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Can Turnitin come to the rescue: From teachers' reflections?

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This article presents a qualitative critical action research of six Grade 12 high school teachers who used Turnitin as part of their assessment processes. Turnitin submissions, one-on-one semi-structured interviews, observation and reflective activities were used for data production/generation. This article concluded that although Turnitin did not help teachers to prevent all learner acts of plagiarism, it did scare the learners away from any obvious act of plagiarism. Teachers and learners became aware of technology as the 'servant', not the 'master'. Grounded analysis was used to generate two themes for this study. This study tried to explore the teachers' reflections of Turnitin used in assessing their learners' work. Purposive sampling was used in selecting the only six Grade 12 teachers who used Turnitin at a school in Durban. This article consequently recommends the use of 'Assessment, Educating to avoid and Turnitin' framework in any integration of hard-ware/soft-ware (HW/SW) resources.

Keywords: assessment; awareness; curriculum; digital technology; habit; Turnitin

Introduction

Turnitin is becoming one of the most popular digital technology (DT) resources that enable teachers to prevent their learners from appropriating another author's ideas as their own. Within this context, a resource is defined as anything that facilitates/initiates learning or "any person or thing that communicates learning" (Khoza, 2012:75). An interpretive case study conducted by Khoza (2013a) on university lecturers, who were using online environments in teaching their modules, identifies three types of resources in education. The study identifies the HW (any tool/machine/object used in education), SW (any material used in conjunction with tools to carry/display information) and ideological-ware (IW) (esoteric concepts). According to this study, ideological-ware should drive any lesson/curriculum in education, because learning is not about technology (HW or SW resources), but is, instead, about the ideology behind the learning (ideological-ware) (Amory, 2010). This suggests that those who implement the curriculum (teachers), should first understand all IW resources that underpin their intended curriculum, before the implementation of new technologies and resources occurs. Therefore, the teachers need to formulate or identify an ideology (which includes educational goals and vision) for using Turnitin as a deterrent, in order to help learners to learn in the process. In other words, Turnitin, like any other technology, should be required by the educational goals, vision and/or content as well as identified ideologies (Amory, 2014).

Most teachers are unaware of the challenges that face higher education institutions, such as plagiarism (Khoza, 2015). There is a higher risk of plagiarism for higher education institution students if they were not trained at high school level to avoid plagiarism. This suggests the importance of higher education institutional processes that support school teachers' initiatives that appeal for help, which will in turn develop learners when they are still at school. In South Africa, however, there are very few schools that expose teachers to Turnitin in order to prepare learners for the tertiary level of education. As a result, teachers do not take advantage of digital technology in order to operate at the same level as learners, most of whom are avid users of digital technology. On the other hand, there are countries that seem to take advantage of digital technology by introducing Turnitin at school level as their investment for higher education. A good example is McLean High School, where assessment papers in 2006 were examined by both teachers and the California Company that specialised in catching cheaters (Glod, 2006). As a result, the process introduced learners to issues of integrity and honesty at an early school level. While Turnitin is becoming a necessary solution, it is not different from other technologies that have contributed to the division between teachers and learners, namely those that result in the need for an acquisition of new concepts that seem to exclude teachers of an older generation from their young learners' activities. This division between the teachers' and learners' usage of Digital Technologies (HW or SW resources) has started a new, important, on-going discussion in education (that seem to discriminate teachers from learners' activities). A study undertaken in the early 1990s by Strauss and Howe (1991) began the discourse on whether age was a determinant in the use of digital technology resources, because it was reportedly most appealing to the younger generation. Strauss and Howe (1991) further identified differences between several categories of DT users based on age, such as Generation X (born between 1961 and 1981) and the millennial generation (born between 1982 and 2000 as well as after). In line with the discussion on age being a criterion for DT use, Tapscott (1998) referred to current digital users as the Net Generation, and later Prensky (2001) referred to them as Digital natives, implying that as they are born in the digital era, it predisposes them to learning via digital technologies. The normalisation of technology in the everyday life of learners makes it necessary for solutions for connecting to the learners' activities without being discriminated

against by technology such as Turnitin. The most important activity for teachers that helps them to overcome challenges caused by the normalisation of technology is teachers' own reflectiveness (Pinar, 2012).

The way teachers perceive their work has been a crucial question in education since Valli (1992), Zeichner and Liston (1987) and others supported Dewey's (1933) work on the importance of teachers' reflections on their practices. The importance of this issue became evident in a qualitative interpretive study conducted by Pedro (2005) on five pre-service teachers, who constructed their own meaning of reflective practices as this informed their technology integration. This suggests that reflections help the teachers formulate relevant IW resources that help them to identify relevant technology according to their educational vision, goals or content. In other words, the teachers are able to involve themselves in introspection, and are able to communicate with other experienced teachers, using technology as identified by their ideologies, to identify problems which affect their teaching (Khoza, 2015). Other studies that recommend the teachers' reflection as an important tool that transforms teachers to overcome new curriculum challenges were conducted by Fomunyam (2014) and Pinar (2012). These studies reveal the importance of personal elements, social elements and political elements in any successful reflection on curriculum, especially as it encourages the theorising processes and integration of technology. It is for this reason that the next section discusses different issues of Turnitin within the context of teachers' experiences (reflections).

Turnitin

Plagiarism problems led to the development of the Turnitin program by John M. Barrie, when he was a graduate student at the University of California (Berkeley) (Ison, 2014). By the year 2006, Turnitin was used by about 6,000 academic institutions and 60,000 students' assignments were uploaded into the database daily (Glod, 2006). This suggests the importance of Turnitin in helping teachers and learners become aware of issues of plagiarism.

A study conducted by Macdonald and Carroll (2006) on the approach to plagiarism suggests a holistic approach, with three main principles to be used as a framework for Turnitin usage. The principles indicate that: (1) it is important that students receive the appropriate information and develop the necessary knowledge with skills; (2) assessment design is such that plagiarism is reduced; and (3) the usage of the programme has appropriate policies, procedures and guidelines in place to deal with any issues that arise. When these principles were used by Rees and Emerson (2009) in a case study that explored the extent to which the use of Turnitin transformed assessment practice (promoted academic integrity) at Massey University, it did not transform all the learners, although it was useful. However, Coren (2012:171) recommends the Theory of Planned Behaviour (TPB) as the solution to the usage of Turnitin in order "to predict the target behaviour of whether faculty would speak face-to-face with a student suspected of cheating". This suggests that there is a need for a clear and coherent framework for the usage of Turnitin by teachers.

While there seems to be many studies conducted on Turnitin, these studies recommend further investigation in order to "understand how to use the self-service approach more effectively to improve referencing and citation, and narrow the gap between learner expectations and university /school standards" (Kiriakidis, 2013; Rolfe, 2011 :701). Other studies recommend an investigation that aims to understand how to use technology is to avoid plagiarism, by educating to avoid, instead of detecting to punish (Bensal, Miraflores & Tan, 2014; Le, Carbone, Sheard, Schuhmacher, De Raadt & Johnson, 2013). Therefore, the recommendations of the aforementioned studies should be able to help teachers become aware of and avoid the major weaknesses posed by Turnitin. Some of these weaknesses include that Turnitin is unable to distinguish between different referencing styles, such as the American Psychological Association (APA), Harvard style and others, in checking uploaded documents or files. According to Bensal et al. (2014:12), "when comparing the software feedback and the teacher's feedback of the argumentative essay drafts…" one may easily identify comments from the teacher that were not asked or questioned by the software. However, in South Africa, none of the studies on Turnitin were conducted within the critical paradigm of action research. The critical paradigm aims at transforming teachers in order to improve their technology integration process (Khoza, 2015). This suggests the need for a study conducted in the critical paradigm using action research, which will promotes reflective teachers.

Research Purpose/Objective and Research Questions

This article intended to explore and explain teachers' reflections on the use of Turnitin SW in their assessment processes. It is likely that understanding teachers' reflections on the use of Turnitin might help schools to: understand if Turnitin is a worthwhile SW resource, consider affordability of Turnitin resource, consider limitations of Turnitin resource, understand factors that influence the success/failure of using Turnitin.

From the teachers' reflections the following two questions were answered:

- Towards which goals was Turnitin software used in the assessment of Grade 12 learners at a school in Durban?
- How do teachers reflect on their reasons of using Turnitin technology?

Research Design and Methodology

This is a critical action research study of six Grade 12 teachers at a school in Durban. The main purpose of the critical paradigm is to interrogate the phenomenon, which in turn, may transform the participants (Lisle, 2010). Action research deals with a specific context, which may not represent the whole population, with an aim to create a reliable generalisation. However, transferability remains a possibility. Action research is subjective but in-depth, open-ended, exploratory and transformative in nature; it is conducted on entities in their natural settings, where teachers research their practices, with the aim of improving their teaching situation (McNiff & Whitehead, 2009). A combination of the critical paradigm and action research is important for this study, because it is transformable, holistic, explorative and contextual in its nature (McAteer, 2013; McNiff, 2013). The study used a critical action research process in order to help the participants to learn to plan, implement, observe and reflect on their practices in order to improve their practices (McAteer, 2013; McNiff, 2013). The data were generated from the reflection stage as the final stage of action research. However, Hakim (2000) asserts that this process is not suitable in education, because it may take place even without following a scientific research process, and be influenced by opinions rather than facts. Nonetheless, this study combined the action research with a critical paradigm, to overcome the above weakness (Lisle, 2010).

Sampling

Purposive sampling was used in selecting the only six Grade 12 teachers who used Turnitin as part of their assessment processes at a secondary/high school in Durban. The participants had to answer the research questions through Turnitin submissions, one-on-one semi-structured interviews, observation and reflective activities. Purposive sampling is useful for selecting a specific group, with specific, unique qualities (Khoza, 2013b). The school had 57 teachers, but only six of them used Turnitin. Therefore, this group was purposively selected by default, since it had all the qualities of the required group for this study. These participating teachers were exposed to Turnitin during their postgraduate studies and decided to use it to assess their learners. Their names were not revealed due to ethical considerations, as suggested by Cohen, Manion and Morrison (2007) and Creswell (2013). Informed consent and ethical clearance were acquired and obtained in terms of confidentiality, voluntary participation, and withdrawal, whenever they felt the need. Issues of benefit and anonymity were also discussed with the participants. The ethical clearance certificate was obtained from the local ethical guidance committee of the university, while permission was obtained from the school and the department of education, with the signed informed consent from the participants.

Data Production/Generation and Analysis Methods

Methods used in this study for data generation/production were Turnitin submissions, one-on-one semi-structured interviews, observation, and reflective activities. The participants had both Turnitin assignment results for their studies and their learners' project results, which were all used for the findings of this study. The Turnitin submissions were reviewed. Thirty minute interviews with each of the participants were conducted twice, within which the participants were asked to reflect, through writing, on their use of Turnitin. The different questions asked were: how long have you been using Turnitin? (Personal); who advised /guided you to use Turnitin? (Societal); what books/studies/content do you read on the use of Turnitin? (Content/professional); and lastly, towards which goal/s do you use Turnitin? (Aims /objectives/outcomes). Observation was used twice, as a useful tool for generating first-hand information (Khoza, 2014a). The interviews were used to add some sub-questions in order to probe for more data, and to rephrase the questions where necessary in order to accommodate those participants with a tendency to avoid certain questions (Khoza, 2014 b). Reflective activity was used twice, in order to give the participants free space to reflect on their work, without being observed.

Multiple sources of data were used for the purpose of enhancing authenticity of data and achieving measures of trustworthiness (Khoza, 2013b). An audio-tape was used to record the interviews for ease of transcription. As a result, the five processes of trustworthiness are observable in this study (triangulation, transferability, dependability, confirmability and credibility) (Ozerbas & Ucar, 2014).

In terms of data analysis, this study used inductive analysis, where two themes and categories emerged from the data and literature (Table 1). The codes used for data analysis in theme one were personal (driven by one's experiences), societal (driven by people's advices/instructions), and content/professional (reason driven by reading different sources). Theme two identified aims, objectives and outcomes.

Findings

Table 1 presents the findings framed by two themes and categories in order to simplify them for the readers.

Theme One: Reasons for using Turnitin (Vision/Rationale)

According to the findings from the teachers' reflections, the teachers' reasons for the use of Turnitin are categorised into personal everyday experience, societal/social and professional/content reasons as presented in Table 1 and are discussed below.

Personal everyday experience reasons

Personal everyday experience reasons for using technology (Turnitin) in teaching or assessment is the reason (vision/rationale) for teaching that puts individual learners at the centre of the teaching/learning environment (Khoza, 2015). The main part of this reason for teaching is to create a well-resourced environment that helps learners to construct their own unique individual identities. When teachers create this supportive environment, they include experiential and subjective activities that support the learners in order to construct and reconstruct knowledge repeatedly and, hence, take the form of personal meaning. According to Schiro (2013), personal meanings make up the knowledge that is unique to each individual that possesses it, and holds personal significance to each person, since the particular environmental context in which it is assimilated or constructed is a result of experiences in a particular teaching/learning environment at a particular time. As a result, knowledge is viewed as a fundamental, or as a basic part of learning, because it is not a separate entity that has to be learned from outside the individual learner.

Table 1 Findings (Themes and Categories)

Themes	Categories
Reasons for using Turnitin (vision/rationale)	Personal everyday experience reasons
	Professional/content reasons
	Societal/social reasons
Goals achieved through the use of Turnitin	Aims/purpose
	Objectives
	Outcomes

Participants used Turnitin to check their university assignments and started to enjoy it. Their university had Turnitin as part of its Learning Management System (LMS). The specific name of the LMS used by their university was Modular Object-Oriented Dynamic Learning Environment (Moodle). After these participants used Turnitin for their studies, they decided to add Turnitin within their school Moodle, because their school had the same LMS/Moodle as that of their university, as shown in Figure 1.

Participants used the school Moodle to add Turnitin for their learners, because they were motivated by their school Moodle which was the same as that of their university. They all enjoyed Turnitin after they were introduced to it by their university. Participant 2: "*I was not aware of Turnitin until I had to use it for my assignments at varsity* [sic], *although it was difficult at first, when I saw the percentage that was more than 0%, because I thought that I was perfect in my academic writing…but Turnitin proved me wrong, and I started to be extra careful and enjoyed it…*" (Others agreed); Participant 4: "*I enjoy working with computers, but I was not aware of this useful programme, which has been helping my learners before they join tertiary institutions* […] *I have been helping my learners by making sure that they are familiar with most of the university application software while they are still at school…*"; Participant 1: "*although I do not have advanced computer skills, I found that Turnitin is easy for… anyone can use it if it is integrated within the Moodle subject framework …*"; and Participant 6: "*we are lucky that our school is very supportive; as a result, we had to do postgraduate curriculum studies together as a team, in order to improve our knowledge and skills in working with learners who are good in using technology* […] *we have been doing well in shaping these learners for tertiary education* […] *tertiary education involves searching for information in order to write assessment tasks or assignments, where Turnitin is becoming an excellent tool to check any plagiarised element… .*"

The above accounts suggest that the participants used Turnitin for personal reasons, because they started by using it for their university studies (they were at the centre of Turnitin activities as students). Therefore, it appears that when they tried to use Turnitin to prepare their learners for higher education institutions, they were still at the centre of the Turnitin activities that helped them to find their technological identity. This suggests that the participants had a higher level of awareness about Turnitin and its capabilities.

Content or professional reasons

Content (professional) reason is defined as a reason for teaching that places the discipline or profession at the centre of the technology integrated curriculum (Khoza, 2015). This teaching of reason is called performance/collection/vertical curriculum (Bernstein, 1999). This suggests that one uses Turnitin because one is influenced by reading different sources, towards developing one's 'cognitive domain'. The term cognitive domain is used to decide whether technology (in this case, Turnitin)

is successful or not within a specific discipline /subject. In a performance or collection curriculum, each subject stands on its own and has its own collection of terminologies/concepts. It is driven by identified content, where all teachers teach and students learn the same body of knowledge from the lowest to the highest levels.

Participant 5: "*we have been using Turnitin to check learners' projects if they have not plagiarised* [...] *no we do not use it for other things other than originality* [...] *maybe we shall use other tools like marking tools in future but for now it is working well with the originality tool ...*"; (others agreed); Participant 1: "*...we designed an information book on plagiarism, which has procedures for all Grade 12 essay submissions to Turnitin, where all essays that exceed 10% had to be corrected and re-submitted to Turnitin* [...] *those who exceeded 10% in their second submissions were given more support to show them how they should avoid plagiarism over and above the two workshops that were organised to give all our Grade 12 learners formal information on plagiarism* [...] *As a result we used this information book to develop our policy and procedure* [...] *we are preparing them for university education and promote academic honesty and integrity...*" (others agreed). Participant 4 noted: "*sometimes other learners write some documents on general knowledge and submit them to Turnitin to record 0%, and make sure that they do not submit the real projects to Turnitin, but submit the short screen report to us... .*"

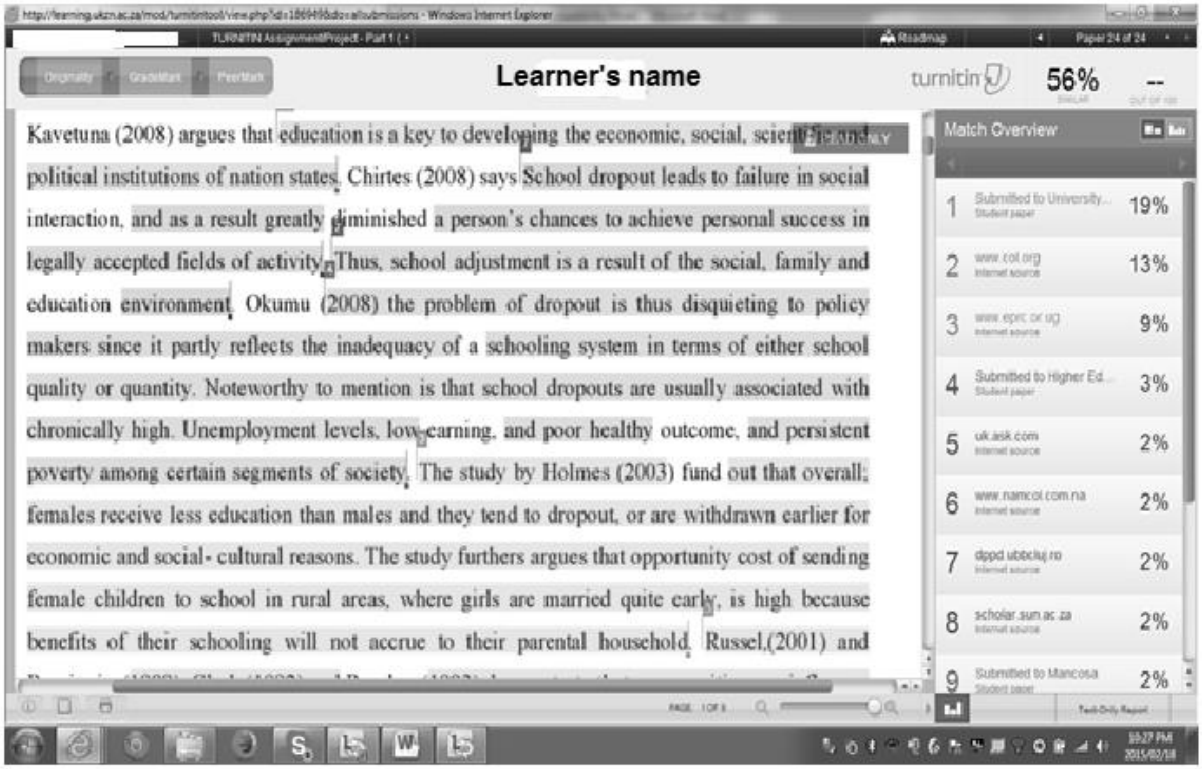

Figure 1 Turnitin from Moodle

These findings suggest that the content/ professional reason was limited in driving the participants to use Turnitin. None of them were able to read studies/sources (content) on the importance of using Turnitin in teaching and assessment. Even the information book used to develop policy and procedure was not specific to any subject/discipline in order to reflect the content/professional reason. It was clear that the participants did not read studies/sources on the use of Turnitin to help learners to avoid plagiarism, because they had a misconception of 10% as a maximum percentage to guide learners (Kiriakidis, 2013). The 10% is a misconception that mostly affects those who do not use Turnitin for content reasons, because learners may have even 1% seriously plagiarised work. On the other hand, one may even have 20%, but when checked, only find that one has 0% plagiarism, and that the 20% reflects the used template or standard cover pages.

Societal/social reasons

Societal/social reason places society at the centre of teaching/learning environment (Schiro, 2013). This teaching environment is called a competence (integrated or horizontal) curriculum (Bernstein, 1999). In a competence curriculum, subjects are combined to form a learning area. Achievement of observable/measurable outcomes is the major practice in this type of curriculum. Levels of outcomes

(lower, middle or higher order) are not important, but the most important element is the achievement of outcomes, which becomes an end in itself (Khoza, 2014b). As a result, it is mostly influenced by opinions, local everyday or general knowledge, and oral conversation. In this type of curriculum, knowledge is mostly generated horizontally from simple sources or local known sources (Hoadley & Jansen, 2012). Assessment mostly concerns what is present or what the learners (students) have achieved, not what the students should have achieved, based on international standards. In other words students are compared to one another for achievement.

Participant 4: "*We believe that Turnitin promotes integrity, therefore we are trying to encourage all our colleagues to use Turnitin, because we want our school to lead* […] *and we are aware that technology is here to stay and we want to take advantage of all useful technologies that help our school…*" (with others agreed). Participant 2 said "*we have started to introduce our colleagues to Turnitin* […] *but we limit it to Grade 12 because we have 251 Grade 12 learners while our school has 100 computers only…* ."

The above accounts suggest that the societal reason was one of the two dominating reasons (along with personal reason), due to the fact that the participants used *Turnitin* to introduce it to their colleagues (school community). Over and above being encouraged by teaching their colleagues, they were also encouraged by the fact that they wanted to lead other schools in using *Turnitin* to promote academic honesty and integrity.

Theme Two: Goals Achieved through the Use of Turnitin

According to Kennedy, Hyland and Ryan (2006) and Khoza (2013b), goals are divided into aims, objectives and outcomes. An aim is a long-term goal, while an objective is a short-term goal, where they both indicate teachers' intentions. On the other hand outcomes are what students should achieve at the end of a lesson or session. The outcomes are constructed according to specific observable/measurable keywords that reflect different levels of complexity (Bloom's taxonomies) (Modipane & Themane, 2014).

Turnitin has three major components, which it terms 'Originality', 'GradeMark' and 'PeerMark', respectively. However, the participants only used the originality component, as they did not have someone to introduce them to the other two. Originality is the basic tool within Turnitin used to indicate the percentage of similarity, or plagiarism. The participants were observed using the originality.

Participant 3 noted: "*we only use originality because we do not know how to use other tabs and we believe that the only one we need so far is originality, because we are also new in this technology* […] *so we do not want to overload ourselves …*" (others agreed); Participant 6: "*…our main aim use Turnitin for our studies, for learners' projects, introduce our learners and colleagues to it and understand the importance of it…* ."

The findings on goals (aims, objects and outcomes) suggest that the participants used Turnitin to achieve aims and objectives. None of them reflected on using Turnitin to achieve outcomes, but they were expected to use the outcomes because they indicated that they favour personal reasons. This means that their use of Turnitin was societally centred (which favours societal reasons), because they expected instructions and guidance from other people. As a result, they only used what they learned from university, without reading more to extend their knowledge/skills. The participants were not expected to use objectives (e.g. understand) because objectives favour the content /professional reason which was limited in their reflections. However, the three types of goals were included in all the teachers' assessment tasks to drive assessment processes.

Discussion of Findings

The findings appear to suggest that Turnitin is promoted by teachers' reflections on their personal everyday experience and societal reasons. 'Assessment, Educating to avoid and Turnitin' (AEtaT) framework in Figure 2 shows how the process of integrating Turnitin unfolded. The integration process started with teaching/learning signal (T/LS) (assessment), followed by IW (educating to avoid) and then SW (Turnitin).

In assessing learners for attained goals, formative and summative assessments were important for these teachers because they helped them to assess learners with an aim to educate them to avoid plagiarism. Formative assessment (assessment for learning) is part of learning when learners are assessed for their collection of relevant information (Khoza, 2013b). This indicates to teachers where their support is required without necessarily grading learners (it usually takes place during the teaching/learning processes). The teachers achieved this by allowing their learners to do peer assessment before summative assessment. Summative assessment (assessment of learning) is a summary of formative assessment of their learners' achievements of goals (outcomes) where teachers are grading their learners (Khoza, 2014a).

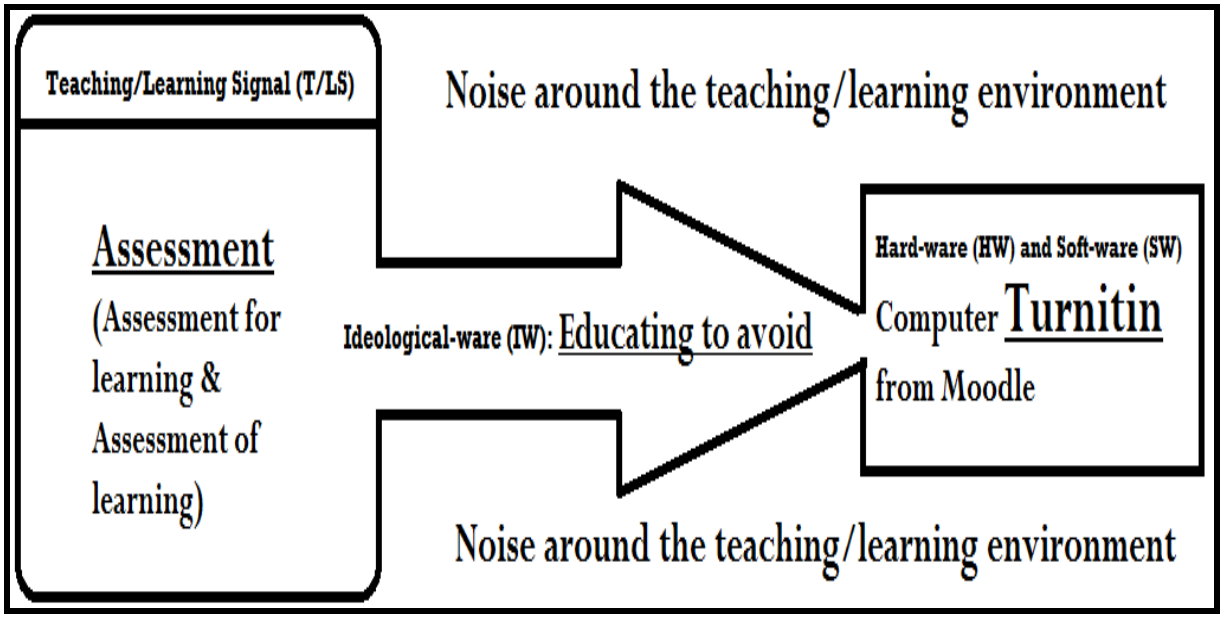

Figure 2 Assessment, Educating to avoid and Turnitin framework (AEtaT)

Kennedy et al. (2006), indicate that if assessment strategies are used for continuous assessment, the process becomes a collection of different sets of summative assessment used in generating marks for grading students, without any formative assessment element that help the learners with feedback (Khoza, 2014b). Ramsden (2003) indicates that assessment takes place at the end of teaching and learning processes for teachers, while it takes place at the beginning of the teaching and learning process for learners. This means learners are being tested by anything that is given to them, while their teachers are sometimes not aware of this situation (Francis & Le Roux, 2011; Khoza, 2013b). Formative assessment or assessment for learning was used as the T/LS that identified 'educating to avoid' as IW resources, in order to focus and become aware of the relevant HW/SW resource (Turnitin).

The participants (teachers) should be aware of what constitutes learning (T/LS) as well as approaches that identified Turnitin as the relevant SW resource. Awareness goes along with school/scientific knowledge. This suggests that the AEtaT framework consists of T/LSs (Formative assessment) HW (computer), SW-Turnitin, and IW (educating to avoid) resources, that transform both teachers and learners if they believe in school or scientific knowledge. Scientific knowledge is about utilising present situations in creating what one needs for the future. One becomes aware of past, present and future activities and treats them accordingly (Khoza, 2014b). According to Hoadley and Jansen (2012), scientific knowledge is about identifying the absence, where one has to always look for what is still missing in the teaching/learning environment, in order to move to the next level, or to improve the situation (future investment).

However, the AEtaT framework did not help all the learners to transform, because others learn how to manipulate Turnitin to produce false readings of zero percent (Participant 4). The learners knew that their general knowledge was not recorded in any database. Subsequently, they submitted it in order to generate 0% and print, the screenshot a report of 0%, while the original project is then submitted without being tested by Turnitin. This suggests that teachers should check each of the reports from their learners in order to make sure that none of the learners was able to successfully manipulate the system. Another challenge identified from the learners' submissions to Turnitin is the inability of Turnitin to identify technical errors, even for citations, full-stop, brackets and others.

A further challenge is that while Turnitin works as a way of saving teachers' time in catching cheating learners, it cannot be afforded by the majority of the schools around the world, because it is expensive. In other words, just like other expensive technologies, it is not accessible to poor schools. Perhaps the schools that cannot afford it may request support from tertiary institutions to assist their exit level learners so that teachers themselves may benefit in the process. The process may enable a majority of schools to operate at a mainstream level.

Conclusion

Education Implications

This study concludes that Turnitin does provide means of rescue, because it stops learners from plagiarising any database recorded information, if it

is used for the right reasons. Anything that is not database recorded becomes the teachers' responsibility. This suggests that the teachers' responsibility of checking database recorded documents over and above the none database recorded documents is reduced.

The integration of Turnitin as part of Moodle (LMS) proves to be useful, because learners are acquainted with the LMS used for teaching and learning at their school. Turnitin becomes one of their LMS resources. As a result, teachers should introduce the reasons for using Turnitin to the learners, as part of their LMS, in order to save time for any separate workshop from that of the LMS.

It is possible to successfully use only one Turnitin resource (Originality) and leave others (GradeMark and PeerMark), as long as one applies AEtaT framwork.

Assessment, educating to avoid and the Turnitin (AEtaT) framework, has proven to be a useful framework in the integration of Turnitin to educate learners to avoid plagiarism. It ought to start with the identification of a relevant teaching /learning signal/s (e.g. formative assessment), followed by IW (e.g. educating to avoid) and then HW and/or SW (Turnitin).

However, teachers should monitor or check all the students' submission before they give marks. Checking should include, but not be limited to, technical errors and evidence of learners' claims because Turnitin does not check these. If teachers can work hard to help their learners to have facts about Turnitin, they can avoid all the major challenges of plagiarism. If teachers and learners have facts about teaching and learning resources to hand, they tend to treasure them and use them for content reasons, but if they only have opinions about the resources, they tend to use these for societal reasons (Khoza, 2014a).

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