Questionnaire Items and Original Sources

Item	Dimension	Code	Question	Item Source	
1	Planning	P1	I think of several ways to solve a problem and choose the best one.	Planning (7 items; Schraw & Dennison, 1994)	
2	Planning	P2	I skim through a reading to see how it is organized before I read it thoroughly.	Planning (2 items; Young, 2005)	
3	Monitoring	M1*	I generally had trouble telling when I understood and when I didn't.	Monitoring (3 items; Miller, Behrens, Greene, & Newman, 1993)	
4	Monitoring	M2	I find myself pausing regularly to check my comprehension.	Comprehension monitoring (7 items; Schraw & Dennison, 1994)	
5	Monitoring	М3	I thought up questions to test how well I had learned something.	Comprehension monitoring (5 items; Warr & Downing, 2000)	
6	Metacognition- strategies	ME1	If class/subject/module readings are difficult to understand, I change the way I read the material.	Metacognitive self-regulation (12 items; Pintrich et al., 1991)	
7	Metacognition- goal setting	ME2	When I study for a class/subject/module, I set goals for myself in order to direct my activities in each study period.	Metacognitive self-regulation (12 items; Pintrich et al., 1991)	
8	Metacognition-self- monitoring	ME3	I tried to monitor closely the areas where I needed the most study and practice.	Metacognitive activity (12 items; Ford et al., 1998)	
9	Metacognition-self- control	ME4	If I got confused during a class/subject/module, I made sure I sorted it out as soon as I could before moving on.	Metacognitive activity (15 items; Schmidt & Ford, 2003)	
10	Attention	A1	I concentrate fully when studying.	Concentration (8 items; Weinstein et al., 1987)	
11	Attention	A2	I let my mind wander while doing the task.	Off-task attention (2 items; Kanfer & Ackerman, 1989)	
12	Learning strategies	LS1	When a theoretical point or conclusion is presented in lecture or in the text, I try to decide if there is good supporting evidence.	Deep processing (5 items; Elliot et al., 1999)	
13	Learning strategies	LS2	I try to apply ideas from class/subject/module readings in other class/subject/module activities such as lecture and discussion.	Elaboration (6 items; Pintrich et al., 1991)	
14	Learning strategies	LS3	I try to find relationships between what I am learning and what I already know.	Information processing (8 items; Weinstein et al., 1987)	
15	Time management	TM	When I decide to study, I set aside a specific length of time and stick to it.	Time management (8 items; Weinstein et al., 1987)	
16	Environmental structuring	ES	I arrange a place to study without distractions.	Environmental restructuring (3 items; Gredler & Garavalia, 2000)	
17	Help-seeking	HS*	Even if I have trouble leaming the material in a class/subject/module, I try to do the work on my own, without help from anyone.	Help seeking (4 items; Pintrich et al., 1991)	
18	Motivation	MOT1	I am motivated to learn skills emphasized in any class/subject/module.	Motivation to learn (8 items; Noe & Schmitt, 1986)	
19	Motivation	MOT2	I am very interested in the content area of any class/subject/module.	Task value (6 items; Pintrich et al., 1991)	
20	Motivation	мот3	I am willing to exert considerable effort in any class/subject/module in order to improve my skills.	Expectancy (7 items; Noe & Schmitt, 1986)	
21	Emotion control	EC1	When I felt anxious about how things were going, I told myself that things would work out alright.	Emotion control (5 items; Warr & Downing, 2000)	
22	Emotion control	EC2	When difficulties arose, I calmly considered how I could continue the task.	Emotion control (8 items; Keith & Frese, 2005)	
23	Attributions	ATR	If I don't understand class/subject/module materials, it is because I didn't try hard enough.	Control of learning beliefs (4 items; Pintrich et al., 1991)	
	* Items needed to be reversed				

^{*} Items needed to be reversed.

References:

- Elliot, A. J., McGregor, H. A., & Gable, S. (1999). Achievement goals, study strategies, and exam performance: A mediational analysis. *Journal of Educational Psychology*, *91*, 549 –563. doi:10.1037/0022-0663.91.3.549
- Ford, J. K., Smith, E. M., Weissbein, D. A., Gully, S. M., & Salas, E. (1998). Relationships of goal orientation, metacognitive activity, and practice strategies with learning outcomes and transfer. *Journal of Ap- plied Psychology*, 83, 218–233. doi:10.1037/0021-9010.83.2.218
- Gredler, M. E., & Garavalia, L. S. (2000). Students' perceptions of their self-regulatory and other directed study strategies: A factor analysis. *Psychological Reports*, *86*, 102–108. doi:10.2466/PR0.86.1.102-108
- Kanfer, R., & Ackerman, P. L. (1989). Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74, 657–690. doi:10.1037/0021-9010.74.4.657
- Keith, N., & Frese, M. (2005). Self-regulation in error management training: Emotion control and metacognition as mediators of performance effects. *Journal of Applied Psychology*, *90*, 677–691. doi:10.1037/0021-9010.90.4.677
- Miller, R. B., Behrens, J. T., Greene, B. A., & Newman, D. (1993). Goals and perceived ability: Impact on student valuing, self-regulation, and persistence. *Contemporary Educational Psychology, 18,* 2–14. doi: 10.1006/ceps.1993.1002
- Noe, R. A., & Schmitt, N. (1986). The influence of trainee attitudes on training effectiveness: Test of a model. *Personnel Psychology*, 39, 497–523. doi:10.1111/j.1744-6570.1986.tb00950.x
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). *A manual for the use of the Motivated Strategies for Learning Question- naire (MSLQ)* (Tech. Rep. No. 91-B-004). Ann Arbor: University of Michigan.
- Schmidt, A. M., & Ford, J. K. (2003). Learning within a learner control training environment: The interactive effects of goal orientation and metacognitive instruction on learning outcomes. *Personnel Psychology*, *56*, 405–429. doi:10.1111/j.1744-6570.2003.tb00156.x
- Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, *19*, 460–475. doi:10.1006/ ceps.1994.1033
- Warr, P., & Downing, J. (2000). Learning strategies, learning anxiety and knowledge acquisition. *British Journal of Psychology*, *91*, 311–333. doi:10.1348/000712600161853
- Weinstein, C. E., Schulte, A. C., & Palmer, D. R. (1987). LASSI: Learning and Study Strategies Inventory. Clearwater, FL: H & H.
- Young, M. R. (2005). The motivational effects of the classroom environ- ment in facilitating self-regulated learning. *Journal of Marketing Edu- cation*, 27, 25–40. doi:10.1177/0273475304273346