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PROMOTING GUIDED-DISCOVERY LEARNING THROUGH WHATSAPP TO STUDENTS IN OPEN UNIVERSITY

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ABSTRACT

Abstract: Long-distance learning uses an online platform to transfer knowledge. It has become a breakthrough in this modern era. Online learning brings many benefits to students, but it is also challenging to be implemented by the tutors at distance education universities. This paper tends to investigate the use of the guided-discovery learning (GDL) method in the psycholinguistics online tutorial class. The participants are students of the English Education program at Universitas Terbuka, who take Psycholinguistics subjects through an online tutorial service. The methodology of this research is qualitative, using a case study. The researchers used the WhatsApp application as the platform for conducting the course. The students are required to follow the lesson step by step through WhatsApp. Based on the findings, this research reveals that there are two perspectives on the use of GDL towards a psycholinguistics online tutorial class. The first perspective is for students, that has two major advantages. The second can be seen from the learning perspective, which also has two benefits of the use of GDL.

INTRODUCTION

In this era, online education gives a new perspective on teaching-learning activity in higher education level. However, it does not mean that there is no challenge in this area of education. Many research have been conducted to identify the issues of online education. In online classes, it is sometimes difficult for tutors to keep the learners on track. Online learners have issues with their expectations toward online courses, readiness to attend online courses, and identity where learners feel isolated (Kebritchi et al., 2017). Gillett-Swan (2017) on her research paper also showed that there is a problem for students who experience isolation. Some of the issues are anxiety associated with using technology; being out of one's comfort zone; (perception of) inequity in assessment, particularly in "group" assignments; and the (perceived) inability or difficulty in peer interaction, particularly in presentations. Another challenge of online education is in pedagogy (Serdyukov, 2015). Islam et al., (2015) stated that online education requires a different approach especially in areas such as individual and group interaction and online assessment. It is also concerned with finding the best way to achieve the learning goal. Tutors also must deliver it in the best way, so the knowledge is passed on the learners.

Universitas Terbuka, as one of the leading universities in distance education, hosts its courses by performing online tutorials (tuton or tutorial online) as one of the learning services to assist students in achieving a better result in learning. This online tutorial is conducted once every semester with a duration of two months for 8 sessions. Students can log in to the e-

learning by using their account. With the asynchronous system where students can access the tutorial anytime based on the schedule, it is also giving problems to the teacher. Most of the students are not actively seen in the tutorial.

For students in the English Education study program who are currently English teachers, it is sometimes difficult to engage in the learning activity because of the learners' issues and the subject difficulty level. Out of more than 40 subjects that they must take, one of the subjects that students need to enrol which is quite challenging to be understood is psycholinguistics.

Psycholinguistics has become a subject of interest for linguists. Maftoon & Shakouri (2012) simply defined psycholinguistics as the study of the relationship between human language and the human mind. Shortly, there are 3 important aspects of psycholinguistics: language production, language comprehension, and language acquisition. Psycholinguistics addresses two major questions. The first one is "what knowledge of the language is needed for us to use language?" and the second is "what cognitive processes are involved in the ordinary use of language?" It has provided knowledge on how people acquire language in written and spoken form. Many theories of psycholinguistics have been used in language teaching and learning (Purba, 2018). Psycholinguistics help in understanding the four skills namely listening, reading, writing, and speaking.

At Universitas Terbuka, psycholinguistics is learned by English Education students in the 7th semester by using either online learning or other forms of services. Online learning or often referred to as e-learning is one form of flexible teaching and learning that intends to provide greater access to learning for all students (Rusman, 2017). An online learning environment can include any or all of several aspects. It is ranging from administration details relevant to the class to a total course delivered via the internet.

At UT, one of the implementations of online learning is by using an online tutorial (tuton). The online tutorial is one of the types of tutoring services provided by UT, besides face-to-face tutorial, webinar tutorial, radio broadcast tutorial, and television broadcast tutorial which is delivered through the Internet network (web-based tutoring). It is offered to UT students as an option to supplement their self-directed learning with the course textbooks.

The online tutorials are delivered through the "Moodle" as the Learning Management System (LMS). The tutorial is set weekly that consists of 8 weeks of tutoring sessions. The major components of the tutorial include the contents called "materi inisiasi" or initial topic, discussion forums, and three scheduled assignments. All of these components should refer to the course material in the textbooks.

According to Arkorful & Abaidoo (2015), there are some advantages of e-learning. It strengthens the reasons why UT use the online tutorial as one of its services:

1. It is flexible when issues of time and place are taken into consideration;
2. E-learning enhances the efficacy of knowledge and qualifications via ease of access to a huge amount of information;
3. It can provide opportunities for relations between learners by the use of discussion forums;
4. E-learning is cost-effective in the sense that there is no need for the students or learners to travel;
5. E-learning always takes into consideration individual learners' differences. Some learners, for instance, prefer to concentrate on certain parts of the course, while others are prepared to review the entire course.;
6. E-learning helps compensate for scarcities of academic staff, including instructors or teachers as well as facilitators, lab technicians etc.; and
7. The use of e-Learning allows self-pacing.

It can be understood since the students rarely experience the existence of the lecturer (tutor) which can monitor the students' progress and comprehension in real-time. Furthermore, when students face difficulty, they tend to feel reluctant to ask the tutors. It can be seen from very low students' involvement in the discussion. Dealing with this problem, the

researchers assumed that the students need more intensive care and guidance from the tutor to understand the topic. This subject is very useful for UT's students who currently teach the English language. The students need to understand the topic well, so they can get insight on how to teach language to their students at school. But some problems occurred in the psycholinguistics online tutorial class. One of the issues is the subject is too theoretical and complex, so it makes students feel the boresome easily.

For those reasons, the online tutorial tutors must find a way to deliver the material, so the students can comprehend the idea of psycholinguistics subject. One of the learning models that can be used by tutors is guided-discovery learning (GDL). This is one of the models that can improve students' learning achievement (Yerimadesi et al., 2018). The essence of this method is special cognitive or problem-solving assignments followed by teacher's instructions to guide learners to discover new knowledge relying on their available experience (Belkina et al., 2015).

To improve students' understanding of psycholinguistics subjects, the researchers investigated the use of the guided-discovery learning model in the online tutorial class. Here, teachers provide support to help students reach higher levels of skill and comprehension with assistance. Belkina et al. (2015) stated that:

> "guided-discovery learning is an innovative learning model for teaching a foreign language. This model is also called as the scaffolding method and is based on instructional techniques to move students progressively toward stronger understanding and greater independence in the learning process."

While Saumell (2012) stated that guided-discovery learning is a modified inductive approach in which there is exposure to language first, followed by the use of interference, and finally an explicit focus on rules and practice. It was obvious that the development of thinking and linguistics skills was the major pedagogical goal of the inductive and deductive approach. Thus, there are 3 kinds of benefits of the GDL model: cognitive, linguistics, and social.

Table 1. The Advantage of Guided-Discovery Learning

Cognitive	Linguistics	Social
▪ Encourages analytic learning ▪ Exploits learners' cognitive skills ▪ Improves critical thinking skills ▪ Involves students in problem-solving tasks ▪ Helps learners become aware of and articulate their mental processes ▪ Makes learners participate actively in the learning process ▪ Makes learners understand and remember better what they have worked out for themselves	▪ Resembles natural language learning/language acquisition ▪ Provides extra language practice if done in groups	▪ Increases student participation and fosters collaboration ▪ Empowers learners thus enhancing autonomy and self-reliance ▪ Motivates learners who enjoy the hands-on approach

There are five steps to using a guided-discovery learning model (Denton in Zahara, 2017). It can be seen as follows:
1. Introduction and naming of materials
   In this step, teachers use open-ended questions that encourage students to think about their past experiences with the material and to share current observations.
2. Generating and modeling of ideas
   The teacher invites students to think through how to use the material. The teacher begins with open-ended questions to get students thinking. When the brainstorming falters, the teacher challenges the students to go beyond their first ideas.
3. Exploration and experimentation

After students have generated a list of ideas and a few students have modeled ideas, it is time for students to independently explore the material. They tend to begin trying what was modeled. With encouragement, students soon start experimenting with new ideas.

4. Sharing exploratory work

   After sharing and modeling ideas, students have an opportunity to share the work they have done to other students.

5. Clean up and care of materials

   In the last step, the teacher engages the students in thinking through modeling and practicing how they handled and maintained the materials then access them independently at a later time. Based on the explanation above, the steps are concentrated on the students' role in the classroom. By guiding from the teacher, the steps allowing the students to more active and more independent in exploring and sharing their idea when teaching and learning process begins.

Many studies have been conducted related to the use of GDL in teaching-learning activity. The research by Zahara (2017) showed that GDL is effective in teaching reading comprehension to the students. While Haris (2015) stated that the GDL model affected the critical thinking skills of students. It means that GDL is effective to be implemented in the classroom.

However, there is still a lack of study of the influence of GDL in the online tutorial class, especially in the humanities area. Psycholinguistics, as one of the important subjects in the English Education study program at UT, must be understood well by the students. It is expected that this research can give new information on how to deliver psycholinguistics topics differently and the result can be applied in other online courses. Based on all considerations, the researchers assumes that GDL gives the benefit of online psycholinguistics class. The question of this research is "What are the benefits of the use of GDL toward long-distance learning?" The objective of the research is to investigate the benefit of the guided-discovery learning model in psycholinguistics through the online tutorial class. It is expected that this research can give support and add a new perspective related to the technique of teaching the online classes.

METHOD

The purpose of this study is to investigate the guided-discovery learning model. Based on this goal, the researchers used a qualitative approach with a case study method as a design (Njie & Asimiran, 2014). In this study, the researchers focused on the phenomenon that happened in the WhatsApp class. The researchers analysed the data by describing phenomena, classifying it based on the research question point and concluded it.

To choose the participants of the study, the researchers used purposive sampling. It signifies that one sees sampling as a series of strategic choices about with whom, where and how one does one's research. There were three participants in this research. They are students in English Education Study Program, Universitas Terbuka, who are taking Psycholinguistics subjects. The participants are studying in three different UPBJJ, namely UPBJJ-UT Palangkaraya, UPBJJ-UT Denpasar and UPBJJ-UT Yogyakarta.

The primary data collecting technique that the researchers used is documentation. It means that the researchers depend significantly on this data. The documentation technique was conducted using the WhatsApp platform. The class was conducted every Tuesday and Thursday. In every session, students had 3 stages to be followed and another 2 stages were continued at the next meeting. During the class, students were asked to follow the GDL stages in which the document of the process was collected and analysed by the researchers.

The researchers followed these steps to apply GDL model. First, Introduction and naming of materials where the researchers use open-ended questions that encourage students to think about their past experiences with the material and to share current observations. After

that the researchers invites students to think through how to use the material and challenges the students to go beyond their first ideas. After they have generated a list of ideas and a few students have modelled ideas, it is time for students to independently explore the material. After sharing and modelling ideas, students have an opportunity to share the work they have done to another student. In the last step, the teacher engages the students in thinking through modelling and practicing how they handled and maintained the materials then access them independently later.

For the observation, the researchers observed the implementation of guided discovery learning. The data was collected by using real observation. It means during the teaching-learning activity using GDL, the researchers observed directly. The researchers also met one of the participants in UPBJJ-UT Yogyakarta to have one session in implementing the GDL method. The third data collecting technique that is used by the researchers was an interview. It consists of 15 questions that are relevant to the research questions. This interview is a semi-structured, open-ended interview. It is used to clarify and confirm the data from documentation and observation.

RESULT AND DISCUSSION

The result of the research can be discussed from two perspectives, that are students' perspective and learning perspective. In the students' perspective, the benefit of GDL are motivation and better teacher-student communication. While in the learning perspective, it can minimize students; cheating activity and build students' autonomous learning.

For motivation, based on the data, it is revealed that student's motivation during teaching and learning using GDL was escalating or at least remain stable. It is also supported by the research of Rosiyanti (2016) that the students' motivation in the linear program is improved after using the GDL method. Furthermore, it was also found that communication between students-teacher is positively string and effective. The finding is positive if we see it from the perspective of the students. The student confirmed that the use of GDL makes teaching more effective since they can communicate more intensely and interact with the tutor. Something that they rarely found during a learning activity. Saefulbahri (2015) stated in his research that guided-discovery learning can enhance communication between students and teachers.

Meanwhile in learning perspective, especially in long-distance learning (LDL), the method can prevent or minimize students' cheating activity. It means that it can decrease students' tendency in copying material during the Question and Answer (Q&A) session without an effort to understand the material. Comprehension is the goal for learning; however, students tend to jump into the idea of answering without trying to understand the material first. This process of jumping into the answer by merely copying the material can be prevented or minimized using GDL.

Besides, the GDL method also can build students' autonomous learning. Lyu & Wang (2018) stated that guided-discovery learning can enhance learning autonomy. Autonomous learning is the main goal of distance learning. It is the main factor that can make students discover and explore something new.

Moreover, autonomous learning is a crucial element especially in long-distance learning because autonomous will become a fuel that ensures LDL/digital learning can positively work. As we know that LDL is a process where the teachers are not around the student, so it is difficult for students to maintain their positive perspective toward teaching-learning activity. Therefore, students need to be autonomous to maintain their positiveness toward teaching-learning activity. By having it, students can work independently to explore material provided by the LDL platform with or without the teachers around them. The finding of this research can be seen below:

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                    │ through WhatsApp │
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      ┌───────────────┐              ┌───────────────┐
      │   Students'   │              │   Learning    │
      │  Perspective  │              │  Perspective  │
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  │ Booster  │ │    Maker     │  │Prevention│ │ Builder  │
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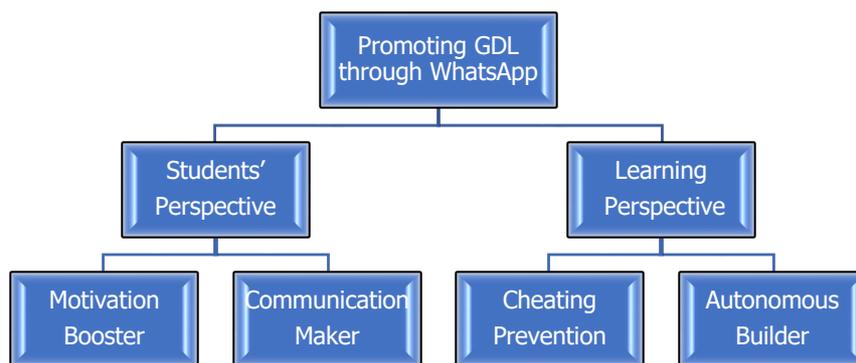
Figure 1. The Use of GDL toward Psycholinguistics Online Tutorial Class

Students' Perspective

The finding shows that GDL can bring benefits for long-distance learning. As it was already stated in the result section, GDL can bring benefit to two main areas. First, it can boost students' motivation during an exhausted individual long-distance learning. Long-distance learning is quite challenging in terms of maintaining motivation. Students can easily drop emotionally during the learning process. It can be understood since students only can rely their self on their intrinsic motivation to keep up on the learning path.

Moreover, the LDL platform tends to have a lack of interactive elements. Here, the GDL shows its use. During the research, the researchers found students at least remain stable until the end of the lesson. It was confirmed by the observation and strengthened by the data from the interview:

Table 2. Interview Transcript about the First Benefit of GDL from Students' Perspective

Interviewer	Interviewee
What are the benefits of the use of GDL toward long-distance learning?	I think it is good enough because we have to open the book and read it.

The second, GDL is proven to be effective in making better communication between teachers and students. Communication always becomes a crucial matter in transferring lessons. Good communication can ensure the transfer of knowledge runs smoothly. During the research it was confirmed by the interview is also more effective because, in GDL, teachers, and students can communicate better as it is showed from the result of documentation.

Table 3. WhatsApp Transcript about the Second Benefit of GDL from Students' Perspective

Subject	Communication
Teacher	We will conduct the lesson until the 5th session to see the effectiveness.
Student 1	I see. I think it is more effective compare to login to e-learning.

By using GDL, the tutor will automatically guide the teaching process which can make the tutor maintain communication with the students. Good communication between teacher-students can help students with their difficulties. The fact is illustrated in the interview clip below.

Table 4. Interview Transcript about the Second Benefit of GDL from Students' Perspective

Interviewer	Interviewee
What do you feel after having a GDL method in the learning process?	What I feel is it is more communicative and the discussion makes us think more.

Interviewer	Interviewee
How was your feeling toward your tutor during teaching-learning using GDL?	I feel better. I can ask what I think is difficult. It helped me a lot.

One of the challenges in distance education is in the term of communication. The students and teachers do not meet directly during the learning process and the miscommunication can occur. When the discussion takes place, students want to have engagement with the teacher by simply answer teachers' question or even asking questions about the topic. By using the GDL method, the teacher can guide students to be more active and communicative in learning. The students also feel that the teacher is helpful. This situation can bring benefits not only during the class but also when the class is over, the relationship between students and teacher can still be maintained.

Learning Perspective

The second, in the documentation, it is showed that GDL can prevent cheating because the answer to the question given by the teacher is from their own, so it is the result of their deep process of synthesizing the material. During the teaching using long-distance learning, it is common for the student when they face a quiz or online discussion by copying from the internet and their Virtual Reading Room. They do not want to bother themselves in exploring and discovering the material which was the idea of learning itself. By having this habit, teaching will be solely based on what so-called as copy-paste action without any contemplating or synthesizing the material. Fortunately, that action can be reduced by implementing the GDL method.

When the tutor used GDL, they increase the process of monitoring the learning process. It happens by keep stringing the connection simultaneously. The tutor can keep monitoring the students' response directly and interactively in order the students can keep focusing on their learning and preventing their answer from merely copying since the tutor seem to exist in the real-time with them. This finding is concluded based on the interview with the participants in the WhatsApp class.

Table 5. WhatsApp Transcript about the First Benefit of GDL from Learning Perspective

Subject	Communication
Student 1	If it is like this, we have to open the book
Student 2	In e-learning, we can search and copy from Google

Besides preventing cheating in LDL, GDL is also proven can build up students' autonomous learning. Based on the documentation, during WhatsApp class, students discover autonomously to confirm the problem that is discussed in the GDL method. It can be seen in the result below:

Table 6. WhatsApp Transcript about the Second Benefit of GDL from Learning Perspective

Subject	Communication
Teacher	Have you confirmed the answer to the module from the previous session? It is about the relationship between language, thought, and utterance.
Student 1	Language affects human's view, perception and comprehension about the world.
Student 2	Language is the foundation for thought. It affects the view, perception, and comprehension of the human.

While from the interview, GDL can promote autonomous learning and become a supplement of long-distance learning.

Table 7. Interview Transcript about the Second Benefit of GDL from Learning Perspective

Interviewer	Interviewee
How does GDL promote autonomous learning?	It is suitable to support autonomous learning because we have to open the book. From the discussion, many answers from the questions that we have to find. We have to learn by ourselves, open the book and found other sources.
Why can GDL become the supplement of long-distance learning?	Because we have to attend the WhatsApp class every Tuesday and Thursday. There is a new material that is being discussed. So, we have to open the book.

Autonomous learning is very crucial for students at Universitas Terbuka as an open and distance education institution. It is supported by the statement from Firat (2016) who stated that autonomy is one of the most important factors of self-learning and self-learning is vital for distance education students. The purpose of teaching in autonomy is to help students attain ideal individual learning behaviour. Students' autonomy or independence is a major requirement to achieve success in e-learning environments because they are responsible for their learning.

From the interview transcript, students agreed that GDL can be a supplement for long-distance learning because they are 'forced' to open the book when the discussion is started. The assistance from the teacher is very important to make sure that students follow the guidance. On guided discovery learning teachers organize the subject matter, guide students, by helping them to conclude a generalization through submitting questions. In GDL, the learning process has now started to be more directed by the guidance of teachers. The teachers give a problem to the students, with the help of teachers, students make the hypothesis, then the teacher gives worksheets and briefing to the students as a reference in experimenting.

CONCLUSION

This research reveals two benefits of GDL, which are from the students and learning perspective. Based on the students' perspective, the use of GDL is useful to increase students' motivation. Student claims that this method can increase their motivation. Besides increasing motivation, the use of GDL can stimulate better communication between students and tutors. The other benefit of using GDL toward online psycholinguistics class can be seen from the learning perspective. First, GDL can prevent cheating action among the online learning process. Second, it can promote autonomous learning character toward students. For managerial implication, this research can be one of evaluation to the use of an online learning platform in UT or in general. It is expected that the data will help to improve the teaching-learning process in an online tutorial class and to give insight to UT's stakeholders about new learning techniques that can be applied in an online tutorial class as a supplement. Finally, due to data variation and methodology used during the research, this research has weaknesses. The weaknesses can be seen in the methodology of the research. The finding of this research was gathered through collection and analysis using the qualitative method. The use of other methodologies probably can capture a different result. Moreover, since the small number of participants involved in this research, it is probably will not represent all feelings and perspectives of the students in the online psycholinguistics class.

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