Increased Activity and Learning Outcomes Using the WhatsApp and Google Form Applications in the Covid-19 Pandemic Period

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| | 13 |
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| Article Info | Abstract |
| Article History | This study aims to describe the increase in student activity and learning |
| Received: 09 February | outcomes that ugh distance learning using the WhatsApp and Google form |
| 2021 | applications during the Covid-19 pandemic. The subjects of this study were 36 |
| Revised: 22 February 2021 | students of class X TKRO 3 SMKN 1 Bulakamba Academic Year 2020/20. 25 This |
| Published: 25 March 2021 | research is a quantitative study using descriptive methods. This study aims to |
| Keywords | describe the increase in student activity and learning outcon 11s through distance |
| Activity | learning using the WhatsApp and Google form applications during the Covid-19 |
| Learning outcomes | pandemic. The subjects of this study were 36 students of class X TKRO 3 SMKN |
| WhatsApp | 1 Bulakamba Academic Year 2020/2021. This research is a quantitative study |
| Google form | using descriptive methods with operational stages: (1) preparing a Learning |
| | Implementation Plan (RPP). (2) preparing learning materials, assignments and |
| | daily tests. (3) upload learning materials on the class WhatsApp group. (4) |
| | students study learning materials using cellphones / laptops. (5) monitoring the |
| | implementation of the learning process. (6) students work on and upload |
| | assignments. (7) provide daily feedback and tests using Google form. The |
| | implementation of distance learning with the WhatsApp and Google form |
| | applications can increase student learning activities from 88.89% to 93.52% or |
| | an increase of 5.20% and can increase the average value of learning outcomes |
| | from 77.53 to 80.13 or increased by 3.34%. |
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INTRO26 UCTION (12pt)

COVID-19 predemic in Indonesia is part of the ongoing coronavirus disease pandemic 2019 (COVID-19) around the world. The disease is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first positive cases of COVID-19 in Indonesia were detected on March 2, 2020, when two people were confirmed to be infected by a Japanese (Septaria, 2020). The spread of the corona virus is taking place rapidly in a number of countries. According to research at the University of Texas at Austin, United States, published in the journal Emerging Infectious Disease, the coronavirus transmission chain lasts less than a week and more than 10 percent of patients are infected by people who have been infected with the virus but are not yet showing symptoms. In handling the corona virus, they are called people without symptoms (Septaria, 2019).

In order to prevent transmission from becoming more widespread, activities that have the potential to bring many people together at the same time are limited, among others, going to school, working in offices or factories, watching m²⁴es in theaters, music concerts and so on. To reduce the risk of the spread and transmission of Covid-19, the Ministry of Education 44 Culture and local governments made various learning adjustments in an effort to prevent the spread and transmission of the corona virus. One of them is the policy of implementing

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distance learning from home online (in navork/ online) which has been in effect since March 40, 2020. This adjustment is contained in the Circular of the Minister of Education and Culture Number 2 of 2020 concerning the Prevention and Handling of Covid-19 within the Ministry of Education and Culture and Circular Number 3 of 2020 concerning Prevention of Covid-19 in the Education Unit and Circular of the Central Java Province Education and Culture Office Number. 443.2 / 08991 dated 15 March 2020 concerning the Arrangement for the Implementation of National Exams / School Examinations and Teaching and Learning Activities in SMA, SMK and SLB of Central Tva Province for the 2019/2020 Academic Year. This policy recommends teachers to carry out online learning or distance learning from the date of March 16, 2020.

Covid-32 pandemic has an impact on aspects of education, process learning shifts from conventional (face-to-face) learning in the classroom into online farming (Nelius Harefa & Sumiyati, 2020). Online or online electronic learning and some call it online learning is a learning activity that utilizes a network (internet, LAN, WAN) as a method of delivery, interaction and facilities and is sufaorted by various other forms of learning services (Waryanto, 2006). Online learning or e-learning is a form of learning model that is facilitated and supported by the use of information and communication technology. Elearning can be defined as a form of information technology applied in the field of education in the form of cyberspace, the term e-learning is more appropriately intended as an attempt to transform existing learning in schools or colleges into a digital form bridged by internet technology (Hanum, 2013). E-learning is an open source learning system, a learning is an educational system that uses electronic applications to support teaching and learning is an educational system that uses electronic applications to support teaching and learning using other computer networted is (Wulandari & Rahayu, 2010).

Education is a system that develops a broad enough mission related to physical development, skills, thoughts, feelings, abilities, social to issues of belief or faith. So that whatever obstacles or obstacles to education must continue to run well (Warkintin & Murgadi, 2019). The obstacles in this case are the obstacles experienced by teachers and students in the midst of the current Covid-19 pandemic conditions, where learning must be carried out with remote system and cannot be implemented face-to-face in class. The current pandemic condition requires educators, in this case, teacers to innovate in changing face-to-face learning patterns into face-to-face learning patterns, online learning methods do not require students to be present in class. Students can access learning through internet media (Andri Anugrahana, 2020).

This online learning process forces parents to support the child's learning process by having to provide a wifi network or data pulses to ensure that their children can get education even from home (Ely Satiyasih Rosali, 2030). Online learning is the only method that can be applied to the current conditions of the Covid-19 pandemic, teachers can evaluate students through assignments to find out the level of understanding of students in receiving material delivered online (Yuka K. M., 2020).

There are many media used for online learning. Various platforms have long provided zeros service. For example, Google Classroom, Learning House, Edmodo, Teacher Room, Zenius, Google Suite for Education, Microsoft Office 365 for Education, Your School, Smart Class. This is what is known as a microbloging platform (Basori, 2013). But it takes time to learn about the learning system through this online learning platform. If understood, it is possible to have a positive impact on the learning process (Wisudawati et al., 2020). Not all teachers and students know and understand the use of these media, teachers and students with different backgrounds have different abilities in applying these media. On the other hand, there is no time and opportunity to study everything together because the Covid-19 pandemic suddenly arrives and forces everyone to stay at home. So the teacher must be able to choose and use media/ applications that are familiar to the teacher himself, especially for students. It

is hoped that the media/ applications used will not make it difficult for teachers and students to use them. And the learning process must continue. In distance learning with an online system using Google Classroom, student activity has increased (Sutrisno, 2020). However, not all teachers and students know and understand the use of these media, teachers and students with different backgrounds have different abilities in applying these media. On the other hand, there is no time and opportunity to study everything together because the Covid-19 pandemic suddenly arrives and forces everyone to stay at home. So the teacher must be able to choose and use media/ applications that are familiar to the teacher himself, especially for students. It is hoped that the media/ applications used will not make it difficult for teachers and students to use them.

Besides the media/ platforms mentioned above, social media can also be used as an alternative in implementing online learning, where media users can search for information, communicate with mother and make friends online. As it is known that social media is very diverse, including Facebook, Twitter, Line, Blackberry Massenger, WhatsApp, Instagram, Path, LinkedIn, Snapchat and several other social media (Trisnani, 2017). In some areas, online learning is not easy to carry out because you stumble upon a weak or even non-existent internet network (Lalu Gede M., 2020). If there is, it can also be burdensome for parents and teachers in the midst of a pandemic that is destroying the joints of the economy. The video call system consumes a large internet quota and is definitely expensive. Besides the stability of the internet in Indonesia is very uneven. There is another way, namely the WhatsApp group. If only texting communication, then this does not require a large quota so it costs low. In addition, through WhatsApp, pictures, voice notes and videos can be sent (Mirzon Daheri et al., 2020). The WhatsApp application make it easier to interact and communicate because through the application it reveals that students feel WhatsApp makes it easier for them to communicate and support learning activities compared to other online media (Afnibar et al., 2020). For assignments and daily tests, the teacher refers more to the independence of students, with assignments such as making videos or sending photos of work/ individual assignments sent/ collected via WhatsApp chat and for daily tests the teacher can use the Google form. The Google form application is one of the services of Google docs, this application has space for making quizzes, online surveys and forms which are supported by many accessibility, which can only be read (reading) and also for editing documents (editing).

Google form has advantages in the world of education, namely (1) teachers can make daily practice questions/ tests per chapter. (2) can collect a questionnaire by providing a website address. (3) to collect teacher and student data in a short time. (4) making registration forms online without having to come to school (Untung Rahardja et al., 2018). Google form is one of the recommended software as an online assessment tool. The interface is simple, easy to use and understand, and stores large amounts of data, stored for a long time (Pitri Wulandari et al., 2019). The teacher as Google Form as an alternative for making evaluations (Tria Mardiana et al., 2017). Google Form is also an application that is easy to use even for beginners, free (free to pay), usually the results of the data are presented in an excel file so that it is easy to process and a fairly lightweight program. Utilization of the Google Form application in helping madrasah supervisors to become effective and efficient (Sri Rahmiyati 2019). One of the online learning media that can be used without paying is Google form. Google form can be used as a distance learning evaluation tool (Eci Marcica, 2020). Online learning using WhatsApp and Google forms is the most effective medium for the learning process. Using Google Form is very easy and effective with limited student conditions. Students can still collect student assignments even though the internet connection is constrained (Akifee Bensulong et al., 2021). The use of WhatsApp and Google forms is very helpful in teaching and learning activities with the current online learning model, besides being easy to use, this application also does not take too many ways to make it easier for students and teachers to carry out learning and learning can run properly (Rahmawati, 2020).

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Research on the use of WhatsApp groups as a learning medium was carried out at Diniyah Takmiliyyah Awaliyyah/DTA At-Tawakal Bandung City, which revealed that the use of WhatsApp groups as a learning medium was deemed sufficient to help tutors and students in the learning process as a learning media development. Students who are left behind on learning materials because they are unable to attend now do not need to borrow/ ask for the material because the tutor can share the learning material on the WhatsApp group (Resa Iskandar, 2020), WhatsApp is very instrumental in providing and disseminating information (15 others and as a good tool In providing course material arthe form of material explanations if students do not understand the material during the teaching and learning process in the classroom, WhatsApp can also play a roza as a means of completing assignments (Sartika, 2020), the use of ICTs such as WhatsApp as a learning medium is suspected to have been able to create a learning atmosphere which is effective because it provides better and faster learning opportunities for students because it contains that naterial being taught, displays assignments to discussions between students and guidance with teachers can all be done outside formal teaching hours (Andikagrajana, 2017), while researchers a study conducted by Mirzon Daheri et al., (2020) revealed that online learning via WhatsApp in elementary schools tends to be ineffective. Is very necessary to evaluate the role of teachers as well as parents, in this case in the future the effectiveness of using WhatsApp as a learning medium, the majority of parents concluded that it was not effective, namely 41.2%. 33.3% doubted the effectiveness of this WhatsApp. Only 25.5% believed it was effective.

Based on online program evaluation research that has been conducted by Eko Mulyadi (2020) regarding learning from Physics through WhatApp, Google form and email, it is revealed that the achievement of active presence has increased by 7.5% Research on the use of Google forms has been conducted by Siti Ngafifah (2020) which reveals that the use of Google forms in evaluating learning at SD IT Baitul Muslim Way Jepara, East Lampung has a level of ease of 100%, speed of 45%, practicality of 60% and efficiency of 60%. conducted by Sri Bulan and Husniyatus Salamah Zainiyati (2020) revealed that the unit of Google forms as an educational space and a task pocket in online learning activities at Madrasah Ibtidaiyah Negeri/ MIN 1 Paser East Kalimantan during work from home can build teacher professionalism to always be creative and innovate so that it can make teaching meaningful with learning videos and quizzes that more students so that new teaching traditions are created from paper to online form sheets. The results of research conducted by (Pitri Wulandari et al., 2019) show that 90% of respondents agree that the use of Google forms starts from the stages of planning, creating, publishing, providing instructions for use, giving good responses because it makes it easier and saves time for sublents and teachers. The results of research by Akifee Bensulong et al., (2021) revealed that the use of WhatsApp in learning continued with the provision of Google form evaluations on Indonesian language subjects at SMK N 2 Sewon Bantul can reduce the level of student absenteeism in details; at the second meeting it fell 19, 04% compared to the first meeting, down 14.11% at the third meeting compared to the second meeting and down 58.90% at the fourth meeting compared to the third meeting.

The distance learning system (PJJ) with an online/ online model using the WhatsApp application and Google form in Vocational High Schools (SMK) is a relatively new implementation that is widely used by teachers when implementing PJJ. For this reason, it is necessary to study whether the use of WhatsApp and Google forms in distance learning at SMK can have an impact on increasing positive learning activities for students which in turn can increase student participation in learning and can increase learning outcomes in the form of increasing the value of daily test results, especially in the eyes Engineering Drawing lessons. The purpose of this 17 Jdy is to determine the extent to which the increase in student learning activities and the increase in student learning outcomes in distance learning using the

WhatsApp and Google form applications during the Covid-19 pandemic in Engineering Drawing subjects with size material on working drawings

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METHO₃₆

The method used in this research is descriptive random with data sources obtained from class X TKRO 3 as many as 36 students (32 boys and 4 girls). The research was conducted at SMKN 1 Bulakamba Brebes Jalan Raya Kluwut Bulakamba Kab. Brebes Central Java in the 2020/2021 school year which was held from January 5, 2021 to February 11, 2021. Data collection techniques were carried out online with the WhatApp application and Google form. The data is taken according to the number of meetings, namely 4 meetings for learning I and 4 meetings for learning II. In learning I, the learning process, giving assignments and collecting assignments as well as daily tests were all carried out using the WhatsApp application media only. Whereas in learning I more starting process was carried out using WhatsApp while daily assignments and tests used Google form.

The data analysis technique used is quantitative data analysis with percentage analysis calculated using Microsoft Excel 2010 with stages; 1) data collection (student activity data in learning and learning outcome data) in learning I and learning II, 2) tabulating data in learning I and learning II 3) displaying data in learning I and learning II 4) drawing conclusions (by comparing the process learning and test results in learning I with learning II).

Data was collected through observation and document study, observation was used to collect data about the level of student activity with indicators of student attendance and activity to ask / give responses in the WhatsApp group. Meanwhile, document study is used to explore supporting documents for student activeness in the form of evidence of assignment collection on WhatsApp / Google forms. Document study is also unit to find out learning outcomes through daily tests with WhatsApp / Google form. The tools used incollect data were in the form of activeness observation sheets containing notes of activeness during the learning process in the form of a checklist (yes or no) and a document study checklist sheet. Assessment on the observation sheet is carried out by determining the percentage of student activity, where the percentage of activeness is obtained by the following equation.

$$P = \frac{f}{N} \ge 100\%$$
 (Anas Sudijono, 206:43)

P = precentage

f = frequency that is being searched

N = numbers of case (number individual)

Student learning outcomes are analyzed by calculating individual completeness and classical completeness with the following equation;

individual completeness =
$$\frac{Score \ obtained}{Total \ score} \times 100\%$$
 (Djamarah, 2008:67)

The results obtained are then compared with the Minimum Completeness Criteria (KKM). The minimum completeness of the learning outcomes of knowledge is 70. If the individual score is less than 70 it means the student has not completed it and if the score obtained is the same or more than 70 it means the student has finished. Classically, it is said to be complete learning if it reaches $\geq 80\%$ of the total student score or the student's average score in the class (Djamarah, 2008).

classical completeness = $\frac{Total students completed}{Total students} x 100\%$ (Djamarah, 2008:67)

Classical completeness description is done by comparing the results obtained. If the number of students completing is equal to or more than 80% it means that classically learning

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is said to be complete and vice versa if the number of students who have completed has not reached 80% means that classically it as not been completed (Djamarah, 2008). Indicators of increasing learning activities can be seen from the increase in learning activities during the learning process in learning and learning II, while the indicators of increasing learning outcomes are seen from the increase in the average value of learning outcomes test results and the increase in individual completeness and classical completeness.

RESULTS AND DISCUSSION

The results of the analysis of student activities in the learning process II show that students are more actively involved in every learning process and assignment collection compared to the implementation of learning in learning I on previous basic competencies / KD.

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Figure 1. Activeness in learning in the form of absenteeism (left), collecting task (middle) and responding (right) via WhatsApp group.

Student activeness can be seen from the attendance of students in the WhatsApp learning group, the number of students who respond to the material being studied and related to the learning tasks they are working on and activeness (timeliness) in collecting or uploading assigned assignments.

Table 1. Comparison of Student Activities in Learning

| | | 1 | earnin | g I | | | L | earning | gП | |
|---------------------------------|-------|-------|---------|-------|-----------|-------|-------|---------|-------|---------|
| Indicator | | | (meetin | g) | (meeting) | | | | | |
| | 1 | 2 | 3 | 4 | Average | 1 | 2 | 3 | 4 | Average |
| Presence Provide questions / | 88,9% | 91,7% | 88,9% | 94,4% | 90,98% | 94,4% | 94,4% | 97,2% | 97,2% | 95,80% |
| responses Timely submitting | 83,3% | 88,9% | 86,1% | 83,3% | 85,42% | 86,1% | 94,4% | 91,7% | 88,9% | 90,28% |
| assignments | 88,9% | 91,7% | 88,9% | 88,9% | 90,28% | 91,7% | 97,2% | 94,4% | 94,4% | 94,44% |
| Average overall | | | | | | | | | | |
| student activity | | | | | 88,89% | | | | | 93,52% |

In table 1 it can be seen that the percentage of attendance at learning I at the 1st, 2nd, 3rd and 4th meetings respectively is 88.9%, 91.7%, 88.9% and 94.4% or the average attendance at learning I amounted to 90.98%. While the percentage of attendance at learning II at the 1st, 2nd, 3rd and 4th meetings respectively was 94.4%, 94.4%, 97.2% and 97.2% or the average attendance at learning II was 95.80. %. The average attendance in learning II increased by 5.30% compared to attendance in learning I. The percentage of questioning / responding activities at learning I at the 1st, 2nd, 3rd and 4th meetings respectively was 83.3%, 88.9%, 86.1% and 83.3% or the average activity of asking / responding to learning I was 85.40%. While the percentage of activities asking / giving responses in learning II at the 1st, 2nd, 3rd and 4th meetings respectively was 86.1%, 94.4%, 91.7% and 88.9% or the average activity of asking / giving responses to learning II amounted to 90.28%. The average activity of asking / responding to learning II increased by 5.71% compared to the activity of asking / responding to learning I. The percentage of timeliness in collecting assignments in learning I at the 1st, 2nd, 3rd and 4th meetings respectively was 88, 9%, 91.7%, 88.9% and 88.9% or the average timeliness of collecting assignments in learning I was 89.60%. While the percentage of timeliness in collecting assignments in learning II at the 1st, 2nd, 3rd and 4th meetings respectively was 91.7%, 97.2%, 94.4% and 94.4% or the average punctuality of collecting assignments at learning II amounted to 94.43%. The average punctuality of collecting assignments in learning II increased by 4.61% compared to attendance in learning I. Overall the average percentage of learning activities increased from 88.89% in learning I to 93.51% or an increase of 5.20 %.

As stated by Munir (2017), the increase in student activity in distance learning with WhatsApps and Google forms is due to the fact that the virtual world environment has great potential to improve the quality of learner (student) engagement, create social presence, and provide authentic learning opportunities for 39 trners. in various disciplines and professions. On the other hand, distance learning, online or e-learning models can bring a new atmosphere in a variety of learning developments, make student independence better and improve students' communication skills (Hartanto, 2015). In online learning, students feel more comfortable to ask questions and express opinions in forums that are carried out online. This learning method is also able to trigger learning independence and encourage to be more active (Firman & Sari, 2020: 84).

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Figure 2. Test with Google form

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| | | Akhmad Wandio | sudah. | - | 1000000 | SANGGUP | | | 5.10L | E | ¢ | 50.5 | garis barbu harus dipanji B | | n sejajar | 3 | |
| t | | Mohammad rofik | sudah | | | SANGGUP | 100 TO | 1 | 5.1/3L | E | - | 50.5 | gars ukur boleh berpotor B | | in kombinasi | 3 | |
| ٩., | | ANF HUMY FIYANDA | sudah | 12.1 | | SANGGUP | | | 5 12L | E | 0 | 50 1 2 | garis bantu harus dipanjis B | | n sejajar | 3 | |
| W | 80/100 | DENOK WINI ANGORA | hiddh | .03 | X TKR | SANGOUP | 0.35 mm | 15.3 | 5.191, | . E | 0 | .50.5 | gans bantu harus dipanji B | ukuta | n kombinasi | 3 | 8.4 |

Figure 3. Test results with Google form

The implementation of distance learning with WhatsApp and Google forms can improve student learning outcomes when compared to learning outcomes in the previous and basic competency with a learning model that only uses Whatsapp media as shown in table 2 below.

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| hmadi | | Increased | d Activity and Learning |
|-----------|---|----------------|-------------------------|
| ble 2. St | udent Learning Outcomes in Learning u | using WhatsApp | and Google form |
| No | | Learning I | Learning II |
| 1 | The highest score | 91,00 | 92,00 |
| 2 | Lowest score | 58.00 | 60,00 |
| 3 | Average value | 77,53 | 80,13 |
| 4 | Amount of acquisition above KKM | 28 | 32 |
| 5 | The percentage of classical learning completeness | 78% | 89% |

From table 2 above, it can be seen that the highest score in learning I was 91 and the highest value in learning II was 92, the lowest value in learning I was 58 and the lowest value in learning II was 60, while the average value of the daily test results in learning I was 77.53 and the average value of the daily test results in learning II was 80.13 or an increase of 3.35%. The number of students who obtained 15 stery learning (with minimum completeness criteria / KKM; 75) in learning I was 28 with a percentage of classical learning constituents who obtained learning completeness in learning II were 32 with a percentage of classical learning completeness in learning II amounted to 89% or an increase of 14.28%.

The increase in learning outcomes by distance learning using Whatsapp and Google forms is inseparable from the high activity of students in learning, it is also supported by good learning planning from the teacher. Besides the process of mentoring, interaction, and feedback that is well developed by teachers in distance learning. The involvement of students mentally, intellectually, and emotionally in learning will have an impact on the better students' mastery of the learning material. This is in line with what Hartanto (2015) stated that distance learning using WhatsApp and Google forms can improve student achievement and / or learning outcomes. WhatsApp and Google form media in online learning can be accessed easily via a smartphone or other device and flexible learning time can be done at any time, thus giving plenty of time to access knowledge (Akifee Bensulong, 2021). The use of the Whatsapp application in online learning has a positive impact because 29 dents are happier when learning to use innovative applications that use gadgets so that it has a high positive impact on the achievement of student learning outcomes in learning and evaluation (Amry, A. B., 2014). According to Yuka Kholyssa Mauly (2020) learning outcomes can increase because in online subject matter students can get learning resources from the internet, so the opportunity to learn is broader not only from the material provided by the teacher so that when evaluating or assessing students are ready to complete with easy.

CONCLUSION

From this research it can be ignored that; 1) student activity in learning with indicators that are present in the WhatsApp group, giving questions / responses and timeframe has increa21d, 2) student learning outcomes have increased, the learning outcomes are in the form of an increase in the average val21 of skills scores (assignment scores / work results) and the average value of knowledge, the increase in the percentage of classical learning completeness, the increase in the highest score and the decrease in the lowest score.

SUGGESTION (12pt)

In distance learning using Whatsapps and Google forms as well as with other media / platforms there are several things that need to be considered; (1) switching to online teaching is really demoralizing, but we will soon get the hang of it if we get to know digital technology. (2) take advantage of various applications, tools, and services designed to assist online learning. (3) strive to interact with each student via email or instant message and remind them that we

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have time to meet face to face. (4) provide regular feedback to students, input or feedback to help motivate students and help them identify the strengths and weaknesses of each, encouraging growth and development. This is important in distance learning where students may feel quite isolated and left unaware of their progress and performance. (5) conduct evaluations with other teachers, share experiences and advice. (6) remain consistent, after we find a system that we think is working well, keep using that system. (7) ask for input or feedback, especially when testing a new system.

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