Historical Development of VIEW

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Historical Development of VIEW: A Model and Assessment of Problem Solving Style

EXECUTIVE SUMMARY

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The purpose of this paper is to review the history of the development of the VIEW Model of Problem Solving Style and the instrument based on that model. In a field often characterized by a profusion of "new" instruments, often with superficial development and lacking in theoretical soundness and empirical support, it is valuable and important to be clear about the history and depth of work that led to the development of VIEW and undergirds an ongoing commitment to blending practical utility with scientific inquiry.

Spanning more than two decades of research and development, and building on more than five decades of scholarship on creativity and Creative Problem Solving, the empirical foundations for both the VIEW Model and the assessment involved five stages of data collection and analysis. This report describes and discusses those five stages.

Stage I represented the initial foundations and formative elements of our work, from 1997 to 2001. Work in this stage involved identifying the need and opportunity for inquiry and development of a model and measure of problem-solving style, and the initial planning for a systematic program of development and research. Stage II, from 2002 to 2004, focused on elaborating the design and development of the model, the measure and supportive materials. It was a period of instrument construction and pilot testing. Stage III represented a three-year period (2005 to 2007) of clarifying and elaborating the model. It also involved data-based refining of the instrument and conducting studies of the instrument's validity and reliability. Stage IV (2007 to 2010) involved expanding research, development, and dissemination. It was also characterized by active efforts to initiate and sustain multi-agency collaboration and cross-cultural engagement among both researchers and practitioners. This was also a period of expanded attention to scholarly dissemination through presentations and publications. Stage V (ongoing since 2011) emphasizes advances in scholarship and application support, deepening our understanding of the model, the instrument's technical structure, and the array of practical and scholarly applications of the model and measure.

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The purpose of this resource is to review the history of the development of the VIEW Model of Problem Solving Style and the instrument based on that model. Since the origins of our work in 1991, VIEW has been used with more than 40,000 individuals, ages 12 to 84, in educational, corporate, arts, religious, governmental and military settings worldwide. Individuals responding to VIEW have been able to better understand, develop and promote their creative strengths and to enhance their effectiveness when working, on their own or in teams or groups, to manage change and solve complex, open-ended problems. VIEW has assisted them in understanding and applying their own strengths and appreciating the preferences of others to enhance performance. The VIEW Model and measure involve three dimensions and six styles (Selby, Treffinger, & Isaksen, 2007a). These dimensions and styles, which are described in detail elsewhere (e.g., Selby, Treffinger, & Isaksen, 2014), are: Orientation to Change (OC; Explorer and Developer), Manner of Processing (MP; External and Internal), and Ways of Deciding (WD; Person and Task).

Developing the Model and the Instrument

The empirical foundations for both the VIEW Model and the assessment were based on five stages of data collection and analysis. Stage I represented the initial foundations and formative elements of our work, from 1997 to 2001. Stage II, from 2002 to 2004, focused on the design and development of the model, the measure and supportive materials. Stage III represented a three-year period (2005 to 2007) of elaborating and refining the instrument. Stage IV (2007 to 2010) involved expanding research, development, and dissemination. Stage V (ongoing since 2011) emphasizes advances in scholarship and application support. These stages are summarized in Figure 1, and this report describes each stage in greater detail.
In developing the VIEW model and measure, we drew upon theory and research from learning style, creativity style, psychological type, and cognitive style, and also from contemporary theory and research on creativity, innovation, change management, the psychology of the person and our combined experience of more than 135 years of study, research, training, and practical applications on creativity, Creative Problem Solving, and style (Selby, Treffinger, & Isaksen, 2014). We began with a firm commitment, which continues to guide us, to develop a model and an instrument that would be accessible and easy to use, interpret, and apply, while also having a sound foundation in theory and research.

**Stage One: Foundations**

Early on in our work we drew from several instrument development initiatives. Selby (1991) studied the application of various style theories and approaches (Dunn and Dunn, 1978; Kolb, 1981; McCarthy, 1987; Kirton, 1989) for instruction in music, drama, and creative writing with middle school students, and the application of the Creative Problem Solving process and tools when working with those students on creative projects. Later, the scope of this inquiry broadened to include the impact of psychological type on instruction (Lawrence, 1996; 1997). While successfully structuring curriculum and instruction to meet the individualized needs of students, especially those engaged in creative projects, Selby (1997a; 1997b) noted that the models associated with these stylistic differences and the instruments that supported them were, in many ways, limited in flexibility, availability for school use, and ease of use in a middle school setting. In short, they were not student friendly, but were relatively expensive considering the constraints that most...
schools work under. He began to expand his search for a more appropriate model, and to design and experiment with informal measures of style, building on the work of Kirton (1976, 1989) and Schaar (1994). The informal instruments that resulted from this effort (e.g., Selby, 2000) were useful, but limited in their application.

During this period Treffinger and Isaksen (Isaksen, Dorval & Treffinger, 2011), carried out research on numerous inventories with the goal of incorporating style into Creative Problem Solving instruction and training. They found that, while many instruments were effective, reliable and valid in meeting their design purposes, each fell short in meeting the needs of CPS students and trainees. Some instruments required extensive training and/or recurring training. Some provided rich, extensive and sometimes complex feedback going far beyond what was needed in a problem-solving program. Others were written in stilted language that was difficult for some respondents to easily understand. None were found that aligned directly with the stages and steps of the Creative Problem Solving process.

Through several meetings and extensive communication on the problems encountered with existing style models and assessments, the three VIEW authors agreed that there was a need for a new direction to guide students and trainees in skillful and personal use of CPS, for the development of a model and instrument that would draw from a broader range of research and theory in the areas of learning style and cognitive style. Such an instrument should provide an approach that could be quickly and easily assessed, require limited but meaningful training over a short period of time, deliver easily understood feedback, and connect clearly with the CPS process.

In April, 1997, VIEW’s two senior authors began working on an early version of an instrument that would support our emerging understanding and model of the connection between style and CPS: the Indicator of Problem Solving Style (IPSS). Early versions of the measure drew on the work of Gardner (1983; 1993), Sternberg and Lubart (1995), Kirton (1976), and Schoonover (1996). At the same time, work on the flexible and descriptive nature of the CPS framework stimulated our thinking about new connections between person and process, or characteristics and operations. This led all three authors to join in the development of an expanded model and supporting assessment, and to engage in several stages of field-testing and research in both educational and business contexts, leading to publication of the current edition.

In its initial development the IPSS consisted of 18 items that provided feedback only on the Orientation to Change (OC) dimension. Early studies were carried out with small groups of students and educators. As results were compiled and analyzed, we refined the pool of items and expanded the instrument to 30 items. We asked respondents from the business and consulting sector, as well as
Based on our extensive review of the literature and our early findings with these subjects, we concluded that the OC dimension alone did not sufficiently describe the salient preferences that, based on our model, had a strong impact on an individual’s behavior when perceiving, defining and/or seeking solutions to challenges. We also began to consider preferences for deciding on a course of action, or acting upon problems, change, and new challenges. This resulted in the removal of some items from the OC pool and the development of the Manner of Processing (MP) and ways of Deciding (WD) dimensions. This led to a draft of the IPSS consisting of 38 items.

A series of statistical studies followed involving more than 2,000 respondents. Participants included business managers, students from age 11 through graduate school, and educators. Based on analyses of those data we clarified or understanding of the model and in August 2001 we revised the measure once more. At this point, we renamed the instrument, *VIEW: An Assessment of Problem Solving Style*, and the VIEW Model of Problem Solving Style took form. The measure now consisted of 40 items. Twenty items were dedicated to the OC dimension, and 10 items were dedicated to each of the MP and WD dimensions.

**Stage Two: Design and Development**

Research and development of the VIEW assessment continued from 2001 through 2004 as we refined the instrument and developed support materials for both the instrument and the model. We conducted a new group of validity and reliability studies during the fall of 2001 involving students, educators, and business managers, leading to another refinement of the instrument in November 2001. We also reexamined carefully the theoretical foundations of the three dimensions to guide us in clarifying and refining the model. We concluded that the instrument was able to provide meaningful feedback and data in support of the VIEW Model. The result was the current 34-item, three-dimension measure. Additional validity and reliability studies were between December 2001 and March 2002 with samples totaling 1,258 individuals.

The current edition of *VIEW: An Assessment of Problem Solving Style* was published in 2002. We continued to monitor the data set, to engage actively in our own program of research and development. For instance Schoonover & Treffinger (2003) looked at the relationship between problem solving style and an individual's approach to the problem solving process and tools. Selby, Shaw & Houtz (2003) and Costello & Houtz (2004) reported on the measures construct validity and its importance in understanding different behavioral styles. We also encouraged other researchers to conduct independent studies using the instrument. In 2004, we published the first *Technical Manual* edition and the initial statistical report on
Stage Three: Elaborating and Refining

In 2007 two reviews of the instrument appeared in the *Mental Measurements Yearbook* (Schraw, 2007; Staal, 2007) that helped us set important directions for ongoing research. An updated collection of support materials for qualified users of the instrument was published (Selby, Treffinger & Isaksen, 2007a). An Introduction to the VIEW Model was made available to the general public (Treffinger, Selby, Isaksen, & Crumel, 2007). Also published was a second edition of the *VIEW Technical Manual* (Selby, Treffinger & Isaksen, 2007b). These were based on a growing body of data from over 10,000 respondents. Also the instrument and some support material had been translated into Dutch, Korean and Chinese (Selby, Treffinger & Isaksen, 2007b) allowing VIEW to reach an ever-growing audience. For instance Lin (2005) and Chiu (2006) reported on their work with Chinese participants. Tuzzo (2007) used the VIEW measure with 30 members of an international women’s organization, and Bergsgaard and McCluskey (2007) worked in collaboration with a group of Russian educators.

During this period we followed up on some of our earlier work. Isaksen and Geuens (2006; 2007) and Geuens (2006) studied the relationships between problem solving style and preferences for learning and using specific tools, guidelines, stages and components of creative problem solving. Isaksen (2006) explored the relationship between problem-solving style and psychological climate. Burger, Marino, Ponterotto, & Houtz (2008) verified VIEW’s construct validity. Studies were also reported on the application of VIEW in other domains (Zmudka, 2006) and in additional areas of research (Houtz, Matos, Park, Scheinholtz, & Selby, 2006; Sokolowska, 2006; Maghan, 2007; Doheny, Houtz & Selby (2007/2008).

Stage Four: Research, Development, and Dissemination

In 2008 and on through 2010 the statistical data supporting the instrument were again updated in three consecutive editions of the *VIEW Technical Update* (Treffinger, 2008, 2009, 2010). These updates were reflective of data collected in various settings and studies demonstrating an expanded understanding of the possible applications of both the model and the assessment. Conference presentations and published reports introduced VIEW to a wider audience or instance. Maghan and Houtz (2009) and Crerar (2010) looked at the relationship between problem-solving style and career interests or preferences among students in university and high school settings. The potential for VIEW to aid pre-service teacher to better understand their approach to basic principles of teaching and learning was demonstrated by Shaw, Selby &
Houtz (2009). Other studies added to our body of ongoing research statistically confirming the strength of the assessment (Houz and Selby, 2009; Houtz, Ponterotto, Burger and Marino, 2010).

Research has been extended by the instrument's translation into additional languages (Japanese, French, Spanish and Norwegian). We have been able to collect data from individuals in nine other countries including the work of Isaksen, DeSchryver & Onkelinx (2010). Working in more corporate like settings DeSchryver and Shephard (2007) provided VIEW based feedback to multi-lingual teams. Babij (2008); Aerts, Isaksen & Isaksen (2009) and Isaksen & Aerts (2011) discussed individual style differences and personal perceptions in relation to the work climate for creativity and productivity. Babij suggested that VIEW could be a useful tool when designing interventions to strengthen the health and success of a company. Stead (2008) successfully used VIEW as a tool for customer profiling in a retail setting.

Stage Five: Extending Scholarship and Application Support

The most recent data provided by the assessment is summarized in one of the companion pieces to this paper (Treffinger, Isaksen & Selby, 2014) that includes the technical data and statistical information, both quantitative and qualitative, which support our claims for the VIEW Model and for the instrument’s quality and value. In 2011 a series of booklets were published aimed at specific audiences such collaborative boards and committees, families, and educational leaders. The next year, Isaksen (2012) provided a comprehensive update on VIEW’s psychometric qualities based on work carried out during its first decade of VIEW’s publication. This was added to the following year in a study (Isaksen, Kaufmann & Bakken, in preparation) comparing VIEW data with Cattell’s 16 PF (Karol & Russell, 2009).

We continue to work in educational settings. Style differences of students involved in distance learning were investigated by Treffinger & Schoonover (2012) The benefits of understanding style for educators involved in differentiated learning were also studied (Treffinger, Selby & Schoonover, 2012). Crerar, Maghan, Matos-Elefonte & Houtz (s2012) examined the relationship between students' VIEW scores and measures of achievement. Woodel-Johnson, Delcourt, Treffinger (2012) reported on their work with problem-solving among high school students. More recently Gartner, Hanakis, Landers, Mandelbaum, Mator-Elefonte & Vazquez (2013) questioned how well academic success in a traditional setting prepares individual with differing style preferences to deal with future problems. Mandelbaum (2013) studied the relationship of style and teaching behaviors with 114 secondary private school teachers.

Isaksen & Aerts (2011) and Aerts (2012) extended their discussion of style differences and personal perceptions in relation to the work climate for creativity. Another report discussed how effective
leaders in organizations worldwide can build an inclusive environment based on an understanding of problem-solving style (Treffinger, Crumel & Selby (2013).

**Three Elements Contributing to OC.** Over the past decade as we gathered both quantitative and qualitative data, we were able to develop a more in-depth understanding of the complexity of each of the three dimensions, especially the Orientation to Change dimension. This led to a modification of the VIEW Model as it pertains to that dimension. Our initial understanding was that there were three contributing factors to the OC dimension: novelty, structure, and authority. However, we were unable to separate structure and authority. Instead, based on the data, these came together to form a single contributing element, and another element emerged: search strategy. In 2012, we clearly identified three contributing elements to an individual’s Orientation to Change style: Novelty, Structure and Authority, and Search Strategy. The varying strengths of each of these preferences are the foundation of an individual's Orientation to Change. These findings were supported by Isaksen, Kaufmann, & Bakken (in preparation) and Swerdzewski (2011), and described by Selby (2013).

As we learn more about the VIEW Model and *VIEW: An Assessment of Problem Solving Style*, more questions are raised, while many that we had when this work was begun remain. For instance, if an individual's style on one dimension is well defined and the styles on the other two dimensions are moderate does the well-defined style act to drive behavior? Or, is the interaction of each of a person's preference determined by the situation and the challenge at hand? In what additional situations might VIEW be an effective tool? Considering the Orientation to Change dimension, what are the additional understandings and applications to be derived from a more in-depth study of the three contributing elements? We continue to conduct our own research and development with VIEW, and we will make additional data available through journal publications and in the form of technical papers that will be available in print from the publisher or electronically at the VIEW website (www.viewassessment.com). We also invite, encourage and support ongoing research with VIEW by qualified scholars; a call for research is available at the VIEW website.
References


and Economics of the VLEKHO University for Science and Art. Brussels, Belgium.


