Learning Attributes Essential for Online Success: Individualized Metacognitive Strategies for Online Learners

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Abstract: This is the second phase of a study investigating the learning attributes of online students. Phase 1, presented at E-Learn 2006, identified and verified the factors important for online success. Phase 2 included providing individualized learning tips to online students. The learning tips were gathered from the research literature and from the authors' experience in the classroom with graduate students. An online system was created to survey students and provide them with a customized spectrum of learning tips suited to their particular online learning preferences and needs. At the conclusion of the semester, a survey was administered to measure student perception of the usefulness of the learning tips and their satisfaction level with the online learning.

Student success online

Effectiveness of online learning depends on the accessibility of the course information and students' varying abilities to process it (Sprague, Maddux, Ferdig & Albon 2007)**.** In addition, to succeed in the online learning environment, students must become aware of how comfortable they are with the technology and how driven they are to take on a more self-directed learning experience (Perez Cereijo 2006). A clear understanding of this will allow them to better handle the challenges posed by online learning, including adopting their own efficient learning strategies, developing a study schedule and interacting with classmates and instructors. This idea of metacognition is not new to education, but now needs to take the step over to online learning. When a student understands how they learn, they are taking large strides to becoming a better learner (Wall & Higgins 2006).

Based upon the research literature (Jiang, Parent & Estmond 2006; Perez Cereijo 2006; Reisetter, Lapointe, & Korcuska 2007; Sprague, Maddux, Ferdig & Albon 2007), a total of 39 learning tips (among 9 categories of learning preferences) for online students were compiled and validated by experienced online instructors.

Tips for learners with low self-motivation

Motivation is an issue in traditional classrooms, and it does not exclude online learning. Online courses create a learner directed environment. How do students motivate themselves in an online learning environment? In online classes, the class will not happen to the students, they have to help create the learning experience for themselves. A learner can motivate themselves through an understanding of course demands (Perez-Cereijo 2006). In other words, if the student signs up for a course, knowing what they will have to accomplish, they will motivate themselves for the end result.

Tips for learners with poor self-management skills

Being outside of the classroom fosters the independent nature of online learning. Therefore, each student is in charge of his or her own task management. If a student has an understanding of their weakness in this area, they can use tips such as the following to create the probability of success. In order to avoid being weighed down by an excessive work load, students should plan a regular schedule to work on the class. In this manner, the class is broken down into manageable pieces (Akins & Li 2005).

Tips for learners who are dependent on teacher feedback

Growing up in an educational system where the student is used to frequent face -to-face contact with the teacher can cause some dissonance for students when they approach the online learning experience. With the understanding that the student is in charge of their learning experience, the student should also be assertive in beginning a dialogue with their instructor (Reisetter & Boris 2004). If the student needs feedback, they should begin working on assignments early. Students who encounter problems with assignments usually want to get direct answers from an instructor. Getting an early start on an assignment gives the instructor a more reasonable amount of response time if the students have a concern (Watkins & Corry 2005).

Tips for learners who are socially oriented

Although the online learning community has a lot to do with independence and individualistic assignments when it comes to the student's learning experience, most online courses encourage or require the use of discussion boards. This can be a tool to help those who learn easily from discussing materials, or need items paraphrased. In order to get the most out of the discussion board experience, a student should be active on the discussion board and respond to others' posts. Checking the discussion board frequently, and sending responses lets others know you are interested in the conversation and may help others to post (Guide to Discussing 2004).

Tips for learners who are strong in visual text

Lectures, notes, discussion boards, assignments and other written text are easily and readily accessible in an online class. Learners who are strong in visual text will recognize the amount of saved information in the course materials that will help them in their studies. (Using Group Work 2004). A student should not fear to read and reread materials or discussions they find particularly useful. Most materials can be printed and used to make notes or even color coded to help retention and comprehension.

Tips for learners who are strong in reading visual graphics

The Internet and online medium in general offers a wide range of visual tools for learners. A visual learner can view or create graphs, charts or videos to reinforce materials that they have been reading about. Those who recognize that they conceptualize ideas through more graphic means can help themselves by exploring extra links or videos the instructor has put into the course (Bonk & Zhang 2006).

Tips for learners who are audio learners

Among the vast visual media that the Internet allows, there is also a supply of audio material that can help those who learn best by listening (Bonk & Zhang 2006). Students should not despair if they feel like the bulk of the course content does not fit their learning preference. There are other outlets and advice other than the use of multi-media links. Students could form a study group to meet with other students and discuss topics, or even read aloud to themselves while covering course material. Again, the online classroom materials themselves can be accessed repeatedly to help understanding. Lectures can be rewound and reviewed to help maximize comprehension (Friedman& Deek 2002).

Tips for the student who is not tech savvy

Technology is a rapidly growing field that leaves some feeling left behind. Because technology is growing so rapidly, it is becoming more widespread and user friendly. Technology support teams can have useful advice or frequently asked questions (FAQ). It is important for the online student to "play" around with the course website and even ask questions about how to use certain tools (Akins & Li 2005). It is likely that many students will have concerns about the use of technology, so students should use the classroom setting and ask classmates how to use certain tools. Tutorials or other orientation materials can be quite helpful to familiarize a user with a program (Mortera-Guiterrez 2002).

Learning Preferences Profile and Students' Satisfaction Level

Participants

In the beginning of each class, students were given a learning-preference survey, consisting of 36, five-point Likert-scaled items. Once submitting their response, a bar chart (Learning Preferences Profile, **Figure 1**) was generated and proposed online learning tips were listed.
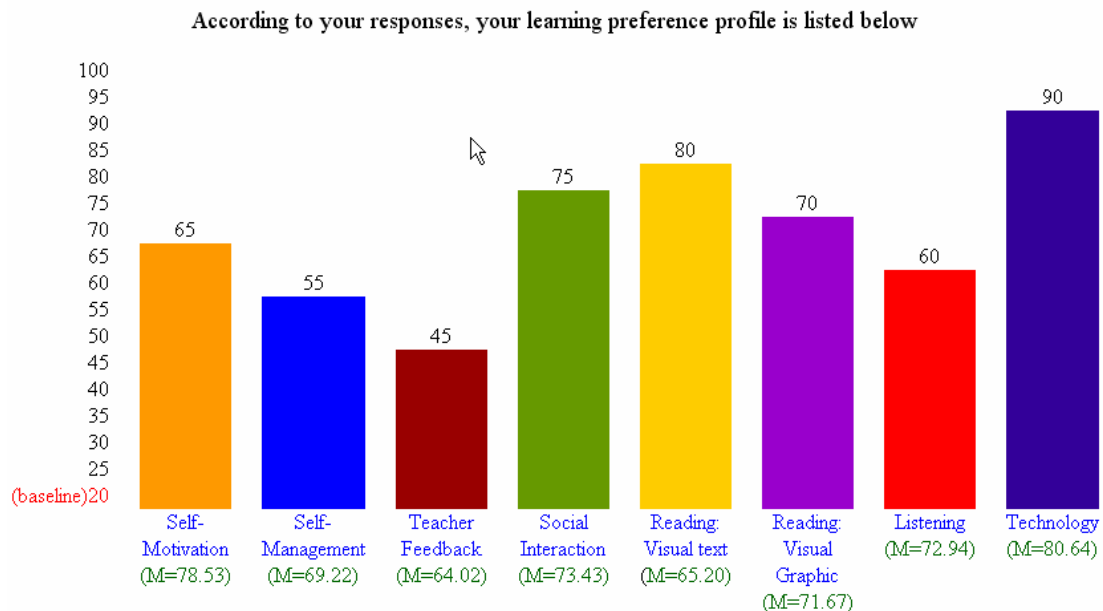

Figure 1: Bar chart generated reflecting student's Learning Preferences Profile

Online Learning Tips

Based upon a literature review, the authors' experiences, and students' feedback, 39 online learning tips were identified and classified into nine categories (**Table 1**).

Categories	Online learning tips
General tips for all online learners	• Be assertive and active in your online learning pursuits. Ask questions, you will get more out of the experience. • Peer interaction can be one of the best resources for you – they maybe experiencing the same issues as you. • Think of the instructor as a coach, there to guide. Online learning is meant to be self-directed.
Tips for learners with low self-motivation	• Make sure to read the syllabus. Knowing what is expected of you will help you reach your goal. • Finding a study buddy will help you understand course work. You can help each other stay motivated. • Procrastination will cause work to pile up, you to be overwhelmed and lose motivation. Plan ahead, so you can be successful! • Do not think of coursework just as coursework; see how it will apply to your future. • Remember why the class is important to your education and career.
Tips for learners with poor self-management skills	• Write down assignments! Use electronic calendars with reminders to help you remember. • Create regular study and work times, so you can break the work up into manageable pieces. • Have your own personal goals for the course and note if you are meeting them or not. • Have a quiet learning environment set aside, free from interruptions
Tips for learners who are dependent on teacher feedback	• Communicate with your instructor via email, discussion board or phone call whenever needed. • Be aware that your instructor may give you feedback in different forms: grades, emails or discussion board messages. • Understand that your instructor will not always be online, so start the assignment early in case you may have questions.
Tips for learners who are socially oriented	• After introductions, find peers with similar goals or interests. You can create valuable peer relationships online. • Use this electronic forum to your advantage – ask questions and be assertive. • Form a study group in which you discuss course content with others. • When you post, use the subject lines to draw in people's attention. You will be more likely get the readers and the response you are looking for. • Posting early during the unit will help you get the most response as well. • Check the discussion board frequently and respond if you are interested. It helps to know that someone is reading your posts. • Know that many people are intimidated to post, just as you may be.
Tips for learners who are strong in visual text	• Print out a hardcopy of your online text, make use of "color coding" when studying new information. When learning information presented in diagrams or illustrations, write out explanations for the information. • Write out sentences and key phrases in the margin (aka take notes!). • Discussions and course content are there to look at whenever you want. Go back and revisit discussion that may help you. • Locate or make an environment conducive to reading and make sure to take breaks.
Tips for learners who are strong in reading visual graphics	• Use links provided by professors – they often will provide a multi-media experience that can help your visual needs. • Create diagrams, flow charts and maps to help you visualize course concepts or notes.

	• Create a visual course map to help you navigate assignments and goals. • Use key words, symbols and diagrams in your note taking.
Tips for learners who are audio learners	• Form a study group in which you discuss course content with others. • When studying, read out loud. • Use links provided by professors – they often will provide a multi-media experience that can help your listening needs. • Use the video tools in your class - do not be overwhelmed by the content. Rewind and replay if you do not understand something.
Tips for the student who is not tech savvy	• Experiment with how the course works. Understand that others will struggle too, and ask for help. • Use any orientation materials available. For example, the Blackboard tutorial http://tltc.findlay.edu/onlinesupport/BB_Tutorial/Bb.htm. • Make a general visit to your Student Technology Resource Center or to their website. • After trying to solve a technical problem for 20 minutes, make sure to contact your instructor or help center. • Identify a single computer that you will use for the online course (if possible) so you can keep track of your files and know the computer's capabilities.

Table 1: Online learning tips

Students' Perception and Satisfaction Level

Prior to the conclusion of the course, a satisfaction survey was administered to gauge students' perception of the usefulness of the proposed tips and their satisfaction level with the course. The majority of students (68%) indicated that the recommended learning tips were helpful as they completed their assignments. In addition, 78% were satisfied with the quality of the course.

Plan for Continuing Study

Future study includes plans to incorporate knowledge gained from students' Learning Preferences Profiles with an online classroom environment including teaching styles, media and materials, and presentation design.

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