

Training of the Curriculum (K-13) e-Rapor Information System for the Teachers of Senior High School

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Abstract *The curriculum transformation of primary and secondary education in Indonesia had stimulated the transformations movement of technology. One of these transformations was in the form of the student grade report (e-rapor) in Indonesian schools. This transformation required primary and secondary school teachers to be adapted to use information technology. The efforts to answer this transformation were carried out through the technical guidance to provide training for teachers of Sekolah Menengah Atas (SMA) and Sekolah Menengah Kejuruan (SMK) Persada Bandar Lampung by filling out this e-Rapor. This training was carried out through several main materials i.e., the application installation, the application troubleshooting, and the use of e-Rapor. This training was implemented in 3 days. Moreover, the next training was also conducted to deal with some of the arising problems after the technical guidance was conducted. This technical guidance was attended by 27 teachers. This technical guidance was implemented by delivering material, conducting the simulation, and doing discussion. The result of this technical guidance was analyzed quantitatively through observations and discussions. It showed that all technical guidance participants were able to fill out the e-Rapor system according to their respective roles after the technical guidance implementation on filling out the e-Rapor.*

1. INTRODUCTION

The implementation of the 2013 curriculum in elementary and secondary schools encourages several transformations in national education (Mumpuni, 2018). which can be seen in the pre-learning process, the assessment process, and the reporting learning outcomes. Learning outcome which are commonly known as a student grade report was also transformed in the form of e-Rapor (Nurani *et al.*, 2015).

This transformation encourages each primary and secondary education to improve and provide the education services that meets the 2013 curriculum standards (K.13). This improvement was seen in the reporting process of learning assessment. This

reporting process was previously conducted by filling out the report physically which are then transformed into the electronic-based report by filling out the items through web page format (Putra & Putri, 2017).

The transformation that was seen on the web form and format encouraged the education system to change the procedures of filling out the learning assessment through the electronic-based report. This procedure requires a new understanding to fill out the assessment in an explicit procedure so that the teachers have the same understanding of accessing the electronic-report (Jaffar & Sabandi, 2019). Moreover, some teachers in the primary and secondary schools do not have the required skills in accessing the electronic-based service

system, especially the information system in the web pages (Directorate General of Education and Culture Agency, 2015). Also, several rules in accessing e-Rapor became important issue for the teachers because they need a thorough learning to ensure the reporting process of learning outcomes properly (Juliantri *et al.*, 2017)

The non-numerical and numerical data and the synergy among users in filling out the learning Assessment through this electronic reporting became an important aspect of this technology (Kashora *et al.*, 2016).

Another problem that is rarely understood by the teachers is about their role in the electronic report system i.e., the role of classroom teachers, the role of course teachers, the role of guidance and counseling teachers, and the role of the system operators. These roles are important to standardize the understanding of filling out the learning outcomes to all the teachers as users (Prasetijo *et al.*, 2016). Therefore, the solutions to give the teachers experience in managing the students' grades through e-Rapor are by encouraging them to improve their skills to use the e-Rapor system through the training and the technical guidance about the electronic-based assessment reporting services in the form of web pages.

The teachers have a low-level understanding of the operation of the e-Rapor Information System. There are only 8 out of 27 teachers who understood the e-Rapor-based Information System. The e-Rapor-based information system has been socialized by the education ministry and the e-Rapor software had been provided by the ministry of education which can be downloaded through various links. The environment for running this system is also available and supported it well. The problems encountered in the e-Rapor integration process are mostly found on the human resources (HR) who do not fully understand the functions of the e-Rapor information system, the use of e-Rapor system, and the positive impact on the education process. Human resources did not only play a role as a teacher, but they also had a role as the principal, the operators, and the head of the education office and academics staff for supporting and running the reporting system through the E-Rapor information system.

Most of the teachers knew and understood the e-Rapor system so that the technical guidance and training on the use of the e-Rapor system has to be implemented. This training is important for the teachers of SMA/SMK Persada Bandar Lampung in order to understand the functions and the positive effects of the e-Rapor system, to operate the e-Rapor system, and to understand the role of each user on the e-Rapor information system.

This community service provides the training in the form of a presentation about the materials and technical guidance of e-Rapor for the teachers. The purpose of this activity is to enable the teachers to conduct the student learning outcomes report management on an electronic-based reporting system in the form of a web page.

2. METHOD

The methods used in this community service were the training method, the data collecting technique, the data analysis technique, the interview, and the inviting participants technique to be willing to use the e-Rapor system (Rifai, 2019).

2.1 Training method

The e-Rapor training activities were designed to create teachers who are able to operate the e-Rapor system, to understand their respective roles in the system such as the classroom teachers, the course teachers, and the counseling teachers, and to carry out the collaboration between Institute of Informatics and Business Darmajaya and the SMA/SMK in Bandar Lampung. The teachers and school administrator/operator of SMA/SMK Persada were participating in this activity.

2.2 Data collecting technique

The data collecting technique used in this research was carried out to find out the problems or obstacles experienced by the school in applying assessment reports using the e-Rapor system. The data were collected by interviewing the principal, the vice-principal, and the operators in the field of a curriculum (Spradley, 2016). As for the measurement of the success level of training activities, the data collecting technique was carried out by distributing measurement devices to pre-test and post-test sessions. The purpose of distributing this device was to photograph the level of increase in knowledge of the e-Rapor training participants. Furthermore, the discussion was implemented to determine the strategies that were considered appropriate in providing invitations and a good understanding of the e-Rapor system.

2.3 Data analyzing technique

The data analysis technique used in this training was the qualitative analysis (Vanderstoep & Johnston, 2008). The data was collected through the result of interviews, discussion results, pretest, and posttest. The data analysis techniques were carried out to determine the best way to transfer knowledge about the e-Rapor system so that teachers were willing to attend and understand training and technical guidance about the e-Rapor system. In addition, an analysis of the results of the pretest and posttest was conducted to measure the level of a teacher's understanding of e-Rapor before and after technical guidance.

2.4. Setting and time of this activity

The training was carried out at SMA/SMK Persada Bandar Lampung. The time of this activity was on February 21st, 2019, and April 1st, 2019. The details of the activities began with the presentation of the e-Rapor system to teachers in the SMA/SMK Persada Bandar Lampung. The presentation was conducted through the lecturings and the training on the use of the e-Rapor system. After that, the technical guidance was carried out to help resolve the technical problems in the use of the e-Rapor system.

3. RESULTS AND DISCUSSION

3.1 Result of Interview

Before the results of the training and technical guidance of the e-Rapor information system were presented, the results of the interview with several respondents were explained so that this activity was carried out properly. These respondents were the principal of SMA Persada Bandar Lampung, the principal of SMK Persada Bandar Lampung, the representatives of teachers of SMA/SMK Persada Bandar Lampung, and operators. Several students were interviewed to find their interests in the e-Rapor information system and to understand the result of accessing e-Rapor information system.

Students also argued that the electronic-based learning outcomes report has a positive impact especially on the students' parents who always wanted to know their children's scores. The report that was always given to the students' parents is in the conventional form which meant that the conventional form was in the printed report, thus, it is difficult for the parents to check the attendance of their children. Therefore, the conventional report was replaced by the electronics form. Students argued that the student learning outcomes report using the electronic system was more effective because it was easily accessible to students and their parents. All of the students were willing to access reports in the form of web pages because they already have a supporting device to access them. The results of the interview were:

1. The e-Rapor system was supported by the environment at SMA/SMK Persada Bandar Lampung
2. It took a commitment from all parties in the school environment in encouraging teachers to be willing to use the e-Rapor system in reporting student learning outcomes
3. Training and technical guidance was needed in supporting teachers and admin resources to be able to operate the e-Rapor system consistently

3.2 Result of training and technical guidance

The training and technical guidance of the e-Rapor-based information system was a series of activities aimed at exposing the e-Rapor system in theory, the

legal basis for its use, and the guidance on its use from various types of users. The school elements who were directly related to the e-Rapor-based information system received an in-depth understanding and skills in using the e-Rapor-based information system. Therefore, it was expected to reduce misuse and unpreparedness in facing the process of migration from the traditional report systems to e-Rapor-based information systems. The e-Rapor-based information system had 5 groups of users i.e., classroom teacher, course teacher, counseling teacher, operators, and students. Each group of users had their rights and authority (Appendix 1).

This training and technical guidance focused on the efforts to encourage SMA / SMK Persada Bandar Lampung teachers to be able to use the e-Rapor-based information system. This also provided the teachers' motivation to be familiar with the other systems such as the citizen data that were migrated from traditional to electronic data. If the students' e-Rapor was done electronically, it was able to be systemized so that the course teachers, counseling teachers, and operators may reduce human error in conducting the assessment reporting process. In addition, it became also the easiness for alumni or students who needed to access the e-Rapor. These training activities were conducted at SMA / SMK Persada Bandar Lampung with the details of the activities as follows:

The opening activity was carried out by M. Dwiyan Aditya, M.Pd. This activity was carried out to discuss the agenda which included the training activities and technical guidance on the use of e-Rapor information systems (Figure 1). This training was carried out through several stages i.e., namely training on the use of e-Rapor information systems from which the users became the operator. This training for classroom teachers, counseling teachers, and students were expected to bring information and guidance to access the e-Rapor information system



Figure 1. Log in page of e-rapor information system. Source: e-Rapor Information System Ministry of Education (2019)

The preliminary discussion on this activity began by explaining the log-in form on the e-Rapor information system. Figure 1 shows that the user must fill five items to enter the e-Rapor information system. These items include username, password, organizer, user group, and, select the academic year. The username can be entered with a user name or character that the user can remember. Passwords can be filled with uppercase or lowercase letters or combination of both in addition to numbers and punctuation. The organizer column is filled with the name of the school. User groups are chosen with a choice of admins, class teachers, subject teachers, counseling teachers, and students.

1. Training and Technical Guidance for Operators. Training for operators was carried out by Sabam Parjuangan, S.T., M.Kom. The training was conducted by lecturing and simulation methods. The first stage was to explain the stages theoretically to the operator and carrying out the simulations and assistance. The training with the operators was carried out separately on January 28th, 2019 and the technical guidance was carried out on February 4th, 2019. The result of these activities 2 computer operators were willing and able to have authority and duties as the operator who provided system installations on the server and were able to be accessed on an intranet basis.
2. Training and Technical Guidance for Classroom teachers, Course teachers, and Counseling teachers. Training and technical guidance for teachers was carried out on February 21st, 2019. Moreover, training, and technical guidance activities for classroom teachers, course teachers, counseling teachers were conducted by Sabam Parjuangan, S.T., M.Kom. The material presented included the role of classroom teachers, course teachers, and counseling teachers in the e-Rapor-based information system. The presentation of the material was done by the lecturing method. Furthermore, the simulations were also carried out and the system was used with the guided learning method used to maximize the class teachers' skills through the e-Rapor-based information system. The result was that 18 classroom teachers who were willing and able to report assessment with the e-Rapor-based information system. It is relevant with a result of the researches that states that the classroom teachers, the subject teachers, the counseling teachers, and the administrators who can provide and to use the e-Rapor information system of the students' learning report (Solichin & Kristanto, 2019) and (Supriyono *et al.*, 2019). There were 27 course teachers were willing and able to report learning outcomes assessment with

e-Rapor-based information system. In addition, 3 counseling teachers were willing and able to use the e-Rapor-based information system.

The process of providing material to teachers at the SMA/SMK Persada Lampung is carried out in class. All the teachers were enthusiastic about participating in the training activities. Even though schools do not have adequate facilities for conducting e-Rapor information system training, teachers are willing to bring their equipment. As shown in Figure 2, teachers actively participate in e-Rapor information system training activities. They use devices that they carry themselves, namely laptops. Their enthusiasm was also shown with a high curiosity through the questions raised.



Figure 2. When Exposing the e-Rapor-based Information System Material

3.3 Result analysis of pretest and posttest

The level of success of this activity was measured from the day of the results of the pretest and posttest given to the participants. Posttest results increased by 31.5%. The difference in results as shown in Figure 3.

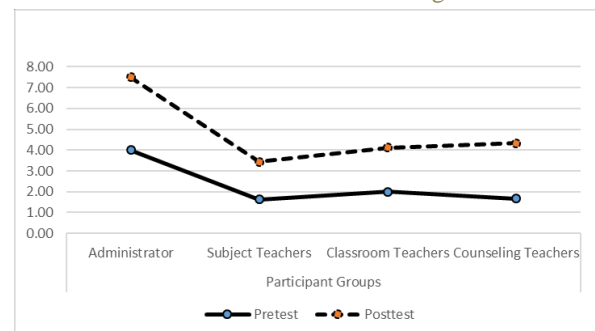


Figure 3. Comparison of the results of the pretest and posttest

Figure 3 showed that there was a significant increase in the admin group. Where the increase reached 3.5 units. This difference in skill and knowledge improvement was 1 point higher than the increase in counseling guidance teachers. After studying in-depth with users from the admin group, there were new findings data, namely the level of interest and educational background. The Admin group has a high interest in matters relating to information systems. The educational background of the admin group is alumni of the informatics engineering and

information systems study program. In addition, the admin group had a relatively younger age than other user groups. Where the average age of the admin group was at the age of 26 years. This was consistent with the results of research which stated that the educational background influenced the success of training (Ayura, 2013). Likewise, the effect of age on the success of training related to information technology (Wirjono, 2010).

While the next significant improvement occurred in the counseling teachers group. The improvement was occurred by 2.5 units. The counseling teacher group had the same characteristics as the admin group, particularly in the age section in which the group of counseling teachers had an average age of 28 years. But counseling teachers did not have an educational background that was related to information technology but were active users of information technology.

This increase was also followed by a group of classroom teachers and subject teachers. The amount of the increase point was around 2 points. Characteristically, classroom teachers and subject teachers had characteristics of an average age of > 35 years. In addition, educational background > 95% had no background in information technology education. Another thing that characterized a group of classroom teachers and subject teachers was that the individuals who were not familiar with information systems.

Overall this training had a good impact on teacher understanding in running the e-Rapor system. According to Aljum (2013), Tamtanus (2018), dan Fajrizka (2016), the results of the pretest and posttest were not merely seen from the improvement but also the spread of the level of correct answers by all participants. This meant that the level of improvement was not only significant but it was also evenly experienced by all participants who had the training activities.

4. CONCLUSIONS

Training and technical guidance of e-Rapor information systems to administrators, class teachers, subject teachers, and counseling teachers have an impact on the readiness and skills of trainees in using e-Rapor information systems to report student learning outcomes. Technical problems that are previously experienced by participants from using the e-Rapor information system had been solved. After having this training, the principals of the schools are not willing to support the procurement of e-Rapor information system support facilities in SMA / SMK Persada Lampung.

The training and technical guidance activities were attended by 2 operators, 18 class teachers, 27 subject teachers, and 3 counseling teachers. Training performance and technical guidance reached 31.5% in improving the abilities and skills of trainees using the

e-Rapor system. The best performance is in the admin group, which is 3.5 points. This happens because the admin does have a high interest in the information system, and in accordance with their educational background.

REFERENCES

- Aljum. (2013). Perbedaan Pengaruh Media Pembelajaran Balok Dan Flashcard Sebagai Alat Permainan Edukatif Untuk Meningkatkan Kreativitas Anak Usia Dini. 71–96.
- Ayura, D. P. (2013). Pengaruh Latar Belakang Pendidikan, Pendidikan Berkelanjutan, Komitmen Organisasi Dan Pengalaman Kerja Terhadap Kinerja Aparat Pengawas Intern Pemerintah (APIP). *Jurnal Akuntansi*, 1(3).
- Fajrizka & Rumana, N. A. (2016). Evaluasi Hasil Skor Pre-test dan Post-test Peserta Pelatihan dengan Materi Klasifikasi Penyakit ICD 10 dan Kode Tindakan pada ICD 9-CM di Pusdiklatnakes Jakarta Tahun 2016. *Indonesian of Health Information Journal (INOHIM)*, 4(2), 54-57.
- Jaffar, M., & Sabandi, A. (2019). Persepsi Guru Terhadap Efektivitas Penggunaan E-Rapor di SMA Negeri 1 Ampek Angkek, Kabupaten Agam. *Jurnal Bahana Manajemen Pendidikan*, 8(1), 9-17.
- Juliantri, L., Florentinus, T. S., & Wibawanto, H. (2017). Pengembangan e-Rapor Kurikulum 2013 Berbasis Web di SMK Negeri 1 Slawi. *Innovative Journal of Curriculum and Educational Technology*, 6(1), 11–16.
- Kashora, T., van der Poll, H. M., & van der Poll, J. A. (2016). E-learning and technologies for open distance learning in Management Accounting. *Africa Education Review*, 13(1), 1–19. <https://doi.org/10.1080/18146627.2016.1186863>
- M Mumpuni, A. (2018). Integrasi Nilai Karakter dalam Buku Pelajaran Analisis Konten Buku Teks Kurikulum 2013. Yogyakarta: Penerbitan Deepublish..
- Nurani, D., Puspasari, M., & Rachmawati, A. (2015). Aplikasi E – Rapor Berbasis Web Pada Smp N 1 Tempuran. Seminar Nasional Teknologi Informasi dan Multimedia, 3(1), 4.71-4.75.
- Prasetijo, L. H., Syah, F., Wibowo, Sapta Hary Surya, Ardanu, F., Suyadi, & Utami, E. (2016). Penerapan Pendekatan Model Waterfall Dalam Pengembangan Sistem E-Rapor. 9(1), 39–47.
- Putra B, M., & Putri G, N. (2017). Sistem Informasi Pengolahan Nilai Rapor di Sekolah Menengah Kejuruan DCI Kota Tasikmalaya. *Jurnal Manajemen Informatika (JUMIKA)*, 4(2), 21-30.
- Rifai. (2019). *Kualitatif: Teori, Praktek dan Riset Penelitian Kualitatif Teologi*. Yoyo Topten Exacta.
- Solichin, A., & Kristanto, D. (2019). Implementasi dan pelatihan penggunaan e-rapor Universitas Budi Luhur. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat*, 7, 1–6.

- Spradley, J. (2016). *The ethnographic interview* (7th ed.). Illinois: Waveland Press, Inc.
- Supriyono, H., Isnen, N. M. A., & Murdiyanto, D. (2019). Peningkatan Sarana dan Pengetahuan untuk Mendukung Penerapan E-Rapor dan Uks di Mim Potronayan 1. *Warta LPM*, 22(2), 98–109. <https://doi.org/10.23917/warta.v22i2.8929>
- Tamtanus, A. S. (2018). Evaluasi Pelaksanaan Diklat Teknis Pengelolaan Arsip Dinamis di Pusdiklat Ristekdikti 2018. *Manajerial: Jurnal Manajemen dan Sistem Informasi*, 18(2), 75–85.
- VanderStoep, S., & Johnston, D. (2009). *Research methods for everyday life*. San Francisco, CA: Jossey-Bass.
- Raino Wirjono, E. (2010). Pengaruh Kepercayaan dan Umur Terhadap Kinerja Individual dalam Penggunaan Teknologi Informasi. *Jurnal Ilmiah Akuntansi dan Bisnis*, 5(1), 1-13.

Appendix 1

Table 1. Authority and Duties of Each Users

| User | Authority and Duties |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operators | 1 Installing e-Rapor-based information system on a server computer. |
| | 2 Synchronizing the e-Rapor-based information system with the <i>primary data of education</i> system |
| | 3 Editing the school profile |
| | 4 Giving access rights to users in this case “subject teachers”, “classroom teachers”, “counseling teachers”, and “students” |
| | 5 Socializing e-Rapor, sharing usernames and passwords to those who were concerned |
| | 6 Summarizing the names of course in the e-Rapor and standardizing it |
| | 7 Mapping subjects |
| | 8 Adjusting local content data |
| | 9 Inputting minimum completeness criteria (KKM) subjects |
| | 10 Entering date of e-Rapor data |
| | 11 Printing report |
| | 12 Sending value to primary data of education |
| | 13 Conducting Backup and restoring data |
| | 14 Inputting the value of the National Standardized School Examination |
| | 15 Activating and deactivating input values by the teacher in the current semester |
| Subject Teachers | 1 Configuring personal data |
| | 2 Mapping basic competencies and summarizing basic competency descriptions |
| | 3 Entering the value of knowledge, skills, spiritual attitudes, and social attitudes |
| | 4 Entering a description of the score |
| | 5 Sending final grades to classroom teachers |
| Classroom Teachers | 1 Configuring personal data. |
| | 2 Configuring student data, especially student data that was not yet available in the <i>primary data of education</i> system |
| | 3 Entering and printing KRS (Study Plan Cards) for those who used the semester credit system (Semester Credit System)oiyyaaa |
| | 4 Entering attendance value, extracurricular value, student achievement, guardian notes, and processing description of student attitudes |
| | 5 Printing report |
| Counseling Teachers | 1 Configuring personal data |
| | 2 Viewing details of student data |
| | 3 Viewing at the results of processing the end of the semester and the end of the year |
| | 4 Viewing at the graph of the students’ score |
| | 5 Viewing the recap of students’ attendance |
| | 6 Viewing and Print |
| | 7 Assessing spiritual attitudes and social attitudes |
| | 8 Giving consideration to classroom teacher on student development notes |
| | 9 Counseling teacher also gives consideration to classroom teachers related to attitude assessment |
| Students | Students were able to access e-Rapor through the internet and intranet networks. In this case, the students were only able to see without making changes to the data on the e-Rapor except changing the password and input the Study Plan Card for the organizer with the semester credit system. |