

The Use of Web-Based Self-Directed Learning for Mandarin Study

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Abstract

Self-directed learning has been researched by scholars for many years. However, there is a lack of literature on web-based self-directed Mandarin learning. This research was aimed to investigate how students can learn Mandarin through self-directed study with Internet resources, what the advantages and challenges are, and what strategies students could use to enhance their self-directed Mandarin learning. A web-based survey and in-depth interviews were conducted with students at West Liberty University (WLU), West Liberty, West Virginia, U.S.A. The research found that most of the subjects chose to learn Mandarin because of personal interest, most of the subjects have difficulty in finding appropriate Internet resources although they have been using various types of Internet resources to learn Mandarin, and the biggest challenge they have encountered is that the lack of face-to-face interaction inhibits their learning. This research also put forward some strategies to enhance web-based self-directed Mandarin learning and some recommendations for future research.

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Introduction

Self-directed learning has been a very popular topic in academic research. The 27th Self-Directed Learning Symposium was held in Florida on February 6-9, 2013. Many scholars presented concerning self-directed learning. Self-directed learning is a valuable skill both in workplaces and school settings (Chou, 2012; Rees & Bary, 2006). Self-directed learning is a critical skill for lifelong learning (Candy, 1991).

With the development of technology and globalization, students are faced with a different learning circumstance in which technology plays a great role. Technology development requires skills and abilities, including self-directed learning in the 21st century (Francis & Flanigan, 2012). The study of online learning has gained much attention in higher education institutions. At the same time, self-directed learning in online contexts has attracted more attention with the increase of online learning in higher education (Song & Hill, 2007).

Along with China's continuous development and the increasing influence on the international stage and global market, Mandarin has been an imperative language for many American students. More and more American students are learning Mandarin, and an increasing number of web-based resources are designed for Mandarin learning.

Because of no Mandarin courses in school, economic problems, inflexibility of time and place, personalized learning needs, or some other reasons, some students choose to use self-directed learning to learn Mandarin with Internet resources since technology has brought great opportunities and convenience for students. Especially for students who have no Mandarin class offered at school, who are not able to afford to go to a language school or training center to learn Mandarin, and who do not have any people to teach

them Mandarin, the best way for them to learn Mandarin is using self-directed learning with Internet resources. Even for some people who are learning Mandarin at school or a training center, they may also go to the Internet and look for some resources to improve their learning. The Internet resources provide great opportunities for students to use self-directed learning to learn Mandarin. However, some challenges exist when students use self-directed learning to learn Mandarin with Internet resources. Some students are not able to find appropriate Internet resources. Some students have difficulty in self-motivation. Many students are not able to persist and learn Mandarin effectively through web-based self-directed learning.

West Liberty University (WLU) is located in West Liberty, West Virginia. The exchange program between West Liberty University and Zhejiang Normal University has been bringing Chinese students to WLU since 2011. WLU students have been exposed to Chinese language and culture, and more and more students are interested in learning Mandarin. However, WLU does not offer Mandarin class, so students can only use Internet resources to learn Mandarin through self-directed learning. I established the WLU Chinese Club in August, 2012. The club has been offering free Mandarin lessons. Students get the chance to learn Mandarin through face-to-face classes once a week. However, due to the schedule and transportation, some students still do not have the opportunity to learn Mandarin in the Chinese club and have to choose to use self-directed learning with Internet resources.

A web-based survey and in-depth interviews were conducted with students at WLU who are pursuing self-directed study of Mandarin using Internet resources. This research was aimed to investigate how students can use self-directed learning of Mandarin with

Internet resources, what the advantages and challenges are, and what strategies students could use to enhance their self-directed Mandarin learning.

Literature Review

The 27th Self-Directed Learning Symposium was held in Florida on February 6-9, 2013. Many scholars presented concerning self-directed learning. Self-directed learning is a valuable skill both in workplaces and school settings (Chou, 2012; Rees & Bary, 2006). The definition and significance of self-directed learning, Benefits and challenges of self-directed learning in online contexts, self-directed learning models, and Strategies to improve self-directed learning in online contexts will be discussed.

Definition and significance of self-directed learning

Knowles (1975) defined Self-directed learning as:

A process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and materials resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (P.18)

Merriam and Caffarella (1991) defined Self-directed learning as “a form of study in which learners have the primary responsibility for planning, carrying out and evaluating their own learning experiences” (p. 41).

Both of the definitions emphasize the learning process including plan, implement, and evaluate autonomously. They also reflect the importance of personal initiative and responsibility in self-directed learning. However, they did not mention about learning

contexts in the definition.

In the literature, there are some closely related terms, including independent learning, self-planned learning, autonomous leaning, self-education (Chou & Chen, 2008), and also self-study (Berndt, 2012), self-regulated learning (Carneiro, Lefrere, & Steffens, 2007; Jézégou, 2012), and so forth.

Self-directed learning is a critical skill for lifelong learning, as Candy (1991) stated,

The relationship between self-directed learning and life-long education is a reciprocal one. On the one hand, self-directed learning is one of the most common ways in which adults pursue learning throughout their life span, as well as being a way in which people supplement learning received in formal settings. (p. 15)

Due to the beneficial learning outcomes, school and corporate settings strongly emphasize the importance of self-directed learning, as a required skill in the 21st century global environment (Berndt, 2012; Chou & Chen, 2008). As the shift from instructor-centered to learner-centered in the 21st century learning, learners need to be motivated and self-directed (Lee, 2000). As Du (2012) summarized, self-directed learning holds promise in developing student-centered curricula (e.g., problem-based learning) and lifelong autonomous learners.

Benefits and challenges of self-directed learning in online contexts

In the literature, various benefits and challenges of self-directed learning in online contexts have been discussed. The benefits include convenience, flexibility, activeness, and autonomy. The challenges include that students may no longer be able to rely on an educator for support, as well as the challenges in planning, monitoring, and evaluating

learning in online contexts, the technical difficulties, lack of a sense of community, and delayed communication. In addition, there is a doubt if people could learn effectively with online self-directed learning.

New technologies enable self-directed learners to participate informally in learning events on open online networks (Kop & Fournier, 2010). The proliferation of Information and Communications Technology (ICT) has added to the complexity of our lives and aided in the creation of a plethora of new opportunities for learning, and informal and self-directed learning now form part of our everyday existence (Kop & Fournier, 2010). However, both benefits and challenges exist in self-directed learning in online contexts.

As Song and Hill (2007) stated, various studies have explored the benefits of online learning, such as convenience, and flexibility. Learners became self-directed, active, and exploratory in a short time when they were learning from a multimedia program (as cited by Chang, 2007). Technologies provide us with access to various information and possibility to learn globally (Downes, 2010; Fournier & Kop, 2010). New structures and environments enable people to learn autonomously (Kop & Bouchard, 2011).

However, the technology raises new challenges and opportunities for self-directed learners, who might no longer be able to rely on educator for support in their learning endeavor (Kop & Fournier, 2010). Although the online learning context provides learners with benefits associated with flexibility, there are also challenges in planning, monitoring, and evaluating learning, many of which learners have not faced with in traditional classroom environments (Song&Hill, 2007). The challenges also include technical difficulties, lack of a sense of community, and delayed communication (Song&Hill, 2007),

In addition, as Kop and Bouchard (2011) stated, there is a doubt if people could learn effectively with online self-directed learning. Chou and Chen (2008) and Francis and Flanigan (2012) conducted a study on the relationship between web-based self-directed learning and academic performance. Both of the studies did not find a direct relationship between web-based self-directed learning and academic performance.

Chou and Chen (2008) conducted an exploratory study of the relationship between self-directed learning and academic performance in a web-based learning environment to identify whether or not self-directed learning is a key factor leading to successful academic performance. They examined six empirical studies and found that the effect of self-directed learning on academic success in web-based environments is divergent among six case studies. Only one case showed a strongly positive relationship between self-directed learning and academic success. They indicated that a number of factors could affect the result of such a study, which include reliability of academic performance as a measure, students' learning style, time for distributing, quality of online learning materials, sample subject's demographics, learner's educational background, prior knowledge for contents, measurement of self-directed learning, or sample size (Chou & Chen, 2008). Chou (2012) examined two experimental studies which explored the effect of self-directed learning on engineering students' online learning, and found that the effect of self-directed learning did not exist in the online setting as four potential extraneous factors which lead to inconsistent findings: randomization, online learning environment, self-directed ability, and online instructional activity (Chou, 2012).

Similarly, Francis and Flanigan (2012) did the research regarding the degree to which higher education is compatible with self-directed learning with 188 college

students. The results suggest that self-directed learning is not directly related to academic performance. Patterns of academic motivation suggest increasing levels of self-directed learning may be associated with disengagement from formal higher educational structures (Francis & Flanigan, 2012).

Self-directed learning models

Some scholars have presented different perspectives on Self-directed learning. Some scholars see Self-directed learning as a process of organizing the instruction, focusing their attention on the level of learner autonomy. Others view self-direction as a personal attribute, with the goal of education described as developing individuals who can assume moral, emotional, and intellectual autonomy. There are several models for understanding self-directed learning. (as cited in Song & Hill, 2007).

Candy's Four-Dimensional Model

Candy (1991) concluded that Self-directed learning encompasses four dimensions: “‘self-direction’ as a personal attribute; ‘self-direction’ as the willingness and capacity to conduct one’s own education; ‘self-direction’ as a mode of organizing instruction in formal settings; and ‘self-direction’ as the individual, non-institutional pursuit of learning opportunities in the natural societal setting” (p. 23) Candy’s model was the first to state that a learner’s self-direction might be different in different content areas. However, the model does not describe how self-directed learning is relevant in different learning contexts such as classroom learning or online learning. (Song & Hill, 2007)

Brockett and Hiemstra's personal responsibility orientation model

Brockett and Hiemstra (1991) provided two primary orientations in understanding self-directed learning: process and goal. In the first orientation, Self-directed learning is

viewed as a process “in which a learner assumes primary responsibility for planning, implementing, and evaluating the learning process” (p. 24). In the second orientation, self-directed learning is referred to as a goal, which focuses on “a learner’s desire or preference for assuming responsibility for learning” (Brockett&Hiemstra, 1991, p.24). Different from Candy (1991), Brockett and Hiemstra (1991) defined the social context as different physical institutions where learning takes place, such as community colleges, libraries, and museums. In the educational situation nowadays, online learning continues to increase, which has stimulated the study of web-based self-directed learning.

Garrison’s three-dimensional model

According to Garrison (1997), self-directed learning is accomplished by three dimensions interacting with each other: self-management, self-monitoring, and motivation. Garrison’s model is focused on resource use, learning strategies use, and motivation to learn (as cited in Song & Hill). Garrison explained that self-management involved learners taking control of the leaning context to reach their learning objectives. Garrison’s model also had a focus on the learning process. According to Song and Hill (2007), Garrison also recognized the context factor in his model, but the role of context was somewhat superficial and the dynamic interaction between learning context and self-directed learning was not explicit.

Song and Hill’s conceptual model for understanding self-directed learning in online environment

In the research of self-directed learning in an online environment, as pointed out by Song and Hill (2007), self-directed learning is primarily depicted as a process, focusing on learner autonomy in the learning process, and personal attributes are emphasized,

which focusing on learner's capabilities of self-regulating the learning process. Prior knowledge, time-management, and gender differences are some of the specific attributes. (Song & Hill, 2007).

Song and Hill (2007) argued that the models of Candy (1991), Brockett & Hiemstra (1991), and Garrison (1997), have been valuable in enabling the extension of our thinking about self-directed learning, examining process and learner control as well as the interaction between the two, however, the awareness of the importance of context in self-directed learning has not attracted much attention to date. Song and Hill (2007) brought up a conceptual model for understanding the self-directed learning online environment, which is more comprehensive with the incorporation context as a contributor to the overall process of self-directed learning.

In Song and Hill's model, personal attribute and learning process are incorporated in self-directed learning as pointed out by most scholars in the literature of self-directed learning, and a third dimension--the learning context is also incorporated to indicate the impact of environmental factors on self-directed learning.

Song and Hill (2007) concluded that to succeed in an online learning context, learners need to take control in planning their learning pace, monitoring their learning comprehension, and making judgments on various aspects in their learning process. Learners need to explore various learning resources actively in an online learning context, and learners need to develop strategies to effectively use resources and overcome challenges in online learning. (Song & Hill, 2007). Last but not least, Song and Hill (2007) added, "online learners need to become motivated to overcome the procrastination challenge associated with online learning, and to take advantage of online communication

affordances to create meaningful interaction” (p. 35).

Kop and Fournier’s model in learner autonomy and connectivism

Kop and Fournier (2010) conducted research based on two foundational areas: learner autonomy and connectivism, to examine self-directed learning in open networked environments, and they brought up some new dimensions. Learner autonomy is an important component of self-directed learning (Ponton, 2005; Bouchard, 2009; Boucouvalas, 2009; Kop and Fournier, 2010). Bouchard (2009) pointed out particular factors that influence autonomous learning strategies, including four dimensions with psychological issues, pedagogical issues, and two environmental issues (Kop & Fournier, 2010). The first dimension relates to psychological issues such as drive, motivation, initiative and confidence, and the second dimension relates to pedagogical issues, for instance the sequencing, pacing and goal setting in learning, the evaluation of progress, and final evaluation and preparation for validation (Kop and Fournier, 2010). The other two dimensions which Bouchard (2009) identified concerns environmental issues which are related to the delivery model of resources and economy. As Kop and Fournier (2010) stated, the delivery model has drastically changed from the use of resources of books and paper to electronic texts and multimedia, and also blogs, wikis, and synchronous and asynchronous communication. Learners will need to be able to evaluate and navigate the new information landscape through social networks (Kop and Fournier, 2010). As to the economy, the possible cost will influence learner’s self-directed learning in online context (Kop and Fournier, 2010). The first two dimensions are actually related to the learner attribute and learning process and the latter two dimensions are related to the learning context as Song and Hill (2010) mentioned.

Downes (2010) and Siemens (2008) did research based on connectivism in the online environment. “Connectivism advocates the active engagement of people with resources in communication with others, rather than the transfer of knowledge from educator to learner” (as cited by Kop and Fournier, 2010). As Kop and Fournier stated, a connectivist approach and learning environment might pose both new challenges and opportunities for learners to enhance their learning experiences.

Kop and Fournier (2010) concluded four challenges and pertinent developments to connectivist learning based on the current literature related web development: first, the nature of the network and the levels of presence has been highlighted as an important factor in the willingness of participants to actively engage online; second, digital literacies are critical for learners to effectively direct their own learning in an open online networked environment; third, cloud computing and the emergence of Web 2.0 and social media have altered the dynamics of the Web; fourth, the Semantic Web and learning analytics are the latest developments of the Web and can be used for the visualization of large amounts of data, creating a need for learners to be able to understand and critically analyze graphs and figures.

According to the research in Massive Open Online Courses, Kop and Fournier (2010) concluded that learners have their own ideas on what type of activities would suit them and their lifestyles, psychological factors such as drive, motivation, and confidence are important, time management, goal setting, and time availability are important too. It is important for learners to learn about new tools, economic factors are also relevant to the course participants, and some additional issues such as a different mind-set and higher level of critical analysis of resources than is the case in a more organized classroom

environment (Kop and Fournier, 2010). Kop and Fournier (2010) also suggest that educators and institutions might introduce more openness in the curriculum by using social media and global participation.

Strategies to improve self-directed learning in online contexts

Song and Hill (2007) put forward suggestions in resources and strategies in the online self-directed learning process, namely, 1) investigating learner's self-directed learning personal attributes in an online learning context; 2) investigating the interaction between self-directed learning process and self-directed personal attributes; 3) designing effective online self-directed learning environments.

Strategies to improve self-directed learning in online contexts include self-motivation, self-monitoring, self-regulation, know about our learning styles, study plan, and improve technology skills. Scholars did various research regarding these strategies, as we can see from the following.

Self-motivation

As one of the personal attributes, motivation had been studied by many earlier scholars such as Candy, Brockett and Hiemstra, and Garrison, and many contemporary scholars have conducted research concerning motivation in self-directed learning in online contexts (Kop and Fournier, 2010; Song and Hill, 2007; Chang, 2007). Maslow (1970) defined motivation as a psychological process where a behavior is directed toward a goal according to learner's needs. For language learning, Gardner (1985) defined motivation as a combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes towards learning the language. In his model, Gardner talked about two kinds of motivation, the integrative and the instrumental. The integrative

motivation refers to learner's desire to at least communicate or at most integrate with the members of the target language. The instrumental motivation refers to more functional reasons for learning the language such as getting a better job, a higher salary or passing an examination (Gardner, 1985).

A challenge to motivation in online learning is procrastination (Song and Hill, 2007). Song and Hill (2007) stated that, in a face-to-face class, although students may procrastinate, the required physical presence exposes them to the materials on a regular basis, however, learners may not engage in an online situation. Online learners need motivational strategies to improve self-directed learning.

Jézégou (2012) strengthened the importance of self-determined motivation and self-regulation. A high level of self-determined motivation is necessary to involve oneself in an activity to achieve a personal goal, and self-regulation is important in maintaining this motivation during the activity (Jézégou, 2012).

Self-monitoring

Chang (2007) investigated the effects of a self-monitoring strategy on web-based language learning, in which both students' academic performance and their motivational beliefs were investigated. A total of 99 college students who were enrolled in classes for Freshmen English participated in Chang's study. The experimental group was led to a web page with a self-monitoring form for recording study time and environment, learning process, predicting test scores, and self-evaluation while the control group was not. Chang's research found that self-monitoring strategy had a significant effect on students' academic performance and their motivational beliefs. Encouraging students to develop self-monitoring could help increase the success of online learning (Chang, 2007).

As Chang (2007) stated, “self-monitoring activities give students a sense of personal control that has been shown to be a major source of intrinsic motivation to continue learning on their own.” (p. 188) The results of the study revealed a significant effect of the self-monitoring strategy. Chang (2007) also suggested further studies that investigate the effect of individual differences, such as personality factors and different learning styles.

Self-regulation

Andrade and Bunker (2009) developed a new model of self-regulated language learning. The model demonstrates how learners interact with the variables of structure and dialogue to become self-regulated distance language learners. Learners begin a course with individual levels of self-regulated learning, commitment, and language proficiency. They interact with the course content, materials, and technology, etc. As learners interact with the structure and dialogue of the course and develop self-regulated learning skills, they reflect on and monitor their performance, set new goals, and continue to improve and build on the strategies they encounter and practice. (Andrade & Bunker, 2009)

Different learning styles

In this vein, Ng and Confessore (2010) conducted a study in examining the relationship of multiple learning styles to learner autonomy. Ng and Confessore (2010) stated that learners who possess both independent and collaborative learning styles are less likely to face preference problems of completing both independent and collaborative tasks, and the same in other circumstances which may require learners to employ different learning styles. The more learning styles individuals are comfortable using, the

more likely they will effectively and efficiently implement them in learning situations. Results of this study also reflect the importance of being comfortable with a variety of learning styles when approaching learning. This study provides evidence that the number of preferred learning styles is important in determining the intention to learn among distance learners. Learners who are flexible in using different learning styles according to their needs and situations are found to be more autonomous. (Ng & Confessore, 2010)

Study plan

Du (2012) conducted research using study plans to develop self-directed learning skills in language learning. Three factors have been found which could influence the successful implementation of self-study plans, namely: specific learning objectives, feasible and detailed learning activities and resources, and constant monitoring and feedback.

Ley, Kump, and Gerdenitsch (2010) conducted research in scaffolding self-directed learning with personalized learning goal recommendations. The study found that students with personalized learning goal scaffolding outperformed students with random suggestions of learning goals in self-directed learning.

Improved technology skills

An important and essential strategy to improve self-directed learning in online contexts is to improve technology skills. Deepwell and Malik (2008) conducted an investigation into how students studying at the university level engage actively with learning technology in their self-directed study time. In this study, they explored three emerging aspects of the learning experience, namely students' expectations of the technology, their lecturers' engagement with technology and how the technology might

support processes of transition in higher education. One key implication from this study is that more academic guidance is needed on what and how to use the technology effectively for independent learning, even where ICT (Information and Communication Technology) skills levels are high.

The strategies of self-motivation, self-monitoring, self-regulation, and knowing about our learning styles are from the perspective of personal attribute. The study plan strategy is from the perspective of learning process. The strategy of improving technology skills is to adapt to the web-based learning context. When designing strategies to improve web-based self-directed learning, it is necessary to pay attention to all the three dimensions: personal attribute, learning process, and web-based learning context. Utilizing strategies from all the three aspects is essential to improve web-based self-directed learning.

In the literature, the definition and significance of self-directed learning, benefits and challenges of self-directed learning in online contexts, self-directed learning models, and strategies to improve self-directed learning in online contexts have been discussed. However, there is a lack of literature on web-based self-directed Mandarin learning. There was no research on how students could utilize Internet in their self-directed learning of Mandarin or the advantages and challenges, and strategies of web-based Mandarin self-directed learning.

Methodology

The purpose of this study was to learn about the advantages and challenges of self-directed learning of the Mandarin language through the Internet, and how it can be

improved. The experiences and attitudes of WLU students participating in self-directed learning of the Mandarin language were investigated. The collection of data was accomplished through a web-based survey and individual interviews with WLU students who were participating in self-directed study of the Mandarin language sponsored the WLU Chinese Club. These students had expressed interest in participating in the self-directed study of Mandarin, and they have learned Mandarin by themselves. The web-based survey was conducted through Survey Monkey (www.surveymonkey.com) to collect quantitative data and the individual interviews were conducted through face-to-face discussion to collect more rich, qualitative data. The permission for this study was granted from the WLU Human Subjects Committee. West Liberty University is located in West Liberty, West Virginia, USA. The university has approximately 3000 students including undergraduate and graduate students and more than 50 different academic programs.

Participants

The participants were 23 male and female students at West Liberty University. They were Mandarin learners with different Mandarin levels in different grades and majors. Some of them had been studying Mandarin for a long time, some of them just began to learn Mandarin, and some of them studied Mandarin before but did not continue. One of the common things about them was that they were interested in learning Mandarin and had the experience of learning Mandarin by themselves with Internet resources. They expressed interest in participating in the self-directed study of Mandarin. This self-directed learning opportunity was sponsored by the WLU Chinese Club. The role of the Chinese club was to locate internet resources for the students to use in self-directed study.

Research questions

Based on the research objectives and literature review, the research was focused on the following research questions:

1. How do students utilize Internet in their self-directed learning of Mandarin?
2. What are the advantages and challenges of web-based Mandarin self-directed learning?
3. What strategies could students use to enhance their web-based Mandarin self-directed learning?

These questions were investigated through an online survey through Survey Monkey and individual interviews.

Web-based survey

Advantages and challenges of a web-based survey

A web-based survey is efficient and is becoming more user-friendly, and it can increase the response rate that may result in a more valid analysis of the data collected.

(Greenlaw and Brown-Welty, 2009)

As Marra and Bogue (2006) concluded from Yun and Trumbo (2000), a web-based survey has the following advantages:

- Lower cost relative to other data collection methods
- A supportive environment for actual development of an instrument
- An online data collection product that for some populations may facilitate a better response rates
- Support for the data collection process; responses are

automatically stored in the provider's database with the ability for you to download the results when you wish. This eliminates the need for manual data entry. (p. 2)

A web-based survey could reduce the time and cost of conducting a survey, avoid the often error prone, and tedious task of data entry (Solomon, 2001)

However, a web-based survey should be used with caution. Currently the biggest concern in a web-based survey is coverage bias or bias due to sampled people not having or choosing not to access the Internet (Kay & Johnson, 1999; Solomon, 2001). Solomon (2001) stated another challenge about a web-based survey:

The Web is a very public place and unless steps are taken to limit access to a survey, it may be found and responded to by people who are not among those sampled by the researcher. This can either happen by accident or maliciously. Since one only has to "click" their mouse pointer on the "submit" button to respond to a Web-based survey instrument once it is filled out, it is also quite possible for respondents to either mistakenly or purposefully submit multiple copies of their responses. (p. 2)

The use of web-based survey in this study

Compared with a paper-based survey, a web-based survey is more convenient. It was difficult to schedule a certain time for a paper-based survey for all the participants, however, a web-based survey does not have this problem. Participants could finish the survey anytime, anywhere with the access of Internet and computer, or with other technology devices. A web-based survey saves time since the conductor does not have to

hand out the survey to different participants and does not need to wait until the participants finish the survey. It saves paper, which is a good way to save resources. Moreover, it is more confidential since there is no handwriting and no face-to-face contact during the survey. The participants will not need to worry about the personal privacy. At last, a web-based survey usually has the function of gather data and analyze data, which is very convenient. All of the participants are accustomed to frequently accessing the internet for their classes. In addition, the web-based survey in this study was just conducted in a week, and it is not easy to be found without knowing the link. Even though irrelevant people find this survey, they are not likely to take this survey which they will not benefit from. Hence, the concerns of the literature are not applicable in this setting.

In the survey of this study, Survey Monkey (www.surveymonkey.com) was chosen as the web-based survey tool. An account needed to be registered before the survey could be conducted. With the free trial account, up to ten questions could be designed which is enough for this study. Various types of questions could be designed.

Ten questions were carefully designed and after finishing the design, there was a survey link. The link was emailed to all participants. From the management view, the number of participants was recorded and the survey results were very clear. Additionally, the data was gathered and analyzed by the system.

In the survey, basic demographics, the reason why the subjects use self-directed learning to study Mandarin, web resources they had been using, the difficulties they came across and the strategies they used, and their attitude to web-based self-directed learning of Mandarin were investigated. The link is

<http://www.surveymonkey.com/s/YWHQLTZ>. The complete survey is attached at the end of this paper (see appendix A). In addition to this survey, in-depth interviews were conducted to provide more rich, qualitative data which complimented the quantitative data acquired from the survey.

In-depth Interview research

Definition, advantages and challenges of individual interview research

An in-depth interview is defined by Boyce and Neale (2006) as a “qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation” (p. 3).

According to World Bank Institute (WBI) evaluation group (2007), individual interviews can often provide in-depth context, stories, and discussion related to one or more topics in an environment where the interviewer can ask for elaboration or explanation with follow-up questions. Individuals in positions of influence may also appreciate the additional personal attention that the interview can offer as opposed to a survey or focus group.

According to Boyce and Neale (2006) , in-depth interviews provide much more detailed information and provide a more relaxed atmosphere in which people may feel more comfortable having a conversation than through other data collection methods. However, in-depth interviews also have some limitation, including they are prone to bias, can be time-intensive, interviewer must be appropriately trained in interviewing techniques, and not generalizable. (Boyce & Neale, 2006)

As WBI evaluation group (2007) concluded, there are both advantages and

disadvantages to individual interviews. Advantages include: Interviews typically allow for more focused discussions and follow-up questions; Individuals may offer information in interviews that they wouldn't offer in a group context; Interviews can be an excellent source for stories and context; the interviewer can observe the non-verbal behaviors of an interviewee. Disadvantages include: Time requirements for interviewers and interviewees can be significant; Interviews have the potential to reduce the scope and sample for data collection; The results of multiple interviews may contradict each other or be difficult to analyze; Interviewees may be biased or represent only a limited perspective on performance issues/themes. (p. 1)

The use of in-depth interview research in this study

After participants completed the survey, I emailed a request for subjects to additionally participate in an in-depth interview individually. Six students responded and participated in the interview as well.

An informational letter for participants about this research project as well as the informed consent form were given to participants at the beginning of each interview (See Appendix B). The letter explained that there were no foreseeable risks associated with this project nor were there any benefits to the participants. There was no compensation for participants. Each of the interview discussions would be recorded in order to analyze the responses for patterns and neither the participants nor their responses would be identified in any way. Participation was voluntary and the participant could withdraw at any time.

When the individual interview discussion began, each participant received a written copy of the questions. I also read each question orally. This was done in order to

accommodate visual and oral learning styles.

Eight questions were discussed in the individual interview:

1. Why did you choose to learn Mandarin?
2. What motivates you to use self-directed Mandarin learning with internet resources?
3. What type of internet resources have you used? Which have been the most helpful? Which have been the least helpful?
4. What benefits have you experienced from internet-based self-directed Mandarin study?
5. What challenges have you experienced with internet-based self-directed Mandarin study?
6. Do you anticipate continuing to learn Mandarin through internet-based self-directed study? Why or why not? Please explain.
7. Would you recommend to other higher education students learning Mandarin through internet-based self-directed study? Why or why not? Please explain.
8. What strategies do you think could be used to improve web-based self-directed Mandarin learning?

The interview was recorded on the Audacity program on both a laptop and cell phone simultaneously. Two devices were utilized for recording in the event that one did not record. At the same time, handwritten notes were taken by me, which included key points of the interview, notable quotes, and body language and mood of the participant. Sound checks were conducted before the interview to ensure that our voices were audible on the recording. Each interview was saved as an independent electronic file.

The data of the in-depth interviews was captured through a Tape-Based Abridged Transcript. As cited by Dr. Ann Gaudino (2008), Kruger and Casey describe the Tape-Based Abridged Transcript Approach by stating that it, “Relies on listening to a tape recording of each focus group and then developing an abridged transcript of the relevant

and useful portions of the discussion...It is a condensed version of the focus group discussion with irrelevant conversation removed” (p. 131). The use of the Tape-Based Abridged Transcript approach in group interviews is a reference to draw from and to be used in in-depth interviews. In the following weeks, I listened to the recordings, took notes and organized the data from the interview in a transcript. This transcript was used to systematically address the research questions and present the findings.

Findings

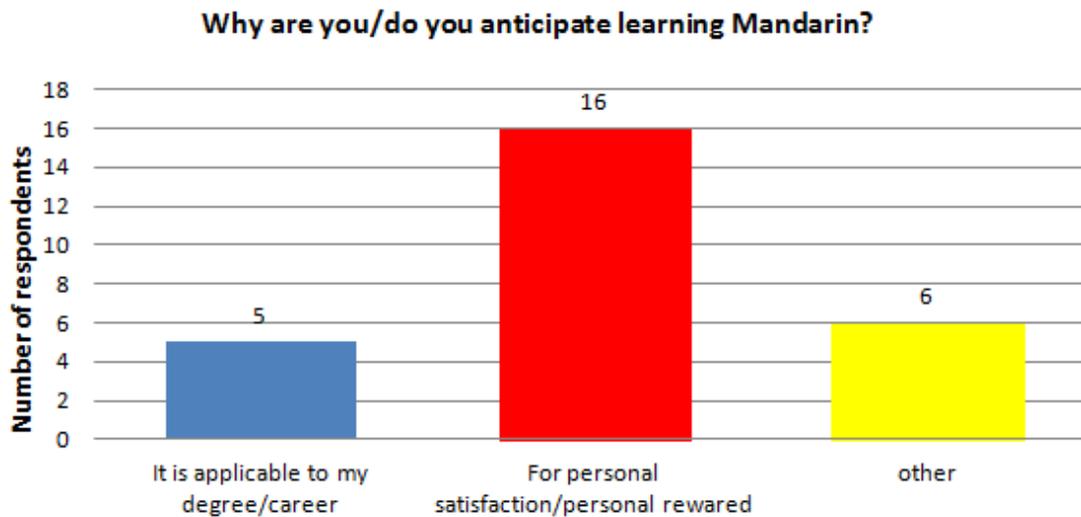
Twenty three WLU students participated in the web-based survey conducted through Survey monkey, including 14 females and 9 males. They include freshmen, sophomores, juniors, and seniors, with different majors and minors. Most of them have been learning Mandarin for several months to 2 years. Some of them just began to learn. Six students participated in the in-depth interviews. They were asked eight questions pertaining web-based Mandarin self-directed study. There were some similarities among their responses as well as some differences.

Reasons for Mandarin Learning

Question 1 of the survey investigated the reason for the subjects learning Mandarin. About why they chose to learn Mandarin, 16 students chose “for personal satisfaction/personal reward”, 5 students chose “it is applicable to my degree/career”, and 6 students chose other. 26.3 % chose to learn Mandarin for their degree or career, as one student mentioned in the response, “I’m going to be working in China”. 84.2% chose to learn Mandarin because of personal satisfaction or reward. Most of them chose to learn Mandarin not because of degree or career but personal interest. In the response, some

students mentioned, “I have friends that speak the language, and hope to visit them in their home country”, “I want to communicate with my Chinese friends in their native language.”

Table 1: Reasons for Learning Mandarin



70.6% of the students use self-directed study to learn Mandarin because there are no Mandarin courses available locally. 58.8% of the students feel they learn well through self-directed study so they use this method to learn Mandarin. Some students mentioned, “prior course work UT”, “limited teachers in my area”, and “convenience of using online tools in my own time”.

In the in-depth interviews, the subjects chose to learn Mandarin because of personal interest, traveling to China, or because of career.

Student G and student J expressed their interests in Chinese culture, history, and art. Student G said he used to like Chinese calligraphy, and “different Chinese stuff, like Jack Chen.” He thought it would be fun to learn Mandarin. Student J said he was very

interested in China, Chinese history, and Chinese culture, and he had a lot of great friends from China. Student S said Chinese characters look interesting and she would like to know more about Mandarin so that she can help her Chinese friends.

Student L and student N chose to learn Mandarin because they went to travel in China. They thought it would be better to learn some Chinese before they went there. Student N said, “I started learning Mandarin because I was going to travel to China and I decided that I need to at least learn a few phrases before I went there. Once I started learning it, I really liked it and I decided to continue. I now have quite a few Chinese friends, and I would like to be able to communicate with them. Also, I think it’s really healthy for your brain to learn a new language and I chose Mandarin.”

Student S and student A chose to learn Mandarin because they thought Mandarin may help their careers. Student A said, “It’s my strong desire to learn Chinese language, to go to China, and to have a business with Chinese people. It will help my career. It will help me to interact with Chinese people when I do business with them.”

Motivations for self-directed Mandarin learning with internet resources

About the motivations to use self-directed Mandarin learning with internet resources, most of the subjects cited convenience as the predominant factor in their choice to utilize internet resources. Student N said, “Internet resource for me is the most convenient because I have a very unpredictable and hectic schedule, so for me to access Mandarin learning tools online in my free time is the most convenient way to learn.” Student J said, “With all the internet resources available, it is very easy to learn language very quickly. It’s very useful for me even though we only have (Mandarin) lessons once a week to continue to learn and to learn more practically. We can find more resources to

learn in addition to the lessons. It's very convenient." Student S said, "You can learn at home. You don't have to go somewhere else, or to pay to get the lesson."

In addition, student A mentioned that we need to be self-sufficient. He said, "You need to be self-sufficient. You need to do everything by yourself. The teacher is there and the tutor is there just to give you guideline, Just to help you when you face some problems. We need to practice online."

Web resources used for self-directed Mandarin Learning

In the survey, pertaining to the web resources they have been using to learn Mandarin, 40% chose social media, 40% chose software, 46.7% chose apps, and 33.3% chose online program. The specific resources they have been using are TVB channel, YouTube, Skype lessons, Rosetta Stone, chinesetools.com, MIT open courseware, Mandarin Madness, Confucius Institute Online, Skype with friends in Taiwan and China, LinkedIn groups, Google app, QQ/Weixin, and TrainChinese.com. Some of them also mentioned that they learn Mandarin through In-law family member and interaction with people.

In the in-depth interviews, as to the internet resources the subjects have used, which have been the most helpful and the least helpful, they gave various responses. Students used a variety of different internet resources, but they did not all utilize the same programs. Student N said she used Rosetta Stone. She said, "It was good, but it was not my favorite because it doesn't explain things, and it just makes me kind of guess." She used a website called trainchinese.com, and she had an iPhone app for it. "It is great because it is a free tool and it has a very good flashcard system and really good dictionary. It is very helpful." she said. Aside from that, the other primary sources she

used were YouTube videos. She found several programs that have free videos online and she has watched yoyo Chinese which has a paid program but she used the free videos. She is currently looking into Livemocha.com, which is social networking style of language learning, but she found a coupon online to purchase the program, so she might be using that in future.

Student G also used the YouTube videos, however, he could only find some short lessons teaching phrases such as “hello, goodbye”. He could not find long lessons and he found that he had to pay most of the resources online. Student L used Rosetta Stone and a translation website. She said, “Rosetta Stone was helpful because you can not only read it and it has pronunciation. The translation website wasn’t that helpful because it just told the meaning without pronunciation.”

Student J used the Confucius Institute Online. He said the program teaching how to write Chinese characters with strokes was very helpful. Student S used an app called Lingo. Student A used a website called chinesetools.com. He said, “It’s very user-friendly. They have lessons uploaded. You can choose the lessons. They have audio and video tracks. It has pronunciation to help people to learn. It’s interesting.”

Benefits of web-based self-directed Mandarin learning

In the term of benefits they have experienced from Internet-based self-directed Mandarin study, the flexibility and convenience are the main benefits.

Student N said,

Flexibility and convenience are definitely the main benefit, and being able to study what I want to learn in my own pace, for example, if I were taking a structured class, even if I knew some

of the things already or even if there was something that I wasn't particularly interested, that was the subject matter the class would be. Whereas, when I have self-directed online study, if I think of a phrase that I want to know how to say or if I think of a grammatical concept that I want to know more about, can look that up and I can go directed to what I want to learn about.

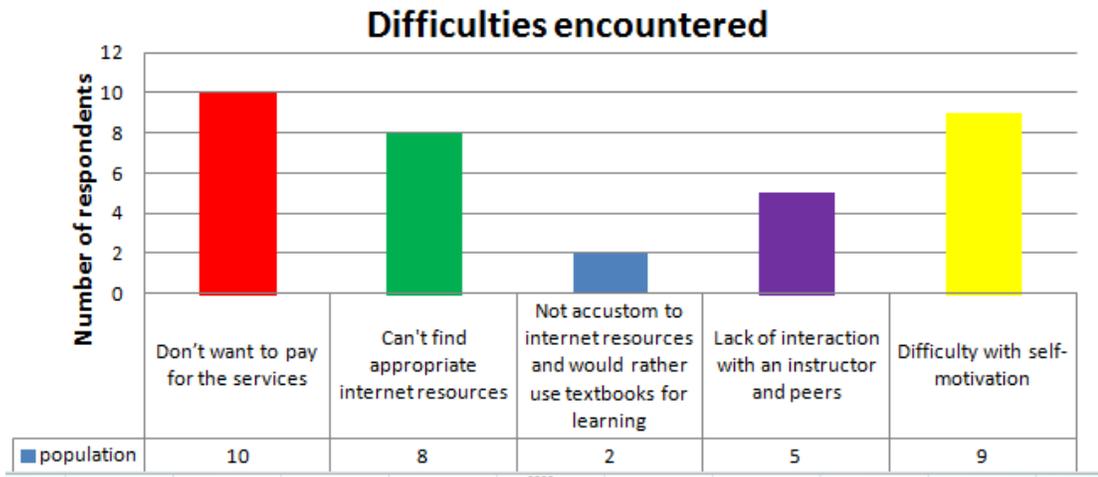
Student G had a similar idea about the convenience, he said, "With YouTube videos, you can stop it and relisten to it, and you can continue where you left off. You can listen to it from anywhere you like". Student S said, "It helps me to get an idea, and helps me to practice more in Chinese. And it saves time." Student L said she learned a few word at least before she went to China. Similarly, Student J said, "It's really helpful to see it practically, and see how to apply it in everyday life."

Challenges of web-based self-directed Mandarin learning

From the survey, as to how much they enjoy learning Mandarin through self-directed study with internet resources, 14.3% chose very much, 38.1% chose much, 38.1% chose not much, and 9.5% chose not at all. Most of them are satisfied with learning Mandarin through self-directed study with internet resources.

With regard to difficulties they have encountered, there were various difficulties with self-directed study of Mandarin using web resources, as we can see from the following table.

Table 2: Difficulties experienced in self-directed Mandarin learning



Only 10% of them are not accustom to internet resources and would rather use textbooks, so most of them feel comfortable to use internet resources to learn Mandarin. The other main difficulties they have encountered are about economy, internet resources, interaction, and self-motivation. 50% of them don't want to pay for the services. 40% of them can't find appropriate internet resources, 25% of them lack of interaction with an instructor and peers, and 45% of them have difficulty with self-motivation. In other responses, some students also mentioned about time management. One student wrote, "I don't have a lot of time for study".

In the in-depth interviews, students talked about the challenges they experienced with Web-based self-directed Mandarin learning. They experienced different challenges, for example, the cost, the website does not work sometimes, difficulty in pronunciation, and most of them mentioned about interaction. Student N said,

Some of the challenges are that almost all of the resources that are of value have a cost and while that's acceptable for a

company who want to pay for the services, you can't sample what you options are, because you have to pay for them, it's hard to find the one program that exactly right for you without trying everything out first. Other than that, Sometimes it's just easier to have a concept explained by a person rather than trying to figure it out for yourself.

Student J said, "The link didn't work. The website was under construction.

Technology doesn't always work." Student L said, "Pronunciation is the challenging part as the translation website just gives the meaning without pronunciation."

Most of the students mentioned about the challenge of interaction.

Student G said,

The biggest thing is when you listen to it online, it is difficult to remember how the sentence structures are. When you listen to it online, they just tell you the sentences... The easy way to do that would be get out of in public and practice with real people. (There is) no chance to ask and interact online.

Student N said,

Sometimes it's just easier to have a concept explained by a person rather than trying to figure it out for yourself. Probably, the biggest challenge is just not having a real person to speak with. Like, in order to practice my skills, I have to be able to speak out loud in Mandarin to another person who knows what I'm trying to say and can correct me when I don't have another

person there cooperating with me, I have no idea how well or how poorly I'm doing.

Student S said,

I'm more a face-to-face interaction person. The Internet couldn't interact or give tips for me, like I have to roll my tongue or do it certain way to get the word it right when I want to say or repeat some words. Because some people have hard tongue to pronounce, if they don't have the way to do it, it's hard to get the pronunciation right.

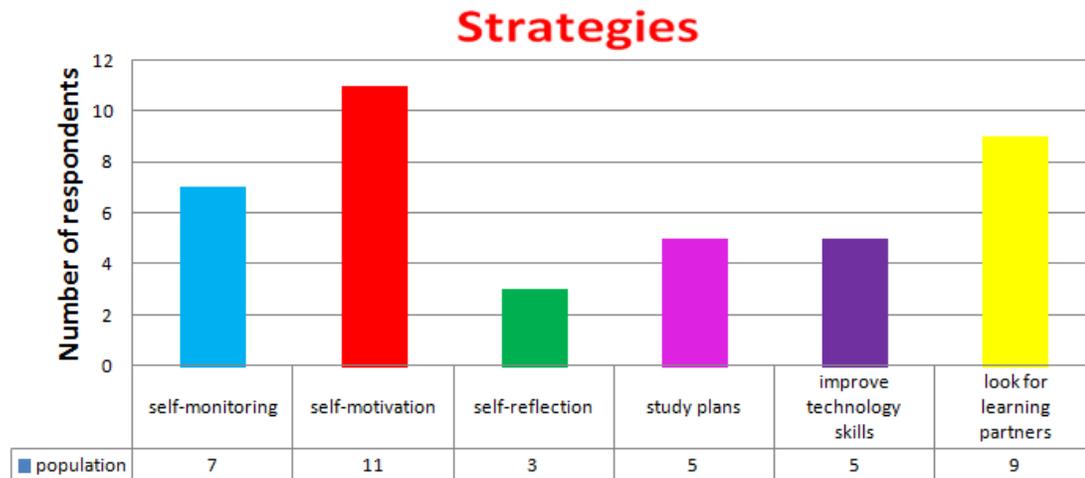
Student A said,

I have nobody to talk with in Mandarin. No people to interact with. It's one-way communication. No two-way interaction. You can listen to them, you can watch the videos, but there is no way to check your understanding or if you have the correct pronunciation. Interaction is the main challenge.

Strategies to improve self-directed Mandarin learning

In the survey, subjects used a variety of strategies to improve their self-directed learning of Mandarin. As we can see in the following chart. 57.9% use self-motivation, 47.4% look for learning partners, 36.8% use self-monitoring, 26.3 % use study plan, 26.3% improve technology skills, and 15.8% use self-reflection. A large number of them are inclined to use self-motivation and looking for learning partners. A few of them prefer to use self-monitoring, study plan, improving technology skills, and self-reflection.

Table 3: Strategies for improving web-based self-directed Mandarin learning



In the in-depth interviews, as to the strategies used to improve web-based self-directed Mandarin learning, most of them emphasized the importance of improving interaction. Student L said, “It would be beneficial to study with someone who already knew it, you can practice conversation with each other, interaction is very important.” Student J said, “If we can get face-to-face interaction with the person who can speak mandarin, we can just like slowly learn to speak with them over like webcam or something, we can actual practice in everyday use.” Student G said, “Instead of just listening to it, writing it down, and having scenarios that would have you interact, if there is a web program where they would ask you or in later stages that ask you questions that you have to reply in the language in order to move on or go on with it, that would be better to know you have a better understanding of the language that you are learning.” Student A said that facilities are needed to increase interaction, and increase the authenticity, namely increasing the learning of Mandarin in the right way. Student N stated that the new websites like livemocha and busuu.com that make a social media interactive format are probably at the forefront of new language learning.

Student N also expressed the strategy of choosing good internet resources. She said,

The best thing to do is to really look into the different programs that are available. Try out gives you a better idea what you are looking for....Don't only commit to one program. For example, when I was using Rosetta Stone, I was picking up things, and I understood what Rosetta Stone wanted from me, they want you to intuitively figure out what these things mean without being directly told in your own language, but what was helpful for me was looking at Rosetta Stone and getting an idea of what it was, then looking it up in a dictionary or in a grammar book, or finding a video to explain it. Because for me, in my learning style, I really need to have the grammar explained or the structure of the language explained to me.

Student N also mentioned about choosing good internet resources. She recommended video with a person demonstrating how to say and how to do, and something interesting to catch attention, like cartoon and pictures. Student A suggested some chat rooms, and some tests. He stressed that the tests are not just about writing, but pronunciation. He expressed that because there are many words with similar pronunciation, if people can't get the correct pronunciation, the words will mean something else.

Whether or not to continue to learn Mandarin through web-based self-directed learning

In the survey, as for whether or not to continue web-based self-directed study of

Mandarin in future, 13 students chose “yes”, 9 students chose “no”, and one student skipped this question. 59.1% of them would like to continue this type of Mandarin learning. Some students mentioned in the other response that, “sure if I get appropriate program for that”, “I need some help”, “I love Mandarin! I intend to continue using it”, “I want to meet more educated Chinese speakers so I can learn from them”, “Convenience of studying in my free time, combined with limited other resources are the two biggest factors that determine my online self-directed Mandarin study habits”,

Although it is difficult to learn a language by yourself because language can be best learned living with the people who use the language. It’s a matter of daily practice, but we are trying our level best and also we are observing some changes in Mandarin understandings and speaking day by day. So hopefully we will do it better in the future.

In the in-depth interviews, as to the question “Do you anticipate continuing to learn Mandarin through internet-based self-directed study?” all of them said “yes”.

Student G said he liked educational material online most of all. For Mandarin, if he could find a better program that is not expensive or free, he will definitely continue.

Student L said, a higher level of Rosetta Stone is needed, if she goes back to China again. She would be willing to pay a nominal fee to access a more advanced program. Student J told me, “Yes. When I get more time, I will do it a lot. It will help me to practice. No one in my family speaks Chinese. It will give me a good chance to practice.”

Student S prefers to learn Mandarin face to face with other person. She will use the internet as a resource, however, it is not a main part. Student N said, “Yes. Now that I

have been looking at online resources for a couple of years, I'm getting a better idea of what it is that I want from a language program and I think I can better judge when I decide to purchase a subscription. I'll have a better idea what I'm looking for and I'll be able to pursue that more effectively." Student A said, "I want to do business with Chinese people. I'm determined to speak Mandarin and get Chinese knowledge. There are challenges, but I still need to work on it. There is nobody to teach me or guide me. Internet is the only way to learn Mandarin for me."

Whether or not to recommend to other higher education students learning Mandarin through web-based self-directed learning

About whether or not to recommend to other higher education students learning Mandarin through internet-based self-directed study, student N and student S both agreed and disagreed.

Student S thought it would be better for people who already know a lot of Mandarin to use self-directed study with internet resources. She said, "If the higher education students already know a lot of Mandarin, internet will be good. They already have an idea about Mandarin." Student N said,

"For the yes, because it does allow you to study on your own time and to find what resources work best for you. But on the negative side, you do have to be very self-motivated and structured in order to get anything out of it, because if you don't constantly keep it up, you will forget things, and also being a college student, means that I have classes that are requiring deadlines that that be other obligations, and for me, sometimes it's difficult to

find time to study Mandarin, because I do have so many other pressing things. But I would say for someone who is graduating or for someone who is moving on from college, I think it's a perfect way to continue to activate your brain and continue learning into adulthood.”

Student G, student L, student J, and student A all said “yes”. Student J said,

Especially when you are learning characters. It also gives you more time to practice. In the class, we only get an hour. With the internet, you can have as much time as you want and practice as much as you want. But don't use internet resources alone. Get a Mandarin lesson and someone you can practice with. Having practice time is really important on Internet.

Conclusion

From the findings of the web-based survey and in-depth interviews, we can see the similarities and differences of the subjects' responses with regard to the survey and interview questions.

One thing surprised me is that most of the subjects chose to learn Mandarin for personal reasons. They have a real interest in learning Mandarin. We can see this result not just in the survey but also in the in-depth interviews.

Students have been using various types of Internet resources to learn Mandarin. Although there are some free online resources for Mandarin learning, most of them are not experienced to find the appropriate resources. Many of them have difficulty in finding

appropriate Internet resources. Even if there are some very good online tools that they can choose to learn Mandarin, however, the cost is a difficulty. However, students could still make good use of the free online resources to learn Mandarin.

The convenience and flexibility are the main benefits which the students have experienced, and this aligns with the literature. Students have also experienced some challenges, such as the cost of the Internet resources, difficulty locating appropriate internet resources, difficulty with self-motivation, difficulty in pronunciation, and lack of interaction with other people which they believe is beneficial to language learning. The main difficulty they encountered is the challenge of interaction, which was mentioned the most by the students. This was not revealed in the literature.

As to the strategies, various strategies have been used by the students, such as self-monitoring, self-motivation, self-reflection, study plans, improve technology skills, and look for learning partners. Besides the strategies of self-monitoring, self-motivation, study plans, and improve technology skills, which have been discussed in the literature, the subjects also have utilized the strategies of self-reflection and looking for learning partners. In addition, the predominant strategy most of the subjects emphasized is to increase interaction.

Most of the students have enjoyed learning Mandarin through self-directed study with internet resources. Most of them will continue to learn Mandarin through web-based self-directed learning as well as recommend this method to other higher education students.

This was only a small scale research at West Liberty University which only involved 23 students. A significant limitation of this study is that it examined the topic with a

limited number of subjects. Because of this, conclusions are not generalizable to other circumstances. As the lack of literature in web-based self-directed learning of Mandarin, this small scale study provided an evidence for the need for a larger study which involve more subjects. Some specific study such as how to improve the interaction of web-based self-directed learning of Mandarin could be conducted for future research.

More and more students have the needs of learning Mandarin. It is not easy for beginners to just learn Mandarin by themselves through Internet. As one student pointed out in the in-depth interview that it would be easier for students who already know a lot about Mandarin to use self-directed learning with Internet resources. Moreover, many students expressed that they need face-to-face interaction. For these reasons, universities may wish to investigate how to serve students who would like the opportunity to learn Mandarin both in-class as well as with utilizing self-directed learning with internet resources.

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Appendix A

Survey questions:

1. Gender, Grade, Major(/minor)

2. Why are you/do you anticipate learning Mandarin? (Check all that apply)
A. It is applicable to my degree/career. B. For personal satisfaction/personal reward
C.. Other(Please explain) _____

3. How long have you been learning Mandarin?

4. Why are you using self-directed study to learn Mandarin? (Check all that apply)
A. I feel I learn well through self-directed study.
B. There are no Mandarin courses available locally.
C. Other (Please specify)

5. What web resources have you been using to learn Mandarin? (Check all that apply)
A. Social media B. Software C. Apps D. Online program E. Other (please specify)_

6. What are the names/titles of the specific resources you are using to learn Mandarin?
(please specify)

7. How much do you enjoy learning Mandarin through self-directed study with internet resources?
A. Very much B. Much C. Not much D. Not at all

8. What difficulties have you encountered with self-directed study of Mandarin using web resources?
A. Don't want to pay for the service B. Can't find appropriate internet resources (the program is too long to complete) C. Not accustomed to internet resources and would rather use textbooks for learning D. Lack of interaction with an instructor and peers. D. Difficulty with self-motivation. E. Other (please specify)

9. What strategies do you use to improve your self-directed Mandarin learning?
A. Self-monitoring B. Self-motivation C. Self-reflection D. Improve technology skills
E. Look for learning partners F. Study plans G. Other__

10. Do you intend to continue your web-based self-directed study of Mandarin in the future? Why or why not? Is there any other information you would like to provide?
A Yes
B. No

Appendix B

Consent Form

Dear Sir/Madam,

My name is Li Cheng and I am a graduate student in the MAED program at West Liberty University, West Virginia. I am completing a Capstone Research Project for the EDUC 581 class at West Liberty University. I am conducting a study to learn about the attitudes and experiences of university students participating in self-directed learning of the Mandarin language. You are invited to participate in this research study because you are participating in self-directed study of the Mandarin language sponsored the WLU Chinese Club or you have expressed interest in participating in the self-directed study of Mandarin.

For this reason, I will be conducting a survey through Survey Monkey (www.surveymonkey.com). You may access and complete this survey on this website <http://www.surveymonkey.com/s/YWHQLTZ> from March 18 to 22, 2013. You are then invited to participate in an in-depth interview in Student Development Center. It will be some time from March 25 to March 29, 2013. The exact date and time will be discussed with you. . Some questions pertaining to advantages and challenges of web-based Mandarin self-directed learning will be discussed in the focus group interview. If you would like to, after the interview, we could have a personal case study about your specific learning. Some strategies will be provided for you to improve your self-study.

There are no foreseeable risks associated with this project, nor are there any benefits to you. There is no compensation for you. The survey will take about 10 minutes. The in-depth interview should take approximately 20 minutes of your time.

The participation is completely voluntary. You are free to decide not to participate in this study. There is no penalty for choosing not to participate in this study. There is no penalty for choosing not to complete the questionnaire, in-depth interview, or personal case study. Please keep this informed consent form with the accompanying information in case you feel the need to contact the researcher or supervisor for this project.

Dr. Ann Gaudino will be serving as the faculty capstone advisor for this project and will also be available if you have any questions or concerns. Her contact information is agaudino@westliberty.edu or 3043368306

The survey will be conducted through Survey Monkey. Your responses will not be identified. The in-depth interview discussions will be audio recorded using the Audacity program in order to analyze responses for patterns. You are free to reply to all, none, or some of the questions posed. Neither you nor your responses will be identified in any way. Audio recordings of the interview will remain locked and under my possession alone. Your participation is voluntary and you may withdraw at any time.

There will be no identifying information recorded when you complete the survey or

identifying interview. Please refrain from stating your name or any identifying information during the survey or in-depth interview. All data collected will be to comply with research standards protecting the identity of the research participants. The data will be collected for the purpose of identifying the goals stated above. You may reach me at lcheng@westliberty.edu or (304) 280-4682 with any questions you may have.

Sincerely,
Li Cheng
Primary Investigator

Additions to or changes in procedures involving human subjects as well as any problems connected with the use of human subjects once the project has begun must be brought to the attention of the West Liberty University Human Subjects Committee.

I agree to provide whatever surveillance is necessary to ensure that the rights and welfare of the human subjects are properly protected. I understand that I cannot initiate any contact with human subjects before I have received approval/or complied with all the contingencies made in connection with the approval. I understand that as the principal investigator I am ultimately responsible for the welfare and protection of human subjects and will carry out the project as approved.

Signature of Principal Investigator/Date

Printed name of Participant/Date

Signature of Participant/Date