

ICT-Based on EFL Reading Comprehension Material: Survey of Students' Need

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Abstract - ICT in reading comprehension material is the implementations of learning in the 4.0 revolution era, which is characterized by the use of digital technology that can make learning take place continuously without space and time limits. A survey study on students and instructors of the English Language Education Faculty of Teacher Training and the Education Muhammadiyah University of Mataram are to find out about reading materials and the types of ICT needed in designing reading comprehension material. The instrument used to collect data was a questionnaire that received 45 questions consisting of three variables, namely teaching stuff, reading comprehension, and ICT. The results show lecturers and students required topics that are the focus in making teaching materials, namely technology, education, health, environment, social, animal, and economy as well as three types of ICT that can be applied in the development of ICT-based reading comprehension materials, namely Computers Assisted Language Learning (CALL), Mobile Assisted Language Learning (MALL), and Learning Management System (LMS). Therefore, in designing teaching materials, it is necessary to load these topics and use one of these ICT types.

Keywords - Teaching Materials, Reading Comprehension, and ICT

I. INTRODUCTION

Information and communications technology (ICT) plays an important role in enabling teachers and students to teach and learn more effectively (Aslan & Zhu, 2017). ICT use became of major importance for primary schools across the world as ICT has the potential to foster teaching and learning processes. ICT use is therefore a central measurement concept (dependent variable) in many ICT integration studies (Vanderlinde et al., 2015). Information and communication technologies (ICT) are of key importance at all levels of the educational system (Bilyalova, 2017). ICT in school education is considered a key factor in improving quality at this educational

level (Sangrà & González-sanmamed, 2010). The study reviewed in this paper showed that ICT, through an e-learning intervention, can improve student performance as measured in test scores (Chandra & Lloyd, 2008). Over the past three decades, governments and education systems around the world have regarding the use of information and communications technologies (ICTs) as an important issue for improving the effectiveness of teaching and learning in schools (Plomp, Anderson, Law & Quale, 2003, 2009) (Lin et al., 2012). ICT can play a significant role in the creation of students centered learning environments (Smeets & Mooij, 2001). As a final point, it is evident that the usefulness of the ICT use mentioned above can be evaluated regarding the analyzing students' need for ICT on EFL reading comprehension.

Reading comprehension is the ability to understand the information contained in the text by interpreting what is text read according to their needs. The process of interpreting a text in reading comprehension can be undertaken by combining many methods by involving language, vocabulary, preliminary knowledge (Ahmadi, 2017) to understand reading books (Takallou, 2011) by implementing an effective reading comprehension strategy as an interaction between the reader and the text to explore meaning (Javed et al., 2015) which includes comprehensive cognitive processes (Daniel García et al., 2017).

The purpose of this survey study is to investigate what kinds of teaching material and how the types of ICT-based reading comprehension materials are needed by students at Muhammadiyah University of Mataram. The findings of this research can help lecturers to decide the type of ICT-based reading comprehension material that suits the needs.

II. *LITERATURE REVIEW*

Information Communication and Technology

ICT is viewed as a “major tool for building knowledge societies (UNESCO, 2003). ICT also plays an important role in helping learners find reading materials from original sources. In finding articles from international journals, students can get it just by sitting in front of computers connected to the internet network. ICT facilitates teaching and learning process by providing access to wider sources of information and varieties of articles. With ICT in education, learner centered-approach is encouraged as the students can access and learn from these technologies at their pace, thereby developing learner's autonomy (Maduabuchi, & Vivian, 2016). There are two-factor structure of ICT competencies was identified: (1) competencies to support pupils for ICT use in class and (2) competencies to use ICT for instructional design (Tondeur et al., 2015).

ICT has constituted to the improvement of teaching and learning processes is higher in the schools that have integrated ICT as an innovation factor (Sangrà & González-sanmamed, 2010). Suported by Starcic & Bagon (2014), In the last several

decades ICT has become an important part in the design of inclusive learning environments in mainstream schools and classrooms, with teachers in mainstream classrooms involved in ICT-supported learning for children with special needs. And also the selection and use of software by teachers can have a significant impact on the learning environment (Smeets & Mooij, 2001).

Reading Comprehension

Reading comprehension is also considered to be a highly complex skill, which involves both lower-level processing concerns “automatic” word recognition and higher-level processing pertains to a reader being to assemble clause-level information into a text model of their understanding and to build an interpretation of the text that conforms to their goals, attitudes, and background knowledge (Abdolrezapour & Tavakoli, 2011). Reading comprehension is one of the most important transversal skills for the achievement of success in both school and society (Calet & Pérez-morenilla, M Carmen & Santos-Roig, 2019). Reading comprehension is important to keep in mind because attending to the meaning of the message is just as important as attending to the linguistic forms (Labrozzi, 2014). And Reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language (Rassaei, 2015).

III.METHODOLOGY

Participant

This method used in this study is survey study at English education program faculty of teacher training and education muhammadiyah university of Mataram. Participants in this study are students who will take reading comprehension courses, who have taken courses, and lecturers who taught these courses for three years. The instrument distributed to collect data was a questionnaire received 45 questions focusing on three variables, namely teaching stuff, reading comprehension, and ICT.

IV.Result

The results of the needs analysis of 45 questionnaires obtained from respondents 3 lecturers who have taught reading comprehension courses and 64 students can be clarified into three variables, namely, the need for teaching materials, reading comprehension, and ICT.

4.1.Teaching Material Variabel

In the variable of teaching material, the parameters are the objectives, topics, materials, exercises, and evaluation. The details of the results of the questionnaire distributed to participants are as follows.

In the chart 1, Judging from the aspects of the objectives is in the category of very needed and needed. In the reading comprehension teaching material for the continuity of study in English language study program students, 56% answered very required, and 47% required. Then, in reading comprehension teaching materials to help

students improve their ability to understand reading texts, 60% is very needed, and 40% is required. Whereas in the matter of reading comprehension teaching material for careers as English teachers after students graduate from English language education study programs, 70% is very needed, and 30% is required.

The chart 2 can be described that the topics in reading comprehension material relate to education, the participants responded that 19% is very needed and 8% is needed; environment, 28% is very needed, 69% is required, and 3% is less needed; Education, 50% is very needed and 50% is needed; social, 44% is very needed and 56% is required; health, 22% is very needed and 78% is needed; and sports, 19% is very needed and 81% is needed;

The chart 3 can be described that the materials in reading comprehension material relate to mountain, the participants responded that 34.3% is very needed and 65.7% is needed; beach, 28.1% is very needed and 71.9% is required; basketball, 6.3% is very needed and 93.7% is needed; football, 9.3% is very needed and 90.7% is required; AIDS, 21.9% is very needed and 78.1% is needed; anemia, 6.2% is very needed and 93.7% is needed; computer, 28.1% is very needed and 71.9% is needed; and mobile, 18.7% is very needed and 81.3% is needed.

The chart 4 about the type of exercises used in the reading comprehension materials is looking for main ideas, 62.5% is very needed and 37.5% is needed; Make inferences, 50% is very needed and 50% is needed; vocabulary knowledge, 56.3% is very needed and 43.7% is needed; and given varies between individuals and groups, 65.7% is very needed and 34.3% is needed.

The chart 5 on the participants' response in the type of evaluation based on material on each topic both related to theory and practice, 59.4% is very needed and 40.6% is needed, evaluation techniques are given varying both individually and in groups, 62.5% is very needed and 37.5% is needed. While providing an evaluation at each completion of learning on each topic, 50% is very needed and 50% is needed.

4.2. Reading comprehension Variabel

Reading comprehension variables that are applied as parameters are goals, reading strategies, comprehending readings, and types of reading. The details of the consequences of the questionnaire that has been dispersed to lecturers and students are as follows.

The chart 6 shows that the three questions raised by students and lecturers about the purpose of reading comprehension are in the very needed and very needed categories. A description of the results of the statement for understanding ideas of the text, 71.9% is needed and 28.1% is needed; concluded the contents of the reading text, 75% is needed and 25% is needed; and get the main idea of the text, 59.4% is needed and 40.6% is needed.

The chart 7 illustrates that the four statements distributed to students and lecturers about reading strategies that are categorized as very needed and needed. Scanning 53.1% is needed and 46.9% is needed; 65.7% skimming is needed and 34.3% is needed; intensive 59.3% is needed and 40.7% needed; and Scanning 65.7% is needed and 34.3% is needed.

The chart 8 shows that the statement about the understanding of the reading text 56.2% is needed and 43.8% is needed, while increasing the reading comprehension ability 53.1% is needed and 46.9 is needed.

The chart 9 shows that the four statements about the type of reading comprehension asked, the respondent are in the category of very needed and needed. Critical 56.7% is very needed and 43.8% is needed. Inferential is 50% very needed and 50 needed. Literal, 53.1% is very needed and 46.9% is needed and creative 68.8% is very needed and 31.2 is needed.

4.2. ICTs Variable

The Variable of ICT that becomes the parameter is the applying of ICT and the type of ICT.

The chart 10 shows that the three statements about the use of ICT are in the category of very needed and needed. ICT helps to improve students' reading comprehension, 40.6% is very needed and 59.4% is needed. The ICT used in reading comprehension material is easy to access online, 34.4% is needed and 65.6 is needed. ICT in learning can be accessed anytime and anywhere, 40.6% is very needed and 59.3% is needed.

In the Chart 11 shows that the five items statement about the kind of ICT is categorized as very necessary and needed. Reading comprehension material based on E-learning, 37.5% is very needed and 62.5% is needed; Computer-assisted language learning (CALL), 34.4% is very required and 65.6% is needed; mobile-assisted language learning (MALL), 25% is very required and 75% is required; learning management system LMS), 40.7% is very required and 59.3% is required; and Web-based Learning, 40.6% is very needed and 59.4% is needed.

V. DISCUSSION

Based on the results of the analysis of the need for ICT-based English reading comprehension material on EFL reading comprehension course in the English Language Education the Faculty of Teacher Training and Education, Muhammadiyah University of Mataram can be described as follows:

First, students need English language teaching materials that contain topics, materials, exercises, and evaluations; second, students need a variety of topics to be published, primarily related to technology, environment, education, social, health, and sports; third, students need a variety of materials, especially related to mountain,

beach, basketball, football, AIDS, anemia, computer, and mobile; fourth, students need the type of exercise used in the learning process to help improve the understanding of different English reading given to individuals and groups, especially exercises to get main ideas, make inferences, and vocabulary knowledge; fifth, students need an evaluation based on material both related to the reading comprehension theory and exercises related to the text that is already available in teaching materials, assessments are given individually or in groups, and the time of evaluation is done at each completion of the topic; sixth, students need the purpose of reading comprehension, especially to understand the ideas contained in the reading text and to conclude the reading text; seventh, students need a reading strategy that is used in the reading process contained in teaching materials in understanding English, namely, scanning, skimming, intensive, and extensive; eighth, students need the use of ICT to improve reading comprehension, ICT can be accessed anytime and anywhere, and ICT is easily accessed online; and ninth, students need several types of ICT in the learning process of reading comprehension, including E-learning, computer-assisted language learning (CALL), mobile-assisted language learning (MALL), learning management systems (LMS), and Web-based learning.

VI. CONCLUSION AND RECOMMENDATION

The major finding of these experiments is that students and lecturers at English education program faculty of teacher training and education muhammadiyah university of Mataram need ICT in designing reading comprehension material. ICT can become a tool to assist the students in enhancing reading comprehension. ICT recommended for utilizing in designing the material consist of five kinds: E-learning, Computer-assisted language learning (CALL), mobile-assisted language learning (MALL), learning management system LMS), and Web-based Learning. The topic reading comprehension recommended based on the result of the study, consisting of technology, environment, social, health, sport, aducation. While material recommended to become content of reading comprehension material are eight types montain, beach, bascatball, football, aids, anemia, computer, and mobile.

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REFERENCES

- Abdolrezapour, P., & Tavakoli, M. (2011). *The relationship between emotional intelligence and EFL learners ' achievement in reading comprehension*. May 2014, 37–41. <https://doi.org/10.1080/17501229.2010.550686>
- Ahmadi, M. R. (2017). The Impact of Motivation on Reading Comprehension. *International Journal of Research in English Education*, 2(1), 1–7. <https://doi.org/10.18869/acadpub.ijree.2.1.1>

- Aslan, A., & Zhu, C. (2017). Investigating variables predicting Turkish pre-service teachers' integration of ICT into teaching practices. *British Journal of Educational Technology*, 48(2), 552–570. <https://doi.org/10.1111/bjet.12437>
- Bilyalova, A. (2017). ICT in Teaching a Foreign Language in High School. *Procedia - Social and Behavioral Sciences*, 237(June 2016), 175–181. <https://doi.org/10.1016/j.sbspro.2017.02.060>
- Calet, N., & Pérez-morenilla, M Carmen & Santos-Roig, M. D. L. (2019). *Overcoming reading comprehension difficulties through a prosodic reading intervention : A single-case study*. <https://doi.org/10.1177/0265659019826252>
- Chandra, V., & Lloyd, M. (2008). The methodological nettle: ICT and student achievement. *British Journal of Educational Technology*, 39(6), 1087–1098. <https://doi.org/10.1111/j.1467-8535.2007.00790.x>
- Daniel García, J., Rigo, E., & Jiménez, R. (2017). Multimedia and textual reading comprehension: Multimedia as personal learning environment's enriching format. *Journal of New Approaches in Educational Research*, 6(1), 3–10. <https://doi.org/10.7821/naer.2017.1.180>
- Edmunds, R., Thorpe, M., & Conole, G. (2012). Student attitudes towards and use of ICT in course study, work and social activity: A technology acceptance model approach _1142 71..84. *British Journal of Educational Technology*, 43(1), 71–84. <https://doi.org/10.1111/j.1467-8535.2010.01142.x>
- Javed, M., Eng, L. S., & Mohamed, A. R. (2015). Developing reading comprehension modules to facilitate reading comprehension among malaysian secondary school ESL students. *International Journal of Instruction*, 8(2), 139–154. <https://doi.org/10.12973/iji.2015.8211a>
- Labrozzi, R. M. (2014). *The effects of textual enhancement type on L2 form recognition and reading comprehension in Spanish*. <https://doi.org/10.1177/1362168814561903>
- Lin, J. M., Wang, P., & Lin, I. (2012). Pedagogy * technology: A two-dimensional model for teachers' ICT integration _1159 97..108. *British Journal of Educational Technology*, 43(1), 97–108. <https://doi.org/10.1111/j.1467-8535.2010.01159.x>
- Maduabuchi, C. H. & Vivian, E. (2016). ICT and the Teaching of Reading Comprehension in English as a Second Language in Secondary Schools: Problems and Prospects. *International Journal of Education & Literacy Studies*, 4(3), 18–23. <https://doi.org/10.7575/aiac.ijels.v.4n.3p.18>
- Nichol, J., Watson, K., & Waites, G. (2003). Rhetoric and reality: using ICT to enhance pupil learning—Harry Potter and the Warley Woods Mystery—Case study 2. *British Journal of Educational Technology*, 34(2), 201–213.
- Rassaei, E. (2015). *Effects of three forms of reading-based output activity on L2 vocabulary learning*. <https://doi.org/10.1177/1362168815606160>
- Reynolds, D., Treharne, D., & Tripp, H. (2003). ICT — the hopes and the reality. *British Journal of Educational Technology*, 34(2), 151–167.
- Sangrà, A. and, & González-sanmamed, M. (2010). The role of information and communication technologies in improving teaching and learning processes in primary and secondary schools. *Research in Learning Technology*, 18(April

- 2011), 207–220. <https://doi.org/10.1080/09687769.2010.529108>
- Selwyn, N., & Gorard, S. (2003). educational participation via ICT. *British Journal of Educational Technology*, 34(2), 169–181.
- Smeets, E., & Mooij, T. (2001). observations in educational practice. *British Journal of Educational Technology*, 32(4), 403–417.
- Staric, A. I., & Bagon, S. (2014). ICT-supported learning for inclusion of people with special needs: Review of seven educational technology journals, 1970–2011. *British Journal of Educational Technology*, 45(2), 202–230. <https://doi.org/10.1111/bjet.12086>
- Stephen, G. (2020). *Usage of ICT Resources in Academic Libraries With Special Reference to Engineering Colleges*. 250–252. <https://doi.org/10.4018/978-1-7998-3559-2.ch014>
- Takallou, F. (2011). The effect of metacognitive strategy instruction on EFL learners' reading comprehension performance and metacognitive awareness. *Asian EFL Journal*, 13(1), 272–300.
- Tondeur, J., Aesaert, K., Pynoo, B., Braak, J. Van, Fraeyman, N., & Erstad, O. (2015). Developing a validated instrument to measure preservice teachers' ICT competencies: Meeting the demands of the 21st century. *British Journal of Educational Technology*. <https://doi.org/10.1111/bjet.12380>
- UNESCO. (2003). *Communiqué of the ministerial roundtable on 'Towards Knowledge Societies''*. Paris: UNESCO.
- Vanderlinde, R., Aesaert, K., & Braak, J. Van. (2015). Measuring ICT use and contributing conditions in primary schools. *British Journal of Educational Technology*, 46(5), 1056–1063. <https://doi.org/10.1111/bjet.12282>

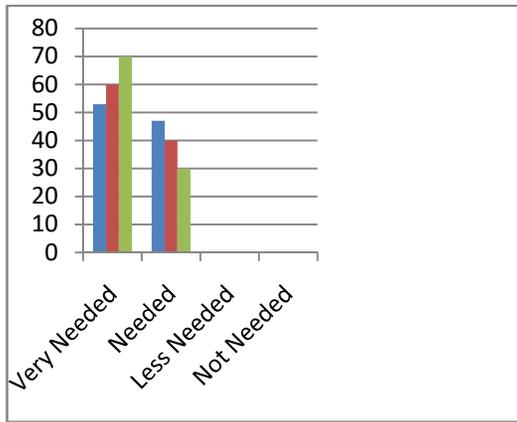


Chart 1

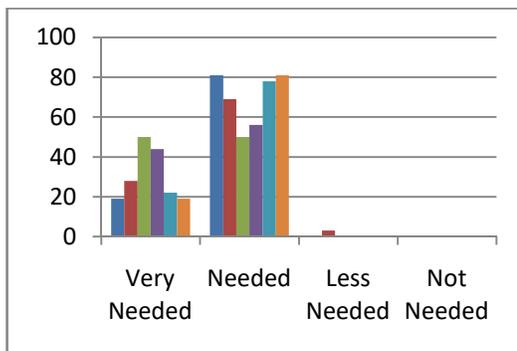


Chart 2

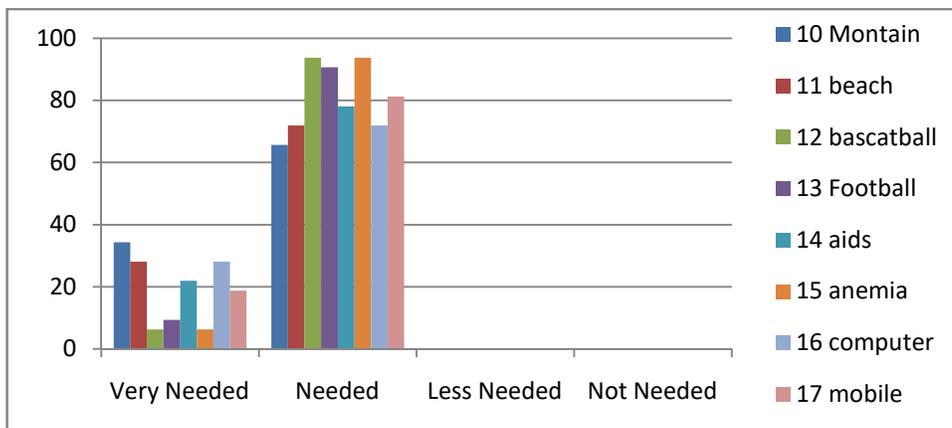


Chart 3

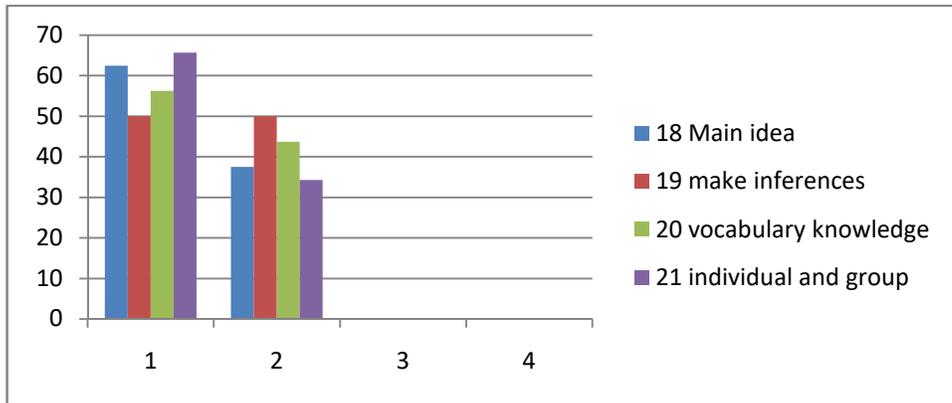


Chart 4

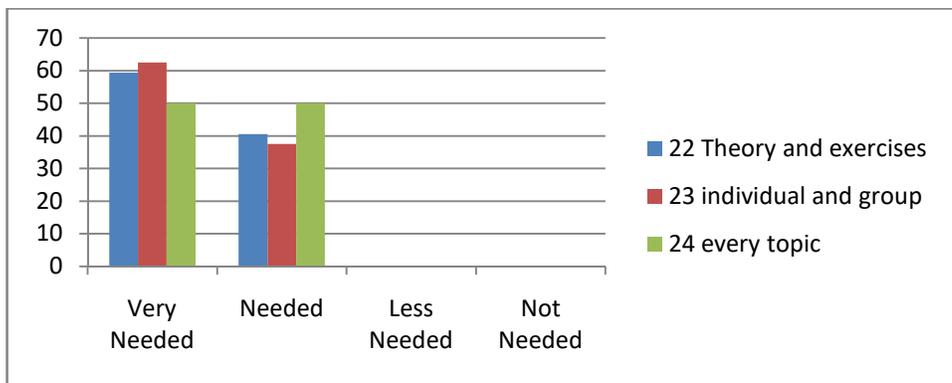


Chart 5

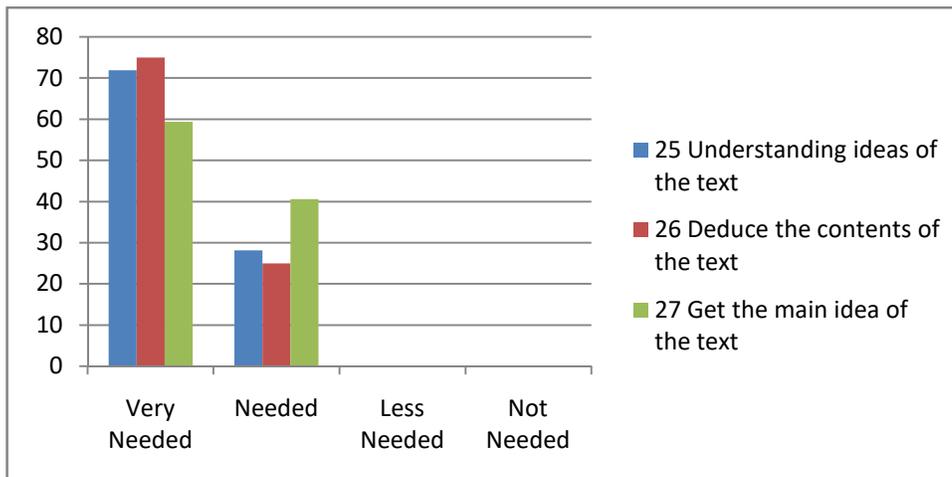


Chart 6

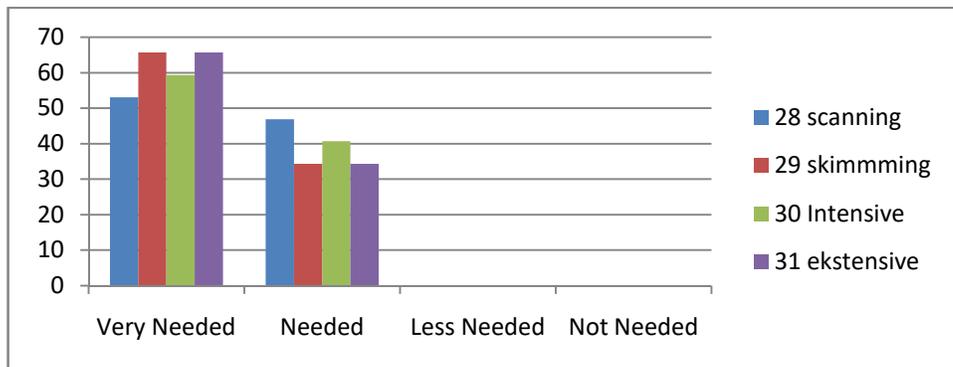


Chart 7

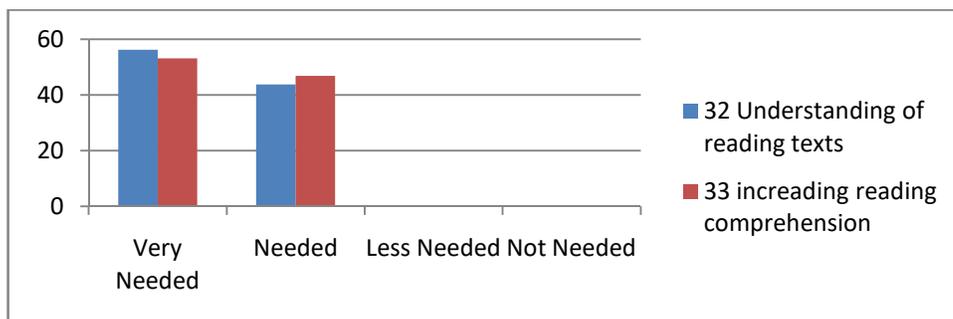


Chart 8

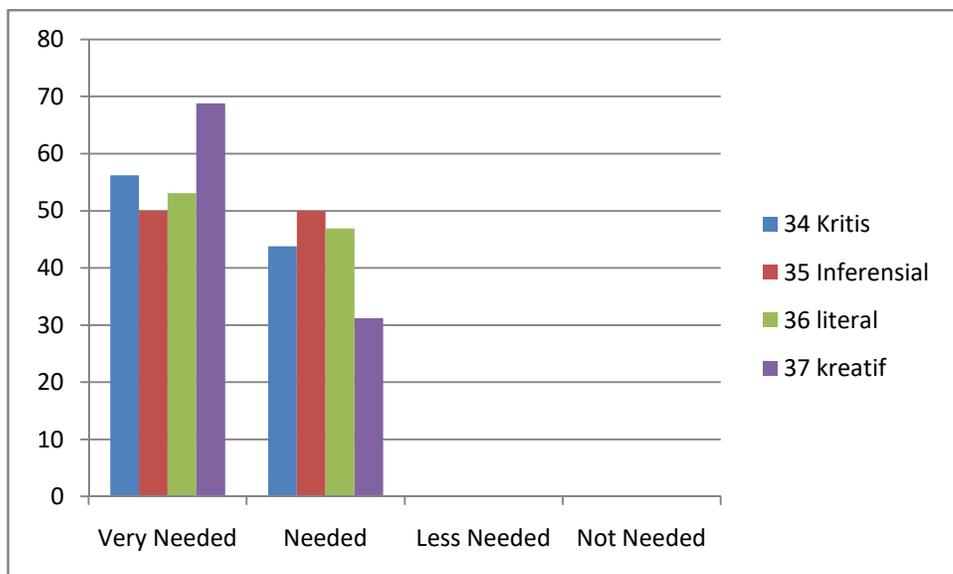


Chart 9

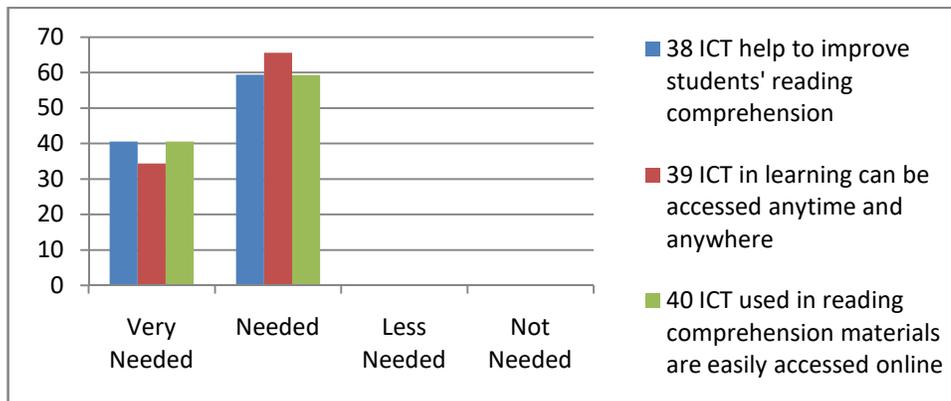


Chart 10

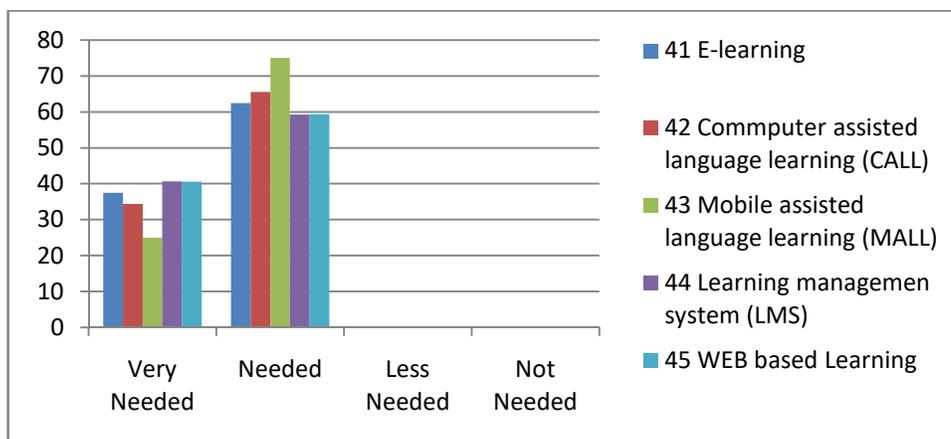


Chart 11