Designing Online Instruction for Success: Future Oriented Motivation and Self-Regulation

Joel T. Schmidt and Christian H. Werner
University of Applied Management, Erding, Germany
joel.schmidt@myfham.de
christian.werner@myfham.de

Abstract: Given the high rate of student drop-out and withdrawal from courses and programs using an online learning format, it is important to consider innovative ways to foster and encourage student success in online environments. One such way is to incorporate aspects of student future orientation into the design of online instruction. This paper presents an overview of a program of research examining whether perceptions of student motivation, self-regulation, and future time perspective can be positively influenced through future oriented instruction in a blended learning (semi-virtual) environment at a German university. Individual differences in student future time orientation can provide insight into this interesting connection between the influence of attitude toward time on motivational and self-regulatory processes in learning. In conclusion, the practical implications of this topic for the design of online learning environments must be considered: Increased effort needs to be taken for developing methods for online instruction to tap into and encourage the future orientation of students, and for providing meaningful connections to the content and possible future outcomes. This paper intends to provide insight into and examples of how an online course or semi-virtual programs can benefit from a future oriented design.

Keywords: e-learning; future time perspective; self-regulated learning; blended learning

1. Introduction

Mintzberg (2004) asserts the need for management education that delivers flexible, experiential and hands-on opportunities for personal development – not just in areas identified by industry executives and managers, but in areas that are vital for optimal functioning in a knowledge society throughout the lifespan. This means the capacity and competency for learning. The challenges for educators to encourage and foster the internal self-regulated, motivated and managed processes enabling life long learning are immense, yet not impossible. Online instruction using web-based technology deals with the aspect of flexibility, but what about experiential and authentic learning? The use of future oriented instruction in blended learning environments offers an innovative method for achieving this goal. The following sections provide an overview of key concepts relating to the theory of time perspective, future time perspective, and provide an example of research applying these concepts to online instruction using a blended learning format. In conclusion, recommendations are presented for how operation of these concepts can be achieved within a framework of a program-wide initiative offered at the University of Applied Management (UAM) in Germany (UAM Milestones Educational Model).

2. Time perspective

The study of time perspective deals with how the flow of human experience is parcelled into temporal categories, or time frames, usually of past, present and future (Zimbardo and Boyd 1999). Although there is a growing body of literature focusing on time perspective, lack of unity on definitions of concepts and terminology is an inhibiting factor in development of the theory – one literature review has identified 211 different conceptualisations of time perspective (McGrath and Kelly 1986). For this current study, time perspective is defined as a cognitive operation involving both an emotional reaction and a preference for locating action in a specific time frame (Lennings 1998). Further insight into this cognitive operation can be gained by examining other research relating to the field (Husman and Lens 1999), explaining the emotional component through the aspect of attitude (an individual's positive or negative outlook concerning time), and preferential time frame through the concept of orientation (preferential temporal direction in thought and action) to either past, present, or future.

Zimbardo and Boyd's theory of time perspective (1999) sub-divides the time frames of past, present and future into 5 different possible perspectives (see Figure 1). This theory operates on two primary assumptions: first, that both individuals and environments operate with identifiable time perspectives; and second, that individuals will function optimally when they are able to act congruently with the time frame of a given environment. A good example is an educational environment, which by definition is heavily focused on the future (Husman and Lens 1999) – a central issue for the research presented in this paper. In order to achieve successful performance in school related tasks, a student

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must be able to function effectively within a future time perspective. Furthermore, new educational environments, such as online and web-based learning increase this future requirement in the necessity for intense self-directed functioning. This will be discussed later in greater detail, but it is important to emphasise the flexible and adaptable characteristic of time perspective: it is neither fixed nor permanent; it is learned, and allows for a flexibility of behaviour contingent upon individual values and beliefs, and the demands of a specific situation or context (Boniwell and Zimbardo 2004).

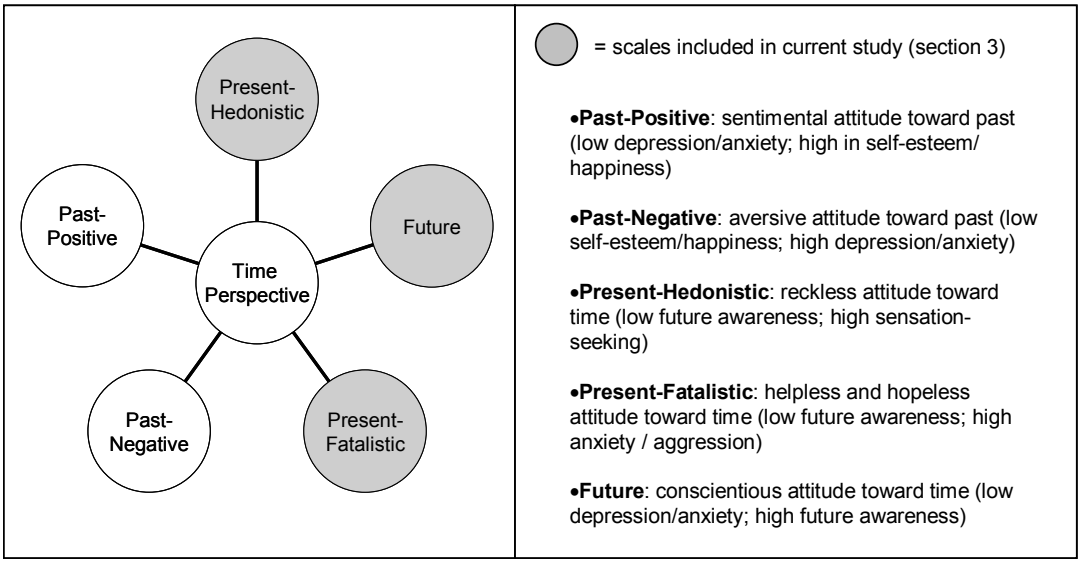

Figure 1: 5 distinct time perspectives according to Zimbardo and Boyd (1999)

Operating from a social cognitive perspective of education (Bandura 1986; 1999) where people are viewed as self-organising, proactive, self-reflecting, and self-regulating, not just reactive organisms, formed and controlled by external events (see Pintrich and Schunk 2002 for a detailed review), this type of optimal social functioning hinges upon achieving a balance of self-regulation and sustained motivation. A key factor providing insight into how to achieve this equilibrium is the examination of attitudes and perceptions of the future – namely future time perspective (FTP).

3. Future time perspective – An overview

Husman and Lens (1999) in their foundational article on the role of the future in student motivation, define FTP as the integration (method and degree) of the chronological future into the present life-space of an individual through motivational goal-setting processes. They have identified four important figures in the development of the literature base. The information in Table 1 summarises their findings. The common feature across all of these theoretical concepts is the importance of goals and planning for the future.

Table 1: Fundamental concepts found in foundational literature on FTP

Theorist	Fundamental Concept Relating to FTP
Lewin:	goal setting is closely related to time perspective – individual goals include future expectations
Fraisse:	importance of individual beliefs in the possible realisation of the future
Nuttin:	connection of psychological future to motivation (future = time quality of the goal object)
Gjesme:	FTO = capacity to anticipate the future (including cognitive elaboration of plans and projects), reflecting concern, involvement and engagement in the future

According to Nuttin and Lens (1985), it is important to think of individual FTP in terms of its extension, density and degree of realism. Extension (also referred to as habitual time space) refers to the amount of time that is considered when making plans, resulting in goals being located either inside or outside of the "habitual time space". The importance of "inside" goals is much greater than goals that are "outside" in terms of how close and distinct they appear.

Therefore, having an extended habitual space will influence the perception of long-term goals, making them appear to be closer and more important. Density relates to the amount of goals that an individual plans to achieve, and *realism* refers to whether these goals and plans are realistic or not. The concept of goal-setting is a defining factor in motivational literature, yet exactly how far into the future these goals should reach for optimal performance is unclear and a subject of debate. On one side, goals close to the present (proximal) are encouraged; on the other side, goals that are achieved further in the future (distal) are seen to be the most powerful.

3.1 FTP, Goal-setting and instrumentality

The ability to conceptualise a plan for the future and be affected by long-term future goals is a critical component of motivation (Miller, De Backer, and Greene 1999; Husman et al. 2000; Simons et al 2004 for reviews), and many popular studies have focused on the topic addressing effective goal-setting. A crucial aspect identified in this literature is goal proximity – how far ahead in the future will the goal be achieved? The literature implies that goals taking less time to achieve will have greater motivation than goals taking longer to achieve. This could be a logical conclusion considering the aspects of challenge, difficulty, and perseverance, but only if FTP is not accounted for (especially the aspect of extension).

Research examining future goals is growing, and many studies examine aspects of value and utility – or instrumentality (Husman et al 2004; Miller and Brickman 2004; Simons et al 2000 for a detailed review). The premise supported by these studies maintains that the degree of task value increases when a present task is viewed as "instrumental" to achieving a relevant goal in the more distant future. Miller, DeBacker and Greene (1999: 250) have identified two key functions of future goals that provide a foundational basis for the current program of research described later in this paper: '(1) future goals provide the impetus for the formation of systems of proximal sub goals; and (2) future goals represent important incentives for present action, but only when current tasks are perceived as instrumental to attainment of those future goals'. Miller and his colleagues expand on Bandura's (1986) combination of distal aspirations with proximal self-guidance in personal development stating that 'having a context of personally valued future goals in which proximal sub goals are imbedded not only makes pursuit of the future goal possible and attainment feasible, it gives meaning to our proximal behaviour; for without future goals to guide the generation of proximal goal systems, human behaviour would be guided only by immediate needs and immediate consequences' (1999: 251).

3.2 Barriers and limitations to FTP

Potential inhibitors of FTP competency have been identified, including formation of goals that avoid learning or performance (Elliot and Harackiewicz 1994), and negative views, attitudes, beliefs or values about the future (which may be culturally determined, see McInerney 2004). Zimbardo and Boyd (1999) in their theory of time perspective acknowledge that a "temporal bias" may occur, which could severely inhibit the ability to flexibly switch temporal frames among past, future and present depending on situational demands, resource assessments, or personal and social appraisals. Two time perspectives (see Figure 1) are identified in the Zimbardo Time Perspective Inventory (1999) that, when biased, can lead to negative life consequences (such as mental health problems, crime, or addictions) in the predominantly future-orientation of western society: present-hedonistic (reflecting a risk-taking, reckless attitude focusing on present pleasure with little concern for future consequences) and present-fatalistic (reflecting a helpless and hopeless attitude toward the future and life). In academic environments requiring goal-setting and self-directed and regulated learning, rigidity in either of these time perspectives could cripple learning processes – from a disregard for the future (hedonism) or from a complete relinquishment of control, responsibility, or anticipation for all goal directed behaviour (fatalism).

3.3 FTP and academic success

Research by Shell and Husman (2001) examining the relations between FTP and control beliefs, academic achievement and studying of college students (*N*=198) found that FTP beliefs have a positive effect on motivating achievement and studying. Malka and Covington (2005) in their program of research in three studies confirmed the potential of perceived instrumentality to predict unique variance in achievement independent of other motivational variables. Therefore, they encourage educators to explore the benefits of nurturing perceived instrumentality within instructional interventions. Husman and her colleagues (2004) in their examination of the relationships between instrumentality, task value, and intrinsic orientation in college students (*N*=207) found that these three unique motivational constructs impact each other in specific ways, and are supportive. In their investigation intrinsic motivation was the most significant predictor of task value, and they encourage further research on the relationship

between instrumentality and task value. Ultimately, their research is important in solidifying the motivational differences between an activity's value for the present and value for the future. In another study on the dynamic interaction between college students' (*N*=103) volitional strategy use and perception of instrumentality, Husman, McCann and Crowson (2000) confirmed that the relationship between these two constructs grows over time (1 semester). The study encourages further research in a dynamic framework regarding the complex relationships between instrumentality, academic performance, strategy use, and how these might promote and support each other over time.

3.4 Summary

Much of the research presented in this overview has explored the relationship between the motivational constructs of perceived instrumentality, intrinsic motivation and task value. Perceived instrumentality has been confirmed as a valid predictor of key motivational factors: task value (Miller et al 1996); intrinsic motivation (Husman, et al. 2004); achievement (Malka and Covington 2005); volitional and self-regulatory strategy use (Husman, et al. 2000). These studies have stemmed from the intent to identify perceived instrumentality as a unique construct worthy of research in motivational research, and have been successful in achieving this goal. Fostering perceptions of instrumentality within instructional interventions is an aspect that has not been explored in the literature on FTP, and such research is needed. Miller and Brickman (2004) view such future oriented instruction as a critical factor in promoting increased proximal motivation in students.

4. Research examining future oriented instruction

One of the few studies dealing with the effects of future oriented instruction (Schmidt, in press) examines whether perceptions of student motivation, self-regulation, and future time perspective can be positively influenced through future oriented instruction in a blended learning (semi-virtual) environment. Using a convenient sample of first-year undergraduate business students in blended learning (semi-virtual) courses at a German university, Schmidt employs both quantitative (self-report surveys) and qualitative measures (semi-structured interviews) over two semesters. A central element in Schmidt's program of research is the focus on instrumentality as instructional content. Building on the social cognitive model of future oriented motivation and self-regulation presented by Miller and Brickman (2004), Schmidt emphasises the cyclical nature of complex goal systems and their interaction with instrumentality as a supportive construct increasing the relevance and value of proximal activity for distal goal achievement. As students develop goals for distal future achievement occuring through the accomplishment of proximal subgoal systems, instrumentality plays a key role in solidifying the connection between the here-and-now and the distant future. Conceived as supplementary instruction to any course, future oriented instruction was implemented within a required course (Personality Development and Self-Management – PDSM) dealing with life and career goals, along with time-management strategies.

Future oriented instruction for the treatment group consisted of the following:

- A simple heuristic tool for determining the value and relevance of coursework: stepping stone, hurdle, and hoop
- Explanations on proximal and distal goals presented and discussed in group coaching sessions, including successful implementation strategies
- Worksheets encouraging self-reflection and assessment, as well as individual practice in effective goal-setting (proximal and distal)
- PLUS – regular instruction for PDSM

Instruction for the non-treatment group focussed solely on future goals (for life and career) and time management strategies – no explanations or materials were provided dealing with future orientation, instrumentality, proximal and distal goal systems, and their application in academic environments. The findings presented by Schmidt (in press) that are relevant to the topic of designing successful online instruction are as follows:

- Future oriented instruction increases awareness and understanding of time perspective, instrumentality and distal/proximal goal systems: qualitative interview data analysis revealed that students in the treatment group receiving future oriented instruction were better able to articulate their awareness and understanding of the factors listed above.
- High-FTP increases the likelihood for higher self-reported levels of performance-approach goal orientation, metacognitive self-regulation, strategies for managing time and study environment, and help-seeking strategies: regression analysis of quantitative self-report survey data indicated that having higher levels of FTP positively influenced the learning process factors of goal orientation, self-regulated learning, and effective strategy use.

- Low-FTP (high Present-Hedonistic or Present-Fatalistic) increases the likelihood for higher self-reported levels of mastery-avoidance and decreases the likelihood of help-seeking: regression analysis of quantitative self-report survey data indicate the potential negative influence of time perspectives associated with low levels of FTP (see Zimbardo and Boyd 1999).

These findings are valuable to the field of instructional design, especially in the creation of online learning environments. Inclusion of FTP and future orientation, as well as other related concepts such as instrumentality and proximal/distal goal setting can promote positive learning processes necessary for high level performance and achievement. The increased awareness and understanding of factors such as time perspective, instrumentality and distal/proximal goal systems occurring through future oriented instruction provide support for increased research activity in this area. Furthermore, these findings identify FTP concepts as supportive to other positive learning process variables identified from previous research, specifically that learning and achievement improves when students operationalise positive goal orientations (Elliot 2005), and when students take independent initiative in learning activities through metacognitive self-regulation and effective use of learning strategies (Pintrich and Zusho 2001). Even with such positive results, an important question to consider is "who benefits the most from future oriented instruction?" The research conducted by Schmidt (in press) appears to emphasise the generic benefits of FTP and future oriented instruction for all learners. However, another more targeted interpretation can be made attributing such instruction as being most beneficial to learners with low levels of FTP. Functioning without high FTP in a high FTP environment (Husman and Lens 1999; Zimbardo and Boyd 1999) can mean low levels of instrumentality for immediate tasks and activities, and possible negative impact on learning processes.

Compensation for this can occur through future oriented instruction which emphasises and supports the connection between distal and proximal goal systems, increasing the instrumentality for immediate tasks and activities (which has been shown to have positive impact on learning processes). Further research is needed in this area to validate these interpretations and findings. The following section provides an overview of a multi-level model (see Figure 3) for implementing future-oriented instruction within higher education degree programs, of which the program of research by Schmidt represents the course level: other programs of research are in progress assessing implementation of future orientation at the program level (including cross-program measures), as well as pre/post program participation in extra-curricular offerings within blended learning environments.

5. Implications for designing online instructional environments

Online learning presents many advantages, such as easy access, flexibility, and the opportunity to study while remaining engaged in full-time employment. However, even with such advantages, there are still reports of high (from 50 to even 70%) drop-out rates (Schmidt 2004; Wang et al 2003: 2). Some speculations as to why students do not continue with online educational programs include lack of face-to-face contact with instructor and peers, and a deficit in academic self-discipline and motivation required for success in distance learning environments. Stark and Mandl (2003) contend that students are often ill-prepared for the demands of online learning environments, and lack sufficient meta-cognitive abilities to successfully reflect, control or organise their own learning activities (especially concerning time management). Blended learning is a good example of how online instruction can be improved in response to the problems of virtual (online) instruction. It attempts to combine the advantages of both face-to-face (onsite) and online instruction (other terminology can also be found in relevant literature, such as "hybrid", "mixed" and "semi-virtual" instruction; see Osguthorpe and Graham 2003; Garrison and Kanuka 2004 for detailed reviews). Conceptualising effective instructional measures for the use of blended learning environments involves the application of two main concepts: authenticity and method.

Mintzberg (2004) presents an overview of effective pedagogy using this spectrum to increase the amount of real experience opportunities provided to students (see Figure 2). This figure presents concrete examples of activities for students in a framework that steadily increases the level of authenticity or situational context required (resulting in an active student role). It has been modified by including traditional forms of learning (focus on the teacher, resulting in a passive role for students) at the beginning in order to emphasise the comparison to computer and web-based online instruction.

Given the research relating to the positive effect that high levels of intrinsic motivation, task value and self-regulatory ability (as presented in the preceding sections of this paper) have upon

student achievement, efforts need to be made within instructional environments to foster and encourage growth in these areas. One way to achieve this is to incorporate elements of future oriented instruction into the design of online learning environments.

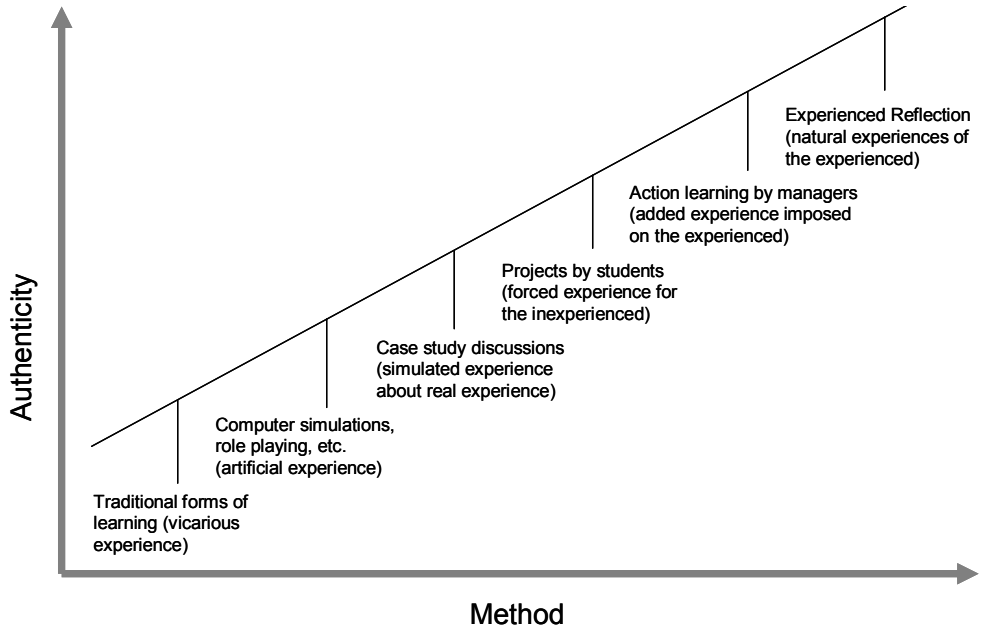

Figure 2: Pedagogical Scale of Authenticity (based on Mintzberg 2004, p266)

5.1 Future oriented design of online and blended learning environments

Efforts need to be increased for developing methods of online instruction that tap into and encourage the future orientation of students, and for providing meaningful connections to the content and possible future outcomes. Figure 3 provides a detailed overview of the UAM Milestones Educational Model offering a framework for concrete operational examples of how online instruction (teaching techniques, course, and program) benefits from a future oriented design

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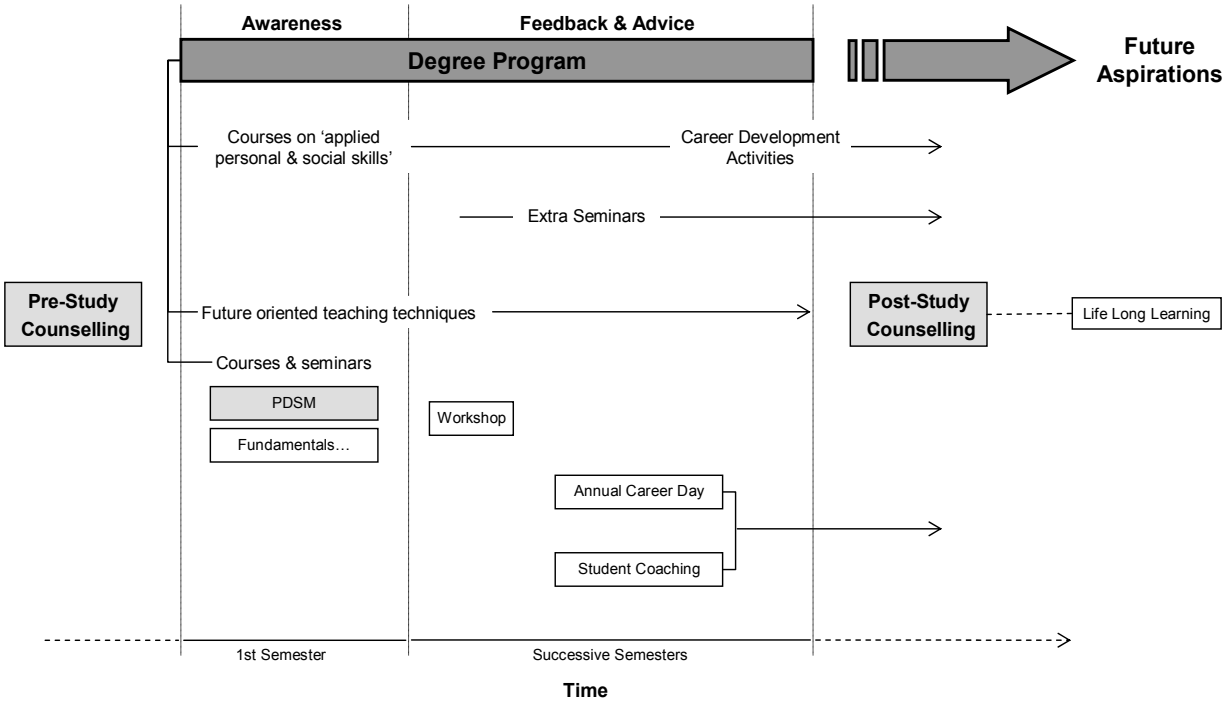

Figure 3: UAM Milestones Educational Model

This model outlines the forms of student support (raising awareness; providing feedback and advice) that are possible within typical university degree programs on a spectrum of time. It is

The time-line presented in this model illustrates opportunities for consultation with students beginning with pre-study counselling that continues within a study program through academic coaching, and extends into the future through post-study counselling (conceivably it could involve aspects of life long learning – effective alumni programs) to help students achieve their future aspirations. Movement through the model can be described as follows:

Pre-Study Counselling:
- Self-assessment opportunities to help identify future goals (academic, career, personal)
- Planning for effective achievement of those goals

Raising Awareness (primarily during the first semester):
- Courses on 'applied personal and social skills' (wide range of activities and interactions with students relating to topics such as effective presenting, negotiation, communication, etc.)
- Future oriented teaching techniques (see below)
- Courses and Seminars (PDSM – see section 3.1; and other introductory course covering fundamental knowledge of the chosen degree program) addressing questions such as:
    - What is the program of study (e.g. Sport Management)?
    - What are the career prospects?
    - What do prospective employers require?
    - How to organise course program and schedule?
    - What other endeavours can assist in to developing the required profile?

Feedback and Advice (during successive semesters):
- Activities to improve student employability (e.g. extra seminars, classes, or workshops that extend the offerings of applied personal and social skills)
- Annual activities (e.g. Career Days - offering structured programming including personality assessment, practical exercises, feedback, and suggestions for improvement)
- Academic/Career Coaching – individual or group sessions (link these sessions to other activities, such as career days for returning students and alumni)

presently in operation at the university participating in the program of research presented in section 3 which examined only one course (PDSM) out of an entire program-wide initiative.
- Activities to help students access the job market:
    - Job application training
    - Interview training
    - Assessment Centre training

Post-Study Counselling:
- Consultation and advice on how to continue personal development and growth in meaningful ways that help students identify new goals, move toward professional activity or continued study, connect to a relevant network of experts in the chosen field, and to maintain contact with the institution to share in the exchange of new expertise and knowledge.

5.2 Future oriented teaching techniques

Many of the measures listed and described above in the milestones model rely upon general teaching techniques that encourage and foster student motivation through the development of distal and proximal goal systems that emphasise task and course instrumentality, impacting an overall program. Some helpful elements to consider are listed below with concrete examples of possible activities. They are by no means comprehensive, and can easily be combined or added to other methods by using the full scope of instructional tools and technologies that are available.

5.2.1 Encourage high levels of perceived relevance (course and task)

Course Level
- Present course material embedded within a framework of the overall field. Provide a meaningful introduction that outlines the benefits and uses of such knowledge for future endeavours (consider using various media – video, audio, web-pages, internet, etc.)
- Invite experts from the field to join a discussion forum (e.g. host a chat session on FAQ's) or to participate in the evaluation of student projects or presentations (e.g. panel of judges).
- Assist the students in recognising peer expertise and relevant experience with the chosen topic (creation of student profiles, reflections on past experiences and/or prior knowledge, etc.).

Task Level
- Whenever possible assign tasks that are constructive in nature, making connections to real concrete examples (e.g. case studies, role plays, observations, simulations, etc.)

solidifying the connection between theory and practice.

- Provide opportunities for students to develop their own autonomy, control and responsibility for learning (task variety, topic choice, format of end product).
- Open-ended projects and/or portfolios (multiple assignments of which only the best are calculated in the final grade)
- Meaningful task sequencing (linking of tasks to create a useful portfolio or resource for continued use or reference).

5.2.2 Encourage effective self-regulation of learning processes

Forethought Phase (planning)

- A wide array of management techniques exist that can assist students in goal-setting, idea generation, task scheduling, etc. Online environments have an advantage of offering instant access to these methods and techniques (make use of links, documents for further self-study, open source material, etc.). Figure 4 is an example of a Gantt Scheduling Chart – one of many planning tools that could be presented to students as a resource (adapted from Dessler 2005: 90).

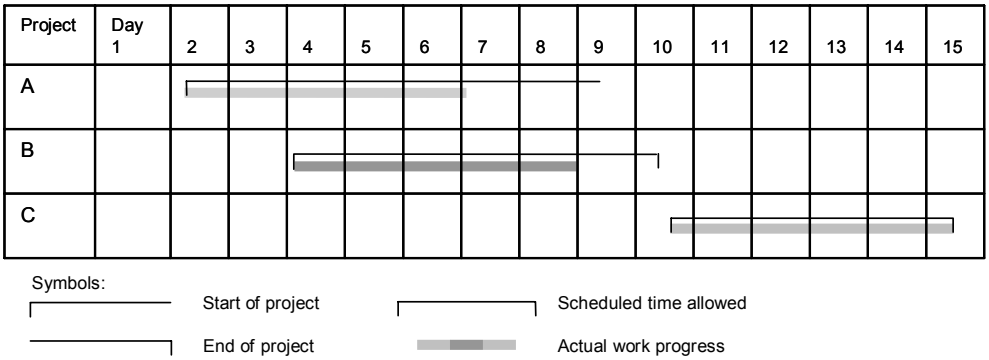

Figure 4: Gantt Scheduling Chart

Performance Phase (self-observation)

- Include assignments that are non-graded but peer-reviewed – this often encourages students to be aware of the quality, without having the pressure of always satisfying instructor criteria for top marks. Caution is warranted with this activity – practice and guidance is necessary so that students are constructive, positive and working together to create successful learning experiences.
- Use the internet to help locate self-study exercises and programs that could be added to current instructional activities. Students who are interested can improve at their own pace and continue to explore the subject area in a meaningful way.

Reflection Phase (self-evaluation)

- Provide opportunities for reflection – online, onsite; synchronous, asynchronous – many vehicles are available, from journals, log-books, short "lessons-learned" reflections, discussions, forums, chat-rooms, blogs, etc.
- Guidance in reflection also is helpful – model this activity as a reflective practitioner (e.g. student newsletter, ongoing forum for discussion, informal opportunities outside of the course, etc.)

5.3 Conclusion

As research in educational psychology continues to identify factors that positively influence student motivation to learn, and the subsequent steps that are taken to acquire new knowledge, parallel efforts in research are necessary in designing possible instructional interventions incorporating these factors in concrete operations within a learning environment. Future oriented instruction is one possibility out of many to consider, but it has great potential to support and improve student learning and achievement within online learning environments. Management education cannot stop at the end of formal training or educational programs. It must be integrated into the internal self-learning processes of the individual resulting in personal development over the life span. Therefore, the role of educators using web-based technologies is to continually seek to provide effective means of encouraging and fostering this learning competency within the design of online instructional environments.

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