

## A CLASSIFICATION OF STUDENT SKILLS AND COMPETENCIES IN ODL

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### ABSTRACT

The rapid growth of world population has increased the demand for education and face to face education has become insufficient to supply this demand. As a response to this, open and distance learning has become one of the fundamental approaches to obviate this paucity. Specifically, the online practices of open and distance learning that are facilitated by Internet technologies have become frequently applied practices instead of being an alternative to face to face education. Because it is a type of learning that learners experience relatively distant from each other and the instructor, open and distance learning is a process of learning that necessitates learners to employ various competencies and skills. In the present study, a review of literature is made and 58 skills and competencies are identified. These are later classified as metacognitive, cognitive, technological and affective competencies and skills. It is believed that such a classification may provide guidance in making informed decisions in the design of the learning processes, the determination of readiness of learners, and in the identification and modification of the content of orientation activities that are prepared to make students develop these skills in open and learning. It is also believed that such a classification can be used to survey student readiness for open and distance learning, and identify the domains that need to be supported most.

**Key Words:** Open and distance learning, learner competencies, learner skills, classification.

### INTRODUCTION

The rapid growth of world population has increased the demand for education and face to face education has become insufficient to supply this demand. As a response to this, open and distance learning (ODL) has become one of the fundamental approaches to obviate this paucity. Specifically, the online practices of ODL that are facilitated by Internet technologies have become frequently applied practices instead of being an alternative to face to face education.

ODL is a learning process that requires learners to employ various skills and competencies because ODL is a type of learning in which learners and teachers are separated from each other both spatially and in terms of time depending on the type of distance learning program. There is a plethora of skills and competencies required of learners that are mentioned in distance education literature. In the present study, the learner competencies and skills from literature are identified and classified as metacognitive, cognitive, technological and affective competencies and skills. It is believed that such a classification may provide guidance in making informed decisions in the design of the learning processes, the determination of readiness of learners, and in the identification and modification of the content of orientation activities that are prepared to make students develop these skills in ODL.

### METHODOLOGY

This study is a qualitative content analysis. Content analysis is defined as “any technique for making inferences by objectively and systematically identifying specified characteristics of messages.” (Holsti, 1969: 14). After the analysis of the literature, the skills and competencies that are identified.

In order to identify student skills and competencies in ODL, research was conducted in Anadolu University Library database and Google scholar. For the analysis, only materials that specifically deal with student skills and competencies are chosen. The web pages of universities that list skills and competencies that are required

are omitted from the analysis. As a result of the election of materials, 20 articles and books are chosen for the analysis.

After the selection of the materials, the student skills and competencies in ODL are identified and listed. 58 skills and competencies were identified. After the listing of the skills and competencies, they are categorized as metacognitive, cognitive, technological and affective skills and competencies based on the function of the skill and the domain that they refer to.

## FINDINGS AND DISCUSSION

In this section the categories that emerge as a result of the analysis of literature are explained, the relevance of the skills and competencies that are identified in the analysis of the related literature are discussed and their value in ODL are explained.

### Metacognitive Skills and Competencies

The most widely used definition of metacognition is perhaps thinking about thinking. Çubukçu (2008) who analyzed the literature on metacognition reported that there are several different definitions of metacognition. While Flavell (1976) defines metacognition as “one’s knowledge concerning one’s own cognitive processes and products or anything related to them”, Baird (1990) defines it as “the knowledge, awareness and control of one’s own learning” (As cited in Çubukçu, 2008: 83). Likewise, Malamed (n.d) maintains that metacognition is a regulatory system that helps individuals to understand and control their cognitive performances; and believes that learners recognize how they learn, define their learning needs, choose and apply the appropriate strategies to meet their learning needs which in the end helps them to take the responsibility of their own learning. Depending on this assumption, researchers identified the processes involved in the metacognitive activities. Proust (2010) argues that metacognition involves all the processes that learners go through while thinking about and monitoring one’s own thinking and all the information obtained in this process. According to White and Frederiksen (2005), metacognitive skills involve planning, monitoring, arranging and reflection. While Winnie and Hadvin (1998) argue that metacognitive processes involve defining the task and objectives, planning, application and adaptation; Pintrich (2000) purports that getting an idea about the requirements of the task, monitoring the processes, choosing and applying the cognitive strategies that are necessitated by the task and reflecting on the effectiveness of the adopted strategies define metacognitive strategies (As cited in Çubukçu, 2008: 83).

Many researchers argued that it is quite difficult to distinguish metacognitive skills from cognitive skills. Nevertheless, Ku and Ho (2010) contend that whether an activity is a metacognitive or cognitive can be identified by the analysis of the objective of the activity and explicate that metacognitive activities incorporate planning and organization in order to complete a task successfully. In this study, metacognitive strategies will be considered as the skills related to planning, monitoring, organizing and reflection.

As a result of the content analysis, 19 metacognitive skills and competencies are identified. These skills and competencies are given in Table 1..

Table 1: Metacognitive Skills and Competencies

SKILLS AND COMPETENCIES	Sources
To have self-discipline	Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Poper, 2007; Borges, 2008
Having effective time-management	Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Poper, 2007; ; Borges, 2008; Morrison, 2012; Bork & Rucks-Ahidiana, 2013
Having the responsibility to contact with the instructor and other staff in case of a	Cowey et al., 2002; Palloff & Pratt, 2003

problem	
Being an independent learner	Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Wang, 2007
Having a realistic perception of academic skills	Palloff & Pratt (2003); Craig et al. (2008); Cowley et al. (2002);
Taking the responsibility of one's own learning	Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008; Stapa, 2009; Bork & Rucks-Ahidiana, 2013
Self-direction	Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008; Bork & Rucks-Ahidiana, 2013
Being able to make decisions alone	Palloff & Pratt (2003); Cowley et al. (2002);
Being able to determine learning needs	Guglielmino & Guglielmino, 2004; Craig et al., 2008; Nita & Roxanne, 2009; Stapa, 2009
Being able to determine learning objectives	Dulaney-Gilbert, 2001; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008; Stapa, 2009
Being able to create a learning plan and apply it	Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008
Being able to evaluate learning and the learning process, and to make reflections	Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Wang 2007; Borges, 2008; Craig et al. 2008
Having an idea about one's learning styles	Guglielmino & Guglielmino, 2004
Determining preferences for learning	Guglielmino & Guglielmino, 2004
Having self-confidence	Dulaney-Gilbert, 2001; Guglielmino & Guglielmino, 2004
Being able to perceive problems and mistakes as opportunities for learning	Guglielmino & Guglielmino, 2004; Dulaney-Gilbert 2001; Borges 2008;
Being able to identify sources for learning	Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Craig et al., 2008
Being able to identify and determine learning strategies	Vonderwell & Savery, 2004
Being open to new experiences	Dulaney-Gilbert, 2001

In ODL, which provides an opportunity for a more flexible learning experience, learners usually face learning activities and processes that are fairly different from face to face education. As a result of this, that learners develop their metacognitive skills has a significant contribution to learner success. The primary reason for this is that learners need to *manage their own learning plans and they also need to monitor their own progress*. As a result of this, that learners have *self-discipline* appears to be a significant skill (Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Poper, 2007; Borges, 2008). Particularly in distance learning models that are based on self-study with little chances for interaction, learners need to develop their self-discipline skills without the presence of teacher guidance. To do this, learners need to be *independent learners* (Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Wang, 2007). To be able to cope with problems, to make decisions on one's own when needed are significant characteristics. As such, open and distance learners need *to be able to make their own decisions* (Cowley et al., 2002; Palloff & Pratt, 2003) and should *take the responsibility of their own learning* (Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008; Stapa, 2009; Bork & Rucks-Ahidiana, 2013).

Learners need to develop several skills and competencies to be able to take the responsibility of their own learning. One of the most important of these skills is *self-direction* (Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008; Bork & Rucks-Ahidiana, 2013). Self-direction skills incorporate many subskills. The first one of them is to be able to make effective *time-management* (Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003; Guglielmino &

Guglielmino, 2004; Vonderwell & Savery, 2004; Poper, 2007; ; Borges, 2008; Morrison, 2012; Bork & Rucks-Ahidiana, 2013). In a flexible learning model where learners learn at their own pace, time management is a very significant skill to avoid procrastination and to meet up to the requirements of the program. Learners who cannot use their time effectively can easily be distracted and have problems before assessment and evaluation processes. Therefore, to be successful, open and distance learners need to prepare a study plan, revise and apply it.

*Planning*, here, appears to be one of the most significant metacognitive skills in ODL. Learners need to plan their learning processes carefully. In order make an effective plan, learners need to *identify their learning needs* above all (Guglielmino & Guglielmino, 2004; Craig et al., 2008; Nita & Roxanne, 2009; Stapa, 2009). After the identification of learning needs, learners need to *identify their learning objectives* (Dulaney-Gilbert, 2001; Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008; Stapa, 2009). As with any other learning experience, identification of objectives ensures that learners have a clear goal and the learning process becomes meaningful with a clear purpose.

Following the identification of learning objectives, learners need to *prepare a learning plan* (Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Borges, 2008; Craig et al., 2008). The planning stage is exceptionally important in ODL, especially in distance learning models where there is self-study, little teacher presence and little interactivity in the learning communities. It can be helpful to *identify the learning styles and learning preferences* for an effective planning (Guglielmino & Guglielmino, 2004). Learners can benefit from sources for learning more effectively when they are aware of how they learn. For instance, visual learners who learn by seeing may not find listening activities productive. Likewise, kinaesthetic learners may not benefit from learning activities based solely on reading materials and activities. Thus, that learners have an idea about their learning styles and how they learn may help them have a more permanent learning. Obviously, learners need to have a realistic perception of their academic skills (Cowley et al., 2002; Palloff & Pratt, 2003; Craig et al., 2008).

Having identified their learning styles, learners should *be able to identify the appropriate learning strategies* (Vonderwell & Savery, 2004). Learning strategies are the cognitive strategies that learners use during the learning process. These strategies should be identified prior to the cognitive stage and they should also be monitored and appropriated during the learning activities. Learners should also be flexible enough to adopt new strategies when one strategy does not work.

In addition to learning strategies, learners should identify *their learning resources* (Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Craig et al., 2008). These resources are not limited to the books and online sources that are going to be used during the lessons. In addition to the resources that are provided by the course-providers, learners should be able to access available library resources, learner communities, online resources and academic support services. Furthermore, feedback from peers and the instructor should also be considered as sources for learning. Learners who are aware of learning resources can use these sources more effectively during the learning process and they may feel less anxious.

Another metacognitive skill that open and distance learners need to have is reflection skills. Learners should *be able to evaluate and reflect on their learning and learning processes* (Guglielmino & Guglielmino, 2004; Vonderwell & Savery, 2004; Wang 2007; Borges, 2008; Craig et al. 2008). By nature, reflection is a process where learners cogitate their experiences in learning. In this process, distance learners like face to face learners need to evaluate the effectiveness and efficiency of their learning strategies and they should be able to decide on new strategies when needed. Determining whether learning really happened or not is again the responsibility of the learner. Learners can use self-reflection lists, progress sheets, learning portfolios and learning journals.

Besides these, open and distance learners should also have some personal characteristics which can also be categorised as metacognitive. These are being *self-confident* (Dulaney-Gilbert, 2001; Guglielmino & Guglielmino, 2004); *being able to perceive problems and mistakes as opportunities for learning* (Dulaney-

Gilbert, 2001; Guglielmino & Guglielmino, 2004; Borges, 2008); *having the responsibility to contact with the instructor and other staff in case of a problem* (Cowey et al., 2002; Palloff & Pratt, 2003) and *being open to new experiences* (Dulaney-Gilbert, 2001). Specifically, being able to deal with problems in case of uncertainty in flexible learning environments may help learners to have a more effective learning experience.

As can be inferred from above, metacognitive skills and competencies are not about the learning activities but skills and competencies that help learners to become autonomous learners. Being able to analyze one's own competencies; planning, monitoring and reflecting on the learning processes can be identified as the main categories of the metacognitive skills. Learner autonomy is a requirement of distance learning and autonomy "a process not a product" (Thanasoulas, 2000). Learners may not be able to develop these skills themselves, and they may need guidance in developing these skills. Therefore, while designing an online course or a program, course-developers should also consider how they can guide learners in developing these skills and competencies.

### Cognitive Skills and Competencies

In essence, cognitive skills are the practical application of the metacognitive skills. Trautwein (2009:2) identifies cognitive skills as the skills like content knowledge, reading and mathematics skills, computer literacy and professional information that are acquired in structured or unstructured learning environments. Michelon (2006) considers cognitive skills and competencies as brain functions and identifies the skills related to brain functions such as perception, attention, memory, motor, language, visual and spatial processing and executive functions as cognitive abilities and purports that each function involve particular skills. Taking information in, keeping it in the memory and using information (Ku & Ho, 2010) are named as the main components of cognitive skills.

As a result of the content analysis, 19 cognitive skills and competencies are identified. These skills and competencies are given in Table 3.

Table 2: Cognitive Skills And Competencies of Open and Distance Learners

SKILLS AND COMPETENCIES	Sources
Being able to follow the syllabus	Cowley et al., 2002; Morrison, 2012
Being able to follow the study plan that is prepared	Craig et al., 2008
Studying regularly	Craig et al., 2008
Following the assignments	Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003
Submitting the assignments on time	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Craig et al., 2008
Completing the assignment oneself and avoiding plagiarism	Craig et al., 2008
Being able to express thoughts, feelings, comments and questions in written form	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Borges, 2008; Craig et al., 2008; Poe & Stassen, n.d.
Being able to understand what you read	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004; Guglielmino & Guglielmino, 2004; Borges, 2008; Poe & Stassen, n.d.
Being able to do research	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Borges, 2008; Craig et al., 2008
Being able to analyze what you read	Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004; Borges, 2008
Being able to apply what you learn, and learn by doing	Dulaney-Gilbert, 2001; Garrison, Cleveland-Innes & Fung, 2004; Piskurich, 2004; Poper, 2007; Borges, 2008
Being able to find and access sources	Piskurich, 2004; Borges 2008
Being able to work collaboratively with peers	Borges, 2008

Being able to ask questions when there is need for help	Cowley et al. 2002; Borges, 2008; Craig et al., 2008; Morrison, 2012; Bork & Rucks-Ahidiana, 2013; Poe & Stassen, n.d.;
Checking the course website, materials and discussions regularly	Borges, 2008; Morrison, 2012
Participating in discussions in the lesson; sharing ideas with peers and the instructor	Garrison, Cleveland-Innes & Fung, 2004; Poper, 2007; Borges, 2008; Nita & Roxanne, 2009
Being able to use learning strategies appropriate for the content / course	Poper, 2007
Being able to give feedback to oneself and the peers	Borges, 2008

*Being able to follow the syllabus* (Cowley et al., 2002; Morrison, 2012), *being able to follow the study plan that is prepared, studying regularly* (Craig et al., 2008) and *checking the course website, materials and discussions regularly* (Borges, 2008; Morrison, 2012) seem to be the essential skills that open and distance learners need to develop. Considering the increasingly online nature of ODL, learners should follow the announcements made by the course instructors and technical staff so that they are prepared for the upcoming events and meet the deadlines. Developing these skills can prevent learners from getting lost in the learning process and meet the demands of the program. Otherwise, it is highly possible that the learners will procrastinate, cram before the exams or simply drop out the course. *Following the assignments* (Dulaney-Gilbert, 2001; Cowley et al., 2002; Palloff & Pratt, 2003), *submitting the assignments on time* (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Craig et al., 2008) can also be considered as key to success and a reflection of how learners apply their metacognitive decisions into practice.

The skills and competencies related to learning the content follow the above mentioned skills and competencies. *Being able to use learning strategies appropriate for the content or the course* (Poper, 2007) can be given as the first of these. As each subject matter has a different nature, each may require the learners to adopt a different strategy appropriate for the subject matter they are dealing with. Learners should be able to identify the strategies and use them when necessary.

With the increasing number of sources that are available on the net, the abundance of information can also frustrate the learners. Therefore, the learners should also *have necessary research skills* (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Borges, 2008; Craig et al., 2008). *Being able to find and access sources* (Piskurich, 2004; Borges 2008), as a result, seems to be one of the most important cognitive skills that open and distance learners should develop. However, locating the sources is not sufficient. As most open and distance learners are fairly separated from other learners and /or the instructor, *being able to understand what they read* (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004; Guglielmino & Guglielmino, 2004; Borges, 2008; Poe & Stassen, n.d.) especially when there is lack of immediate help from the peers and the instructor is essential. Thus, learners should develop reading skills in ODL, considering the fact that most content is still presented in narrative fashion. Multiple ways of presentation like visuals, audio and video require the similar skills.

Having understood the material, the learners are expected to *be able to analyze what they read* (Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004; Borges, 2008) to move beyond the passive reception of information. Analysis, which requires the learner to divide the topic into smaller pieces and find out the relationships between them, and add meaning to this new form of information is an essential skill that learners need to *apply what they have learned into new situations* (Dulaney-Gilbert, 2001; Garrison, Cleveland-Innes & Fung, 2004; Piskurich, 2004; Poper, 2007; Borges, 2008). Having theoretical information in the 21<sup>st</sup> century is not sufficient, especially in the information driven economies. The learners are increasingly expected to put theory or information into practice, that is apply the information. Therefore, that the learners can apply the information that they have acquired ensures that the ODL experience has a practical use in real life situations.

During this learning process, thanks to the increasing opportunities for cooperation and collaboration as a result of web 2.0 technologies, ODL has begun to demand learners to cooperate and collaborate. *Being able to work collaboratively with peers* (Borges, 2008), *being able to ask questions when there is need for help* (Cowley et al. 2002; Borges, 2008; Craig et al., 2008; Morrison, 2012; Bork & Rucks-Ahidiana, 2013; Poe & Stassen, n.d.), *being able to give feedback to oneself and the peers* (Garrison, Cleveland-Innes & Fung, 2004; Poper, 2007; Borges, 2008; Nita & Roxanne, 2009) and *participating in discussions in the lesson; sharing ideas with peers and the instructor* (Garrison, Cleveland-Innes & Fung, 2004; Poper, 2007; Borges, 2008; Nita & Roxanne, 2009) have increasingly become essential skills and competencies. It has long been argued that cooperation and collaboration in learning enhances critical thinking skills of the learners, and contributes to learners' developing multiple perspectives. Moreover, in the workplace employees are expected to cooperate and collaborate with co-workers. To be able to cooperate and collaborate, as most of the synchronous and asynchronous discussions take place in forums or discussion boards, learners are expected to *be able to express thoughts, feelings, comments and questions in written form* (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Guglielmino & Guglielmino, 2004; Borges, 2008; Craig et al., 2008; Poe & Stassen, n.d.).

The last and perhaps increasingly important set of cognitive skills is about the quality of assignments. Plagiarism has long been a concern for especially in higher education institutions, and it has been reported that plagiarism is a serious problem concerning open and distance, especially online learning (Ewing, Anast & Roehling, 2015). *Completing the assignment oneself and avoiding plagiarism* (Craig et al., 2008) is therefore, not only a skill that the learners are expected to develop, but a requirement for the courses. Moreover, the completion of original work by the learners who take the course not only contributes to the learning of the learners, but also the rigor of the course.

### Technological Skills and Competencies

ODL has become increasingly technological, and each passing day a new technology is integrated into ODL programs. E-learning, mobile learning, ubiquitous learning all necessitate the learners to be familiarized and users of Internet technologies. As a natural outcome of this, learners are expected to develop certain technological skills and competencies.

As a result of the analysis, 7 skills and competencies related to technology are identified.

Table 3: Technological Skills and Competencies

SKILLS AND COMPETENCIES	Sources
Having access to computer and the Internet	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003
Having the hardware necessary to log in an online course	Palloff & Pratt 2003; Borges, 2008; Bork & Rucks-Ahidiana,2013
Having computer literacy / skills [Having computer skills like being able to use Word processors (e.g. MS Word), e-mail, Internet, course management systems, learning management systems=t]	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Borges, 2008; Bork & Rucks-Ahidiana,2013
Feeling comfortable with technology for educational purposes	Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Singh, 2004
Learning the necessary software before course begins	Piskurich, 2004; Borges, 2008; Roxanne, 2009; Stapa, 2009
Being able to use communication and collaboration tools	Borges, 2008; Roxanne, 2009
Being able to use ICT to do research; store, analyze and share information	Borges, 2008; Nita & Roxanne, 2009

*Having access to computer and the Internet* (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003) and *having the hardware necessary to log in an online course* (Palloff & Pratt 2003; Borges, 2008; Bork & Rucks-Ahidiana, 2013) are cited in the lists regarding the skills and competencies of open and distance learners. However, these should be regarded as the prerequisites for the online courses. That the learners have the necessary hardware and software does not ensure that they are able to use them. Therefore, *having computer literacy / skills like*

being able to use Word processors (e.g. MS Word), e-mail, Internet, course management systems, learning management systems (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Borges, 2008; Bork & Rucks-Ahidiana, 2013) are cited to be perhaps most important technological skills and competencies that the learners should develop especially in online learning. Even when most of the learning does not take place in online learning settings, just being able to follow the announced syllabus, submitting the assignments necessitate these skills in the 21<sup>st</sup> century. Furthermore, *learning the necessary software before course begins* (Piskurich, 2004; Borges, 2008; Roxanne, 2009; Stapa, 2009) is also of utmost importance as dealing with both the content and the technology and media can be frustrating for the learners.

In addition to developing skills to navigate in the online settings, the learners should also *be able to feel comfortable with technology for educational purposes* (Dulaney-Gilbert, 2001; Palloff & Pratt, 2003; Singh, 2004). As technology has penetrated into our lives with especially the portable devices, learning has also been closely associated with technology. Therefore, even the ones who are not familiarized with educational technology now are expected to be able to use technology for education. The use of collaboration and cooperation tools like discussion forums, even twitter and facebook, google drive, etc. have become inseparable part of technological online learning settings and this naturally leads the learners to be able to use these devices to survive especially in online learning. Moreover, the learners should also *be able to use ICT to do research; store, analyze and share information* (Borges, 2008; Nita & Roxanne, 2009). With the increasing popularity of Open Educational Resources (OER) this has also become a strategy to benefit from the free use of educational sources which can help learners identify new sources and use them when necessary appropriately.

#### Affective Skills and Competencies

Affective domain basically refers to one's feelings, attitudes and values of learners. (Krathwohl, Bloom & Masia, 1964). It involves five phases including receiving, responding, valuing, organizing and characterization. Martin and Reigeluth (1999), also argue that there are six dimensions for affective learning: emotional, social, esthetic, moral, spiritual, and motivational. As a result of the analysis, 13 affective skills and competencies are identified. They are presented in Table 4.

Table 4: Affective Skills and Competencies

SKILLS AND COMPETENCIES	Sources
Being flexible	Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004
Having a sense of humor	Palloff & Pratt, 2003
Being able to cope with the stress that is caused by the conflict between work and educational life	Palloff & Pratt, 2003
Following netiquette	Piskurich, 2004; Singh, 2004; Poe & Stassen, n.d.
Being able to use emoticons effectively	Piskurich, 2004
Being able to control emotions in online discussions	Piskurich, 2004
Allowing others to participate in discussions	Piskurich, 2004
Thinking before responding to a post	Piskurich, 2004
Staying motivated	Poper, 2007
Having social communications with peers	Poper, 2007; Morrison, 2012
Being able to express emotions	Garrison, Cleveland-Innes & Fung, 2004
Feeling a part of a learning community	Garrison, Cleveland-Innes & Fung, 2004
Communicating comfortably in discussions	Garrison, Cleveland-Innes & Fung, 2004

Because open and distance learning usually allows learners to learn at their own pace, *flexibility* is one of the skills that they are expected to develop (Palloff & Pratt, 2003; Garrison, Cleveland-Innes & Fung, 2004). In ODL settings, learners should be able to cope with uncertainties, unexpected occurrences like technical problems and be able to cope with the stress that may be caused with these. In addition, because most open and distance learners are working individuals, they need to be flexible enough *to cope with the several diverse demands of their lives like family and job responsibilities plus the requirements of the courses they are taking* (Palloff & Pratt, 2003).



Besides flexibility, the communications and interactions that take place in ODL settings also demand learners to develop certain affective skills and competencies. As stated in the cognitive skills and competencies, communication, cooperation and collaboration become increasingly significant especially in online learning. In such environments, learners need to *learn to become a part of a learning community* where they learn from each other which in return requires *learners to communicate comfortably in discussions and express their emotions comfortably* (Garrison, Cleveland-Innes & Fung, 2004). Otherwise, the learners can be driven into isolation which may possibly result in not only alienation from the learning community but also the learning experience itself.

One thing that becomes substantial in interactions is how the learners communicate. It is quite frequent that there are some learners who dominate discussions and hinder the participation of others, which can sometimes be intimidating for the ones who are less extroverted than the others. Thus, *allowing others to participate* (Piskurich, 2004) becomes an essential skill. Another noteworthy skill is *the use of emoticons* (Piskurich, 2004). Because most of the online communications are written, the use of emoticons has become widespread to reflect the emotions of the learners. However, the effective use of emoticons like the avoidance of excessive use of emoticons or the use of appropriate emoticons should be considered by the learners. They should also *think before responding to a post immediately* (Piskurich, 2004) as especially in asynchronous discussions, the learner has little chances for compensation because what is written remains. Luckily, the more technology-savvy the learners are becoming, the more competent they are in the use of emoticons and comfortable with online communications. *Following the netiquette* (Piskurich, 2004; Singh, 2004; Poe & Stassen, n.d.) is yet another skill that learners need to develop. As online learning becomes more internationalized, different cultures show up in the learning settings which may cause certain uncertainties or misunderstandings. Therefore, a common code of behavior which is sensitive to different cultures and backgrounds should be followed. *Having a sense of humor* (Palloff & Pratt, 2003) can help also learners to develop social communications in learning situations with diverse populations.

## IMPLICATIONS AND CONCLUSIONS

As demonstrated by the analysis of the literature, there is a huge number of skills and competencies which are closely related to each other. Course designers, instructors, program developers and management cannot assume that the learners start the programs or courses having fully developed these skills and competencies, especially considering the fact that ODL targets huge and diverse populations. Therefore, for each set of skills and competencies, the abovementioned authorities should guide and help learners to develop these skills and competencies. In this respect, student support appears as a critical factor. The necessary support can be given by guidelines that can be published and distributed online or print and orientation programs before the course or program begins. Possible recommendations are, Metacognitive skills and competencies:

- Training on time management
- Training and support to improve study skills and self-study tips
- Guidance in goal setting and identifying learning objectives
- Guidance in critical reflection

Cognitive skills and competencies:

- Preparatory practices to improve academic reading and writing
- Opening writing centers or providing online support for writing
- Providing library support services to improve research skills
- Guidelines and support for how to prepare assignments
- Providing templates for the assignments

Technological skills and competencies:

- Clear guidelines about the technological hardware, software and skills to use them
- An orientation week to tune in the platform

- 7/24 technical support including online support, toll free phone support and detailed web pages on frequently asked questions
- Affective skills and competencies:
- Clear guidelines about netiquette
- Multiple channels for communication with peers and the instructor
- Providing social chat groups
- Integrating social media platforms

In addition to the organization of orientation activities, this classification of student skills and competencies can be used as a guideline to prepare surveys to investigate student readiness for ODL.

**IJONTE's Note:** This article was presented at 1<sup>st</sup> International Congress on Distance Education and Educational Technology ICDET- 2015 21-23 May, 2015, Istanbul-Turkey and was selected for publication for Volume 6 Number 3 of IJONTE 2015 by IJONTE Scientific Committee.

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