

YouTube as Audio Visual Media Learning in Music Education

Muhammad Ilham Rahmaturrizki*, Yudi Sukmayadi

Postgraduate School
Universitas Pendidikan Indonesia
Bandung, Indonesia
*m.ilhamrr@gmail.com

Abstract—This article provides students with how YouTube is a part of learning music. There are several YouTube channels that show how to play a musical instrument properly. This study uses a qualitative research design and descriptive analysis method. Data obtained from research instruments of observation, interviews, literature review and documentation. After the data is obtained, the validity will be processed by triangulation. The purpose of this article's analysis is to offer an alternative learning media development via Youtube to develop students' musical competences. In this study, the researcher described how YouTube can be a learning medium, especially in music. Because students need other media besides books. We can make them use their smart phones for something of value, namely learning music with Youtube. This research also supports the industrial revolution 4.0, which uses technology in every activity, including education.

Keywords—Youtube audio visual, Youtube, music learning, tutorial

I. INTRODUCTION

Youtube is the most popular social media in today's society. Its popularity is projected to continue to increase along with the number of users. Previously, Youtube recorded a monthly registered audience of 1.5 billion in mid-2017. In fact, the market research institute Statista predicts that the number of users will reach 1.8 billion people in 2021 [1].

The increasing popularity of Youtube is driven by the increasing use value of the video sharing platform on the site for its users. On May 9, 2018, Google, representing Youtube, presented the results of the research carried out with Kantar TNS. This research studies the use of Youtube in Indonesia. Google delivers various information about increasing popularity, differences in urban and rural markets, to the type of content that Indonesian netizens are interested in. Based on data quoted by CNN from Pew Research data, Youtube is most popular among young adults, blacks and Hispanics. Like many social networking sites, Youtube is widely used by users between the ages of 18 and 29 with a percentage of 82% [2].

Internet users visit Youtube not only for entertainment, but also to learn or get information. The information above is an

interesting study to research and develop to see that Youtube users between the ages of 18 and 29 are Youtube users with the largest number of users, with a percentage of 82%. Based on data obtained from the Central Bureau of Statistics, the age range is dominated by adolescents who are students.

The development of Youtube as one of the most popular social media is an opportunity in the world of education. Education has a very important role in developing quality human resources. Education is a conscious and planned effort to create an atmosphere of learning and the learning process so that students actively develop their potential to have spiritual strength 2 religion, self-control, personality, intelligence, noble character, and skills needed for themselves, society, nation and state. Educational institutions are required to be creative and innovative in creating new and attractive teaching media for students.

In the context of learning, Youtube can be used as a teaching media. The existence of a video sharing platform allows students to independently find and share information in the form of knowledge and practice. Youtube can be used by Educational Institutions as a teaching media that is preferred by students. It cannot be denied that the community, especially students, is easier to understand information in the form of knowledge through media related to information technology such as Youtube compared to conventional delivery in class.

Most students are interested to the things that are video-visual in nature compared to general ways, such as the delivery of knowledge that only comes from books. By using Youtube, students will be more interested in understanding a theory or knowledge. Through learning media using Youtube, students can understand a material faster than studying through textbooks, because usually learning media is made interesting, so students will not feel bored. This was allegedly able to increase student interest and motivation.

II. LITERATURE REVIEW

A. Previous Research

Youtube as a learning media has been the material for the thoughts and research of several researchers from various institutional backgrounds. So of course there has been a history related to this material, which will support Youtube research as an audio video visual learning media in music learning. The first research is a research entitled "ROLE OF YOUTUBE MEDIA AS A MEANS OF OPTIMIZATION of EARLY CHILDHOOD DEVELOPMENT" Written by Ilva Nur Kiftiyah, et al. In the Islamic Psychology Study Program of the State Islamic College (STAIN) Kediri. This research discusses the phenomenon of YouTube as a video-based application media in this digital era, which has been widely used as a means to optimize children's cognitive development by some parents. The research objective was to determine the role of YouTube media in optimizing cognitive development in children. In this study, it can be concluded that stimulation with Youtube videos can be used as a means of optimization for early childhood cognitive development. The results showed that children who were given stimulation had a similar impact to previous studies. This of course can be a method contribution to developing early childhood cognitive development in the era of the development of gadget technology and social media today.

Next is a research with the title Youtube Social Media Utilizer as a Learning Media for Indonesian Language in Higher Education written by Muhammad Yusi Kamhar and Erma Lestari from FIP Mathematics Education, Tribhuwana Tungadewi University. In this study, it was found that the users of social media or social media as teaching materials had a positive effect on the teaching-learning process inside and outside the classroom. Social media cannot be separated from everyday life for teenagers. The use of social media creates a positive view that Indonesian is not a boring subject but, it is very fun and even forms social character and cooperation between teaching participants. Therefore, social media can be a teaching medium to increase student interest in learning Indonesian.

B. Theoretical Review

1) *YouTube*: YouTube is a popular video sharing website application founded in February 2005 by three former PayPal employees: Chad Hurley, Steven Chen, and Jawed Karim. YouTube is the most popular video database in the internet world, or maybe even the most complete and varied. At first YouTube was not developed by Google, but Google acquired it and then combined it with other Google services [3]. Furthermore, Brad and Debra defines YouTube as "a community where people are entertained, informed, educated, and inspired through the sharing of video" (a community where people can get entertainment, information, education, and inspiration through videos. that the uploader shares). YouTube has become a worldwide phenomenon which is a

video sharing site that functions as a means to share videos online [3].

2) *Learning interest*: Interest is a situation when someone has attention to something and is accompanied by a desire to know and learn and to prove further [4]. This understanding indirectly gives an indication that in the element of interest there is deep attention to an object. Interest has an element of attention, desire, and a tendency to have a more active relationship with an object. The interest that arises in a person for an object makes that person closer and actively connected with the object in question. In the world of education, interest can be defined as a tendency that arises when individuals are interested in something that will be learned and meaningful to themselves. According to Effendi interest is a source of effort arising from student needs which is a driving factor in doing business (learning). This shows that interest is closely related to one's needs. In addition, the intensity of interest in a person can also be seen through how hard he tries to meet the needs related to the object of his attention. Interest that arises in a person actually begins with attention [5]. According to Walgito, attention is the concentration or concentration of individual activities aimed to something or a set of objects. Attention is a selection of stimulus [4]. This is in line with the opinion which says that attention is the concentration of psychic energy on an object. Attention is the amount of awareness that accompanies an activity that is carried out [6].

3) *Audio visual learning media*: The development of educational technology cannot be separated from technological developments in general. Various educational tools and modern educational facilities also support the optimization of the learning process, both at the school level and in everyday life. The development of technology, especially information and communication technology, offers many conveniences in learning, which allows a shift in learning orientation from the process of presenting various knowledge to a process of guidance in carrying out individual exploration of science. In addition, it is also possible to change the paradigm from a philosophy of learning centered on teachers / lecturers (teachers centered) to learning centered on students (student centered). In view of the basic philosophy, learning is essentially a communication process that aims to convey messages / information so that it can stimulate the thoughts, feelings and interests and attention of students. In the learning process, the development of teaching materials / materials can be done in various ways, one of which is the development of teaching materials with media optimization. The media used to facilitate communication in the learning process is often termed learning media. Various efforts are made to foster teacher creativity and motivation in utilizing information and communication technology to improve the quality of education. It is hoped that the planned learning program should be based on the needs and characteristics of

students and be directed to changes in student behavior in accordance with the objectives to be achieved. One of the media used in learning, which is believed to be able to stimulate students' interest in lectures more, is Audio Visual media. Audio-visual media is also an alternative means of carrying out the technology-based learning process. Audio-visual technology-based learning can be used as an alternative means of optimizing the learning process, due to several aspects, including: a) it is easy to pack in the learning process, b) is more attractive for learning, and c) can be edited (corrected) at any time. By utilizing computer technology, it is hoped that audio-visual learning can be used to deliver more interesting subject matter, including the visualization of teaching material, so that it is more attractive to students. Through audio-visual learning can be more interactive and more likely to occur two way traffic in the learning process. Audio-visual media is a medium for delivering information that has audia (sound) and visual (image) characteristics. This type of media has better capabilities, because it includes both of these characteristics. Furthermore, audio-visual media is divided into two, namely: a) silent audio-visual, namely media that displays sound and still images such as sound frame films (sound slides), sound frame films, and sound prints; b) audio-visual motion, namely media that can display sound elements and moving images such as sound films and video cassettes. Other divisions of audio-visual media are: a) pure audio-visual, namely both sound and image elements come from one source such as a film video cassette; b) audio-visual is not pure, namely sound elements and picture elements come from different sources, for example a sound frame film whose picture elements are from a projector slide and the sound elements come from a tape recorder.

III. METHODS

In this study, the authors used a qualitative research paradigm, which is descriptive analysis. The theoretical basis is used as a guide so that the focus of research is in accordance with evidence in the field. The data is in the form of documents recorded by video shooting at your cafe in Bandung with MP4 document files.

Interviews and observations were also carried out on students and teachers in the learning process, to find out the ease and difficulties that students encountered and how much interest and motivation for learning using YouTube as an audio-visual learning medium in music learning.

Data analysis was carried out through data reduction, namely the process of selecting, concentrating attention, simplifying, abstracting, and transforming crude data that emerged from findings in the field. The presentation of youtube as an audio visual learning medium in music learning is also provided to provide a description of the discussion in application, taking action and drawing conclusions on learning

objectives that can be achieved in the implementation of learning.

IV. RESULTS AND DISCUSSION

Education is the right of every citizen in Indonesia, therefore it is the State's obligation to provide proper education for all its citizens. However, with the development of technology, it is possible that this form of education is no longer limited to the classroom, but can be done anywhere and anytime. The presence of the internet in the world has changed the paradigm of education in the classroom into unlimited education. All information flows can be obtained through mass media and the internet easily and quickly. Gerbner argues that the mass media instill certain values and attitudes. The media also spreads these attitudes and values to other members of society [7].

Youtube, which is one of the video-based social media, has become the most popular media for downloading or uploading videos. Users can load, watch and share video clips for free. In general, videos on Youtube are music videos, event reports, news, films, TV, and videos made by the users themselves who are called creators.

Youtube is sometimes labeled negatively with the view that watching YouTube is a waste of time and is useless. But in fact, Youtube can be used to become a learning medium, one of which is in learning music. Music teachers, or Cultural Arts Teachers often have difficulty explaining material that they are not good at, especially in learning musical instruments that they are less good at. On the other hand, school facilities that are not yet qualified in providing musical instruments are another limitation in students learning directly about musical instruments.

Basically, the goals of music education at all levels of education are the same. Learning music in schools aims to: (1) foster a sense of art at a certain level in each child through the development of musical awareness, response to music, the ability to express himself through music, thereby enabling children to develop sensitivity to the world around them; (2) developing the ability to judge music through intellectual and artistic pursuits to the culture of the nation; and 3) can be used as provisions for continuing studies into higher music education [8]. The goals of music education in junior high schools are not much different from the goals of music education in primary schools. The purpose is to shape and foster student personality. Aesthetic sensitivity and positive values from musical activities are expected to foster student behavior, attitudes and character.

So far, the process of learning music in schools, especially elementary schools, has not gone as expected. The obstacles that are always faced are the lack of facilities and infrastructure in schools, the position of music subjects which are not the main subjects (often as extracurricular activities) so they are considered less useful. Apart from that, human resources in the music sector are also a frequent obstacle was found because there are still quite a lot of music teachers in elementary

schools who have non-musical backgrounds. This situation results in learning music, which should be a means to cultivate feelings and cultivate musical skills, in fact only in the form of theoretical lessons that are more directed and emphasize the cognitive realm, so that the affective and psychomotor domains are neglected and forgotten. Until now, there are still many music teachers who in carrying out the teaching and learning process only use the lecture method, so they do not touch the essence of the purpose of learning music.

The application of the lecture learning method in the teaching and learning process of music causes students not to come into direct contact with the music itself because students accept more theoretical definitions. Thus, music will be understood not as a whole as a whole, but become separate. In this case, rhythm, melody, scale, and harmony stand on their own, so that the expected learning objectives are farther away to be achieved. As a result, students' interest in music lessons has declined and the ability to learn music is less encouraging.

To be able to optimize music lessons, learning media is an important factor that must be considered. Schools often don't have qualified musical instruments. Especially musical instruments that are classified as difficult to own privately, one example is the Saxophone musical instrument.

Saxophone is a saxophone is a musical instrument that is included in the classification of aerophone musical instruments, namely musical instruments whose sound source comes from the air. Currently the saxophone is very popularly used in jazz music and has a variety of different types and ranges with different sizes. In the late 20s, the saxophone instrument began to be used in the jazz scene.

The saxophone was originally the design and idea of a Belgian named Adolphe Sax. He wanted a clarinet that could blow the octave in the position of the upper (left hand) and lower (right) fingers unchanged. In 1840 he succeeded in fulfilling this wish by forming an instrument of his own creation. The blow tools he created not only had the technique in the same position of the fingers from top to bottom as desired, but could also be combined. This is also expected between the speed of playing the woodwind instrument and the power of the tin / brass sound. He then made all types that exist in the saxophon family, namely soprano, alto, C melody, tenor, baritone and bass saxophone. The bass saxophone is so big and long that you have to sit on a high bench to play. Because it was impractical, the bass saxophone was discontinued.

Learning the Saxophone is quite complicated, there are some basic techniques that must be mastered, there are several things that must be considered in the basic technique of playing the saxophone. Among them, namely, breathing, ambasir, and fingers. There are three types of breathing, namely chest, diaphragm and abdominal breathing. However, the recommended breath in playing the saxophone is diaphragmatic breathing. After exhalation, what must be learned is ambasir. The word ambasir comes from French, namely embouchure which means river mouth. While in English it has a double meaning, namely mouthpiece and lips.

Ambasir is the position of the lips and teeth in the mouthpiece. After exhalation.

Fingering is a technique that should be learned next.

In this case all the fingers involved in playing any type of saxophone are basically the same. That's why all saxophone players can definitely play all kinds of saxophone.

Learning the Saxophone is not enough with just reading books and theoretical material, but to study it directly will be difficult with the unavailability of the saxophone in schools. Therefore, learning media is another alternative for students to study the Saxophone, namely with Audio Visual media which will provide students with knowledge with the senses of hearing and sight. The Audio-visual Media that can be used as teaching material for teachers is Video via Youtube.

Youtube itself is one of the platforms that can be accessed by anyone with various kinds of videos in it. Videos that can be accessed can also be from various countries. Often YouTube is only an option to fill spare time without any meaning in it. But in fact there are also many people who upload videos that are useful, one of which is tutorial videos for playing musical instruments, we can even find tutorials on playing the saxophone on Youtube.

This is a bright spot for music education in schools, when the facilities are inadequate, and textbooks often make students bored, the use of Youtube is an alternative to overcome it.

There are many tutorial videos to play the Saxophone that we can find on Youtube, one of which is the video uploaded by (KELAS MUSIK CHANNEL). In the video, it is explained in detail how to play the saxophone starting from basic techniques to how to play the saxophone properly and correctly.

Before entering the saxophone practice material, students were given an understanding of the saxophone instrument, both its introduction and maintenance. The saxophone care steps are as follows:

- The mouthpiece gets the first attention where these parts must be joined first. The mouthpiece and reed are joined by a metal ring called a ligature as the fastener. The steps for installing the reed correctly are (a) Put the reed on the table mouthpiece in the correct position. (b) The mouthpiece that has been attached to the reed into the ligature, in this case what needs to be considered is not to hit the reed tip against the ligature, because the reed tip is very thin and easily torn. (c) After the mouthpiece and ligature are attached, adjust the position of the reed end symmetrically with the tip of the mouthpiece. (d) If the reed position is correct, the ligature can be tightened by turning the hardening bolts so that the reed position does not change or shift.
- Care. Intensive maintenance of the instrument, apart from hygiene reasons, is important to keep the instrument ready to play. Things that need to be done in the maintenance of these instruments are (a) Careful handling of the saxophone and avoid the possibility of a

collision with other hard objects, because the metal material of the saxophone instrument is very thin and impact sensitive. (b) Immediately after using the saxophone clean both the outside and the inside, the wet pads should be dried immediately using a cloth that is easy to absorb water. (c) The mouthpiece and reed are cleaned using running water. (d) To lay down saxophone when not being played is by using a special saxophone stand, in this way the instrument load rests on the bell of the saxophone. If there is no special saxophone stand, the saxophone can be placed in another way, by putting the saxophone instrument to sleep on a flat and flat surface. How to put it like this must be considered is that there are no parts that can bear a heavy load, because the basic material of the saxophone is made of soft metal and is easily bent. The way to put the saxophone is safe, namely on the right side bell of the saxophone there is a metal plate which functions to protect the valve tones of Bb, B, C and C#. (e) Storage of the saxophone in the instrument case should be placed in a safe and dry place, and the temperature changes are not too noticeable, this is to maintain expansion. It should be noted that how to put the case (suitcase) is recommended not to turn it upside down, this position is very prone to damage. While the correct position, namely the saxophone relies on the "U", this part is coated with a metal plate to protect the saxophone from impact.

The basic material for playing the Saxophone contained in the video is as follows:

A. Breathing

The breathing that is recommended in studying the saxophone, as in breathing in singing or playing other musical instruments, is the diaphragmatic breathing system. Diaphragmatic breathing greatly determines sound production and a more perfect ability to reach the techniques and tones in existing etude-etude. How to practice breathing is taught by positioning the body slightly bent like a bow, both hands pressing on the side of the stomach, inhaling through the mouth and then stored into the stomach so that the stomach tends to enlarge as if feeling the air in the stomach up to the waist, then exhale by hissing slowly. Gradually, the position of the bow is recommended so that the upper abdomen is depressed so that the side of the stomach is more optimal. And if the chest is expanding then it is not abdominal breathing but it is called chest breathing, but if the chest does not move and the stomach is enlarged it means that stomach breathing has been done correctly.

B. Embouchure

Embouchure or the position of the mouthpiece on the lips when blowing the embouchure comes from French, namely Embouch and Italian, namely Imbocatura which means mouth. The placement of the mouth on the saxophone mouthpiece must be considered because it relates to the tone

color or voice color. Here's how to position the lips on the mouthpiece (embouchure) on the saxophone (a) Curl the lips (upper and lower lips) so that they form lines on the surface of the lips and scorch the corners of the lips towards the center so that the shape of the lips resembles the letter "O". (b) Insert the mouthpiece into the mouth that has formed an "O" as needed then close the lips around the mouthpiece, so that when you blow air it doesn't leak. (c) Blow the mouthpiece by saying the word "dho". By blowing while saying the word "dho", the air that comes out is hot air.

C. Position Playing the Saxophone

The position to hold the saxophone that is taught is to first attach the strap or strap to the body of the saxophone. Followed by the position of the index finger, middle finger and ring finger of the left and right hand, adjusted right on the surface of the tone valve in a semi-circular shape. The position of holding the saxophone while standing which is taught to students is standing naturally, head slightly lowered with straight eyes ahead. The saxophone is tilted slightly to the left by attaching the lower part of the saxophone to the right hip. This really helps with the freedom of movement of the fingers and keeps the saxophone from moving a lot when played. The second position is holding the saxophone, which is a sitting position. The sitting position is not much different from the standing position. The difference is only in body position, while the position of the instrument is the same as in a standing position.

D. The fingering of the saxophone needs to be considered, the correct placement of the fingers determines the speed and accuracy of the tone when playing the saxophone

The curved shape of the finger when pressing the valve button (valve) is highly recommended for students in learning saxophone instruments. To press the first, second and third points from above, use the fingers of the left hand. Type the first from the top for the index finger, the second point for the middle finger and the third point for the ring finger. To press the fourth, fifth and sixth points from above using the fingers of the right hand. The fourth point from the top for the index finger, fifth for the middle finger and the sixth point for the ring finger.

E. Sound Production

The first note recommended for students is Tone B on the saxophone. The position of the B note on the saxophone is on the index finger of the left hand. Tone B is highly recommended for learning sound production because note B is the easiest note to blow because it is in the middle register, the exhalation and embouchure presses are not too heavy. Followed by a note A with the position of the index and middle fingers on the left hand. Followed by G, and C. And the notes F, E, D and C on the right hand.

F. Scale

The scale taught is the C Major scale and its minor relations, G Major (one #) along with its minor relations, D

Major (two #) and its minor relations, A Major (three #) along with its minor relations, F Major (one b) along with its minor relation, B b Major and its minor relation and E b major and its minor relation. Students are required to be able to master the scales that have been taught in grade 1.

G. Sight Reading

Elementary level students are required to be able to read music notation well. Basic level material in reading musical notation in particular in practice the saxophone instrument. Books that are used as references in the practice of saxophone instruments are Paul de Ville's *Universal Method of Saxophone* and N.W Hovey's book *Elementary Method*. This book contains basic saxophone materials in the form of musical notation and is accompanied by short songs that are easy for students to understand.

H. Articulation (articulation)

Articulation is the clarity of tone or words in a sentence. Nugroho Wahyu Pinardi argues that Articulation is a major component of musical phrases or sentences. Control over articulation is also a way for the players to acquire the right quality of musical structure. The techniques related to woodwind instruments consist of various types of tongue work (tonguing) such as when pronouncing the syllable "da, ta, du, tu, la, ga". While the use of this articulation technique is in accordance with the needs of producing tones that include long or short tones, broken or continuous. In this sense, the articulation technique plays an important role in the production of legato tones, staccios and other signs. It can be said that legato and staccato are a good way for students to practice articulation.

Even though it is only through video, this learning medium is expected to be a new experience and add new knowledge of students about the Saxophone musical instrument. More than that, we can also find tutorials to play other musical instruments. This proves that Youtube can be used as a place that provides Audio Visual learning media. YouTube, which is also frequently used by students, is expected to increase students' interest in learning.

The high interest in learning music in a student will be able to move that person to do the maximum in order to achieve the goals of the arts (music) subject. Students' interest in taking music lessons more seriously can also be influenced by external factors, such as teaching methods conveyed by teacher. An interesting music learning method is able to create great interest for students to follow these subjects. Great interest in following music subjects is expected to lead to good mastery of music subject matter, such as mastery of musical instruments and vocal processing. Music is a human creation using sound as a medium to enjoy it. Music comes in the form of a unity of rhythm, melody, harmony, form and style, and expression.

V. CONCLUSION

This research is expected to make a real contribution to class teachers, especially music class teachers who are interested in integrating the internet as a means and source of learning. The use of Youtube in this cultural arts class is very helpful in enriching material for learners. Input that does not only come from books helps internet generations who are familiar with various digital information sources understand learning materials better. This research is also expected to provide an overview of how to integrate technology, especially internet-based video, in the classroom learning theory subjects which are often perceived as difficult subjects by students. Students' perceptions of technology integration in the classroom, especially internet-based video technology, are positive. The integration of YouTube in cultural arts classes has succeeded in increasing student interest and interest so that this subject is no longer considered a difficult subject to learn.

The conclusion that can be drawn in this study is that the use of YouTube as an audio-visual learning medium in music learning can provide convenience in providing in-depth knowledge and understanding of YouTube video tutorials about music as well as providing direct musical experiences through videos on Youtube.

On YouTube, there are various types of videos, one of which is a video tutorial on playing a musical instrument. Not limited to just a few musical instruments, almost all musical instrument tutorials can be found on Youtube, even fairly complex musical instruments like the Saxophone are on Youtube. This is an alternative that can be used in the world of education, especially music. Videos on Youtube can be used as an Audio Visual learning medium that helps teachers to provide material at school. This also helps teachers who have limitations in delivering material that they have not mastered, and also help the absence of musical instrument facilities at school.

REFERENCES

- [1] Diaz, 3 fakta menarik dari riset google tentang perkembangan youtube di Indonesia, 2018, Mei 18 [Online] retrieved from: <https://id.techinasia.com/fakta-perkembangan-Youtube-di-indonesia>, Accessed on March 25 2020.
- [2] Susetyo, Youtube dalam angka-angka., (2020, Februari 15) [Online] retrieved from: <https://www.cnnindonesia.com/teknologi/20150214143544-18532127/Youtube- dalam-angka-angka>, Accessed on June 10 2020.
- [3] Brad and D. Scheep, *How to Make Money with YouTube*. New York: McGraw-Hill Education, 2009.
- [4] B. Walgito, *Pengantar Psikologi Umum*. Yogyakarta. Andi Offset, 1997.
- [5] U. Effendi, *Pengantar Psikologi*. Bandung: Angkasa, 1985.
- [6] S. Suryabrata, *Psikologi Pendidikan*. Jakarta: PT Raja Grafindo Persada, 1998.
- [7] Nurudin, *Komunikasi Massa*. Malang: CESPUR, 2004.
- [8] Jamalus, *Pengajaran Musik melalui pengalaman Musik*. Jakarta: Depdikbud, 1988.

- [9] G. Eason, B. Noble, and I.N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," *Phil. Trans. Roy. Soc. London*, vol. A247, pp. 529-551, April 1955. (*references*)
- [10] J. Clerk Maxwell, *A Treatise on Electricity and Magnetism*, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68-73.
- [11] I.S. Jacobs and C.P. Bean, "Fine particles, thin films and exchange anisotropy," in *Magnetism*, vol. III, G.T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271-350.
- [12] K. Elissa, "Title of paper if known," unpublished.
- [13] R. Nicole, "Title of paper with only first word capitalized," *J. Name Stand. Abbrev.*, in press.
- [14] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," *IEEE Transl. J. Magn. Japan*, vol. 2, pp. 740-741, August 1987 [Digests 9th Annual Conf. Magnetism Japan, p. 301, 1982].
- [15] M. Young, *The Technical Writer's Handbook*. Mill Valley, CA: University Science, 1989.