
contribute to SOAR outcomes in a more altruistic and robust manner.

Finally, the finding of a significant mediated path, and a significant direct c’ path suggests the influence of flow on project success may be partially mediated by SOAR (rather than fully mediated). Therefore, flow may have some additional effect on project success that is not mediated by SOAR. Future research may consider the theoretical possibilities of including other mediating variables in the mediation model beyond SOAR.

Note: This is the seminal article based on Michael J. Glovis’ dissertation: *A Mixed Methods Study of Flow, SOAR, and Motivation: Developing Individual Transcendence within the Delivery of Complex Systems Integration Projects.*

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**References**


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