# Master of Education Students' Reflections: Which Curriculum Reasons Are Promoted or Limited by Skype Resources?

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### Abstract

This article presents an interpretive case study of a group of 10 Master of Education students overseen by one supervisor. The objective of the study was to explore and understand students' reflections on the curriculum or research reasons that are promoted or limited by Skype resources. A curriculum reason is a concept entailing a cognitive process that helps us to manage our actions in order to address our personal, societal, and professional needs. Purposive sampling was used to select the 10 participants for the study, and electronic reflective activities and one-on-one semi-structured Skype interviews were used for data generation. Inductive and deductive methods were followed, therefore guided analysis was used to generate themes for the study. With reference to the objective of the study, the finding was that the students' reflections were driven by three curriculum reasons (professional, societal, and personal), and it was concluded that this was the case because the students understood the concepts of these curriculum/research reasons, for instance, research goals, content, resources, assessment, time, environment, activities, community, and supervisor roles. The recommendation is made that students be trained to know and understand the three curriculum/research reasons to enable them to use Skype for the intended reason/s so as to address their personal, societal and professional needs.

Keywords: Skype; curriculum actions; reflections; entertainment; habits; qualification



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# Introduction

Today, the rapid development and introduction of new digital technologies and resources for research purposes attract students to use digital resources more for professional and societal reasons than for personal reasons (Czerniewicz and Brown 2014; Khoza 2016b). In South Africa, the concepts of societal and professional reasons were developed (Hoadley and Jansen 2014) with the establishment of the first South African schools (Le Grange 2016). There were schools for black learners (where a societal, integrated or competence-based curriculum was followed), and there were schools for white learners (where a professional, collection- or performance-based curriculum was followed) (Hoadley and Jansen 2014).

In a competence-based curriculum (i.e. societal reason), subjects are combined to form a learning area, and the achievement of competences or learning outcomes is the major activity (Berkvens, Van den Akker, and Brugman 2014; Bernstein 1999). For example, in the South African competence-based curriculum of 1997–2012, Mathematics, Physical Science, and Technology were combined into a single learning area (Hoadley and Jansen 2014; Le Grange 2016). The concepts used in the competence-based curriculum were derived from Curriculum 2005, the National Curriculum Statement, and the Revised National Curriculum Statement (Du Preez 2017; Khoza 2016b).

In a performance-based curriculum (i.e. professional reason), the cognitive domain is used to decide whether learners are successful or not within a specific discipline; that is, whether they have mastered specific content or not (Dewey 1933; Le Grange and Reddy 2017). In the performance-based curriculum, each profession stands on its own and has its own collection of terminologies (concepts, theories, language, culture, ideologies, and knowledge) (Bernstein 1999; Du Preez and Reddy 2014). The content in this curriculum is identified, in other words, all students from the lowest to the highest levels learn the same body of knowledge (school knowledge) (Le Grange 2017; Tyle 2013). South Africa introduced the performance-based curriculum in accordance with the Curriculum and Assessment Policy Statement (CAPS) of 2012, assigning each subject its own internationally identified content (Le Grange and Reddy 2017; Mpungose 2016).

As a result of the two reasons (societal and professional) that these curricula produce, when the majority of students move from personal reasons (family experiences or habitual actions) to the other two reasons (either societal or professional), they tend to move to societal reasons or horizontal discourse (everyday knowledge) (Bernstein 1999; Le Grange 2016; Khoza 2016a). The minority of the students choose the professional reason, which is vertically driven by facts (Bernstein 1999; Hoadley and Jansen 2014). This is a cause for concern to the supervisors who expect students to concentrate on the professional reasons so as to understand their personal reasons, which would enable them to complete their qualifications on time (Esau 2017; Pillay and Karlsson 2013). If

students are interested in using Skype, they tend to use it for social activities (societal reasons) more than for educational activities (professional reasons) (Booth 2008; Du Preez 2017; Khoza 2016b). A study conducted by Smit (2015) reveals that when students use digital technology for their studies, they should apply relevant theories in order to promote the professional reasons in their activities. Consequently, the challenge for supervisors is to find appropriate and effective methods that can motivate their students to use Skype for professional reasons.

Several studies (Deakin and Wakefield 2013; Liu 2008; Mclay 2014; Pedro 2005; Pedrosa, Barbero, and Miguel 2013) propose reflections as a solution that can motivate students to interrogate their past/present in order to become aware of their curriculum/research reasons. A curriculum/research reason is a concept entailing a cognitive process that helps us to manage our actions in order to address our personal, societal, and professional needs (Khoza 2016a). When students are aware of the curriculum reasons for the use of digital technology in research, they avoid negative activities such as cyberbullying (Cochran-Smith and Lytle 1999; Hinduja and Patchin 2011; Khoza and Manik 2015; Smit 2015).

Following on the preceding discussion, the next sections present the aspects of reflections and curriculum reasons, Skype resources, and the study's research purpose, research questions, research design and methodology. Thereafter the findings of the study are presented and discussed, concluding with an overview of the findings' implications for research and learning.

## **Reflections and Curriculum Reasons**

A reflection is defined as "an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (Dewey 1933, 9). Reflections help students to become aware of their actions in the usage of Skype as part of their research projects (Huang et al. 2010; McLay 2014; Wang 2005). On the one hand, Van Manen (1995) uses technical reflections to implicitly represent professional reasons, practical reflections to represent societal reasons, and critical reflections to represent personal reasons. On the other hand, Schön (1983) divides reflections into reflection-on-action (professional) and reflectionin-action (societal). This suggests that he also advocates phasing out the personal reasons as these are about future experiences that are driven by habits/automation (Czerniewicz and Brown 2014; Khoza 2016a). However, more recently, Maxwell (2013) and Pedro (2005) have identified the three types of reflections that are important and that need to be understood within the three curriculum reasons and digital technology, namely: self-reflection (personal), verbal reflection (societal), and written reflection (professional). When students use these three types of reflection (through reflective signals) to interrogate their actions, they reconstruct new actions that are understood through the curriculum reasons (Waghid and Davids 2016). The studies referred to above suggest that reflections are among the most powerful forces that shape the curriculum reasons that can successfully reconstruct digital technology environments used in research and learning.

In research, reflections are driven by the three curriculum or research reasons (professional, societal, and personal). Each curriculum reason is influenced by the nine propositions of the reflective signals (see Figure 1).



Figure 1: Reflective signals for curriculum or research reasons

Reflections are generated from the reflective signals, namely: research goals, content, community, assessment, supervisor role, time, environment, activity, and resources (Berkvens, Van den Akker, and Brugman 2014). Each reflective signal produces three propositions for each of the three curriculum reasons (Budden 2017; Fomunyam 2016). Societal reasons consist of research questions, methodology, participant, peer assessment, facilitator, years, distance, societal-centred activities, and software resources (Khoza 2018; Ndlovu 2017). Professional reasons consist of research objectives, literature review, respondent, summative assessment, instructor, hours, face-to-face environment, content-centred activities, and hardware resources (Mpungose 2016; Nkohla 2017). Personal reasons consist of research purpose, framework, participant, formative assessment, researcher, days, blended learning, individual-centred, and ideological-ware resources (Khoza 2016b; Pather 2017). Curriculum reasons are sometimes used interchangeably with ideological-ware resources as the

cognitive processes that manage our actions in order to effectively use technology for research (Davids 2013; Foucault 2007; Percival and Ellington 1988). This suggests that every action is initiated and controlled by the cognitive process (reasons or ideological ware) before it takes place. The reasons for students' actions in the use of Skype may be personal, societal, or professional (Grundy 1987; Maxwell 2013; McCutcheon and Jurg 1990; McKernan 1991).

Personal reasons inspire the habitual use of Skype in research with the aim of developing individual personal talent and character based on the propositions of the personal reasons (Berkvens, Van den Akker, and Brugman 2014; Czerniewicz and Brown 2014). Societal reasons inspire actions that are influenced by other people's opinions in the use of Skype to develop societal skills and citizenship based on the propositions of the societal reasons (Berkvens, Van den Akker, and Brugman 2014; Brown and Czerniewicz 2010). Professional reasons inspire factual thoughts that are influenced by extensive reading about curriculum concepts in the use of Skype for a specific profession with the aim of developing the specific profession (Waghid and Waghid 2016; Wang 2005). For example, if researchers conduct studies to address their personal needs and their societal needs, they may simultaneously develop and advance their professions (they apply the reflective signals). This suggests that the usage of Skype may be based on students' habits (personal), opinions (societal), or facts (profession). The curriculum reasons, also known as ideological-ware resources, are important in the use of Skype and are understood through the reflective signals).

## **Skype Resources**

Skype resources are divided into hardware, software, and ideological-ware resources (Khoza 2018; Percival and Ellington 1988). Hardware resources are the machines used to carry Skype, and these include desktop computers, laptops, iPads/tablets, and mobile phones or smartphones. Software resources are materials that display information that range from file management software, application software, utility software, programming software, and other documents that carry information. Ideological-ware resources refer to ideas, knowledge, skills, values or attitudes, experiences, theories or approaches, and other esoteric research concepts that drive individuals to use Skype (cognitive processes that manage our actions as explained in the previous paragraph) (Ngubane-Mokiwa 2013). The hardware resources of desktop computers, laptops, and mobile phones as well as Internet or web application software resources mostly drive Skype. In terms of ideological-ware resources, the personal, social, and professional curriculum/research reasons, which produce habitual, opinion, and qualification actions, drive Skype. Several studies (Booth 2008; Hanna 2012; Hoßfeld and Binzenhöfer 2008; Rao, Angelov and Nov 2006) indicate the importance of the new platform created by Skype resources. The software resources promote the effective one-on-one online interview platforms using peer-to-peer internet protocol for data collection, production or generation (Booth 2008). Over and above the data generation platform, Skype software resources create a good platform for student interactions that promote language vocabulary through online storytelling (Hanna 2012; Yang and Chang 2008). The main advantage of Skype resources is that they are used for many other data generation methods such as observations, e-journals, and video artefacts (Kruse et al. 2013). Some critiques of Skype resources, such as those that indicate that Skype resources are expensive, can be ascribed to societal reasons (opinions) or personal reasons (habits of criticising technology) (Czerniewicz and Brown 2014). None of the studies covered in the current study produced facts about the expensiveness or limitation of the Skype resources based on professional reasons. However, none of these studies explored the reflections of students in the use of Skype resources framed by the three curriculum reasons. Studies on Skype have researched the technical use of Skype technology and not the curriculum reasons for using Skype.

# **Research Purpose and Objective, and Research Questions**

This article reports on the current study's purpose and objective to explore and understand students' reflections on the curriculum reasons promoted or limited by Skype resources at a South African university. If curriculum reasons are driving research, students have relevant reasons to integrate Skype resources (Deakin and Wakefield 2013; Wang 2005). This study may assist higher education institutions in answering the question: Which curriculum reason/s does/do Skype promote or limit in research?

The study's data generation/production was organised to respond to the following research questions:

- What are students' reflections on the curriculum reasons promoted/limited by Skype as a resource in research?
- What informs students' reflections on the curriculum reasons for using Skype as a research resource?

## **Research Design and Methodology**

The empirical data on which this study was based were generated in 2015 using a qualitative interpretive case study (Clare and Sivil 2014; Creswell 2014; Nieuwenhuis 2016) involving 10 Master of Education (MEd) students at a selected South African university. The qualitative interpretive case study enabled me to generate data that could provide rich data (Creswell 2014; Patton 1990) about the participants' subjective experiences in using Skype for the Mathematics curriculum of their MEd studies. Fouché and Schurink (2011) identify a number of characteristics associated with the qualitative case study methodology within the interpretive paradigm that relate to the purpose of this article. One characteristic includes the desire to reach an in-depth understanding that results in new learning about real-world behaviour and its meaning

(Nieuwenhuis 2016). The qualitative interpretive case study offered the participants the opportunity to interact with me and understand their reasons for using Skype in their studies. In using the qualitative interpretive case study (Cohen, Manion, and Morrison 2011; Creswell 2014), this study achieved a deeper understanding and rich description (Ramrathan 2017) of students' reflections on the usage of Skype, the phenomenon which is the topic of this study. The qualitative interpretive case study is holistic, contextual, explorative, and descriptive, and these characteristics are important for this study as it aims to produce rich descriptions and understand students' reflections on Skype usage (Clare and Sivil 2014; Creswell 2014; Ramrathan 2017).

# Sampling

This study used purposive sampling (Clark 2000; Cohen, Manion, and Morrison 2007) to select the 10 most suitable students who were overseen by one supervisor. This group of students was the only group that used Skype resources as part of their research, and, as such, they were suitable for my study, which was aimed at understanding students' reflections on the usage of Skype. The study accomplished its main aim of achieving an in-depth understanding of the phenomenon (Deakin and Wakefield 2013; Fouché and Schurink 2011). Unfortunately, the findings of the study cannot be generalised because only 10 participants were included. The participants' names were not revealed because of ethical considerations as suggested by Creswell (2014) and the Rand Afrikaans University (2002). The participants were called Participant A, Participant B, and so forth, through to J. Requirements regarding obtaining participants' informed consent and adhering to ethical considerations in terms of confidentiality, voluntary participation, benefit, and anonymity were met (Ramrathan 2017; Rand Afrikaans University 2002). The ethical clearance letter for conducting the study was obtained from the students' university.

# **Data Generation and Analysis Methods**

Electronic reflective journals (reflective activities), and one-on-one semi-structured interviews were used for data generation to answer the research questions. The reflective activity, which produced the reflective journals, was administered once, and the one-on-one semi-structured interviews were administered twice, each taking approximately 30 minutes to complete. The two data sources were used for the purpose of enhancing authenticity, triangulating data (Clark 2000; Fouché and Schurink 2011), and achieving measures of trustworthiness (Creswell 2014; Krefting 1991). Skype recording software was used to record the interviews for ease of transcription. This was done to verify that the data gathered were consistent across the three data generation methods, that triangulation, transferability, dependability, confirmability, and credibility (Cohen, Manion, and Morrison 2011) were supported, and that the trustworthiness (Ramrathan 2017) of the findings could be ensured. The following questions, which led the data generation methods and were based on reflective signals, were: Why do you use Skype? What are your goals for using Skype? What content do you use Skype for? How do you

assess your use of Skype? With whom do you use Skype? How do you use Skype? What is your supervisor's role in the use of Skype? When do you use Skype? Where do you use Skype? With what do you use Skype?

Guided analysis (a combination of deductive and inductive methods) was used for data analysis in this study to generate three themes based on the curriculum/research reasons (Cohen, Manion, and Morrison 2011; Creswell 2014). The coding of the data categorised any response that indicated a habit as "habitual," an opinion as "entertainment," and a written fact as a "qualification." Guided analysis was important because it allowed the themes to be modified through interaction with the data (Nieuwenhuis 2016; Samuel 2009). The findings were exploratory in nature (Ramrathan 2017); three themes were generated from the literature and the data in order to analyse the findings reached from the participants' responses. The participants were required to reflect on the curriculum/research reasons for using Skype in research.

# **Findings and Discussion**

Three themes were identified based on the findings reached after analysing the responses of the 10 participants. These three themes are presented in this section, together with a discussion of the findings in order to substantiate the themes, as well as extended discussions to re-contextualise the findings in terms of the relevant literature reviewed.



Figure 2: Habitual, entertainment, and qualification actions, and reflections

As indicated in Figure 2, family habits (personal reasons) generate habitual actions, and people's opinions (shapeless/societal reasons) generate entertainment actions. Qualification actions are generated through formal classroom teaching and learning (professional reasons). Reflections (conscious thoughts) help the students to understand their habitual, entertainment, and qualification actions based on the curriculum or research reasons.

### Theme 1: Habitual (Personal) Actions

The findings indicated habitual actions as one of the main reasons that motivated the participating students to use Skype in their research projects. Participant A reported as follows (and, based on the responses of participants B, C, F, and G, they agreed with these statements):

Most importantly, I have been enjoying Skype since 2013 ... because I do not pay for the calls and facilitated interviews ... passion-driven because I am used to it. ... Almost all my participants are in education as teachers/learners. ... If I have a problem [with] data generation I ask my supervisor to show me how to do it on Skype because he also enjoys the use of Skype in generating data.

Participant C added the following (and, based on the responses of participants E, F, I, and J, they agreed):

The main aim of Skype is to provide my participants with a relaxed environment that combines a face-to-face and distance research modes. ... Skype even helps me to remind my participants about our appointments because it is easy to forget interview appointments.

Participant H remarked as follows:

I only use Skype when I have appointments with my participants and make sure that I establish theories and frameworks that emerge from the data to drive their practices. ... I give each of my participants a few days to prepare for the interviews so that they understand themselves as independent people. ... If my participants are shy to look at me in the eyes I change from video call to telephone Skype call because I want them to relax and freely answer my questions.

Participant F mentioned the following advantages:

I always record my interviews and other research processes and activities in order to play these recorded activities and use them to improve my research knowledge and skills.

The participants' accounts quoted above indicate issues such as passion (reason), aim of Skype, supervisor as researcher, teachers as participants, theories/frameworks, days,

change from video to telephone to improve research knowledge (formative assessment), blended environment, and individual-centred activities as the important qualities of personal curriculum/research reasons. Therefore, this theme suggests that most of the participants continued with their old actions of using telephone technology when they communicated with other people even when they had access to Skype as a video resource. These are habitual actions that are generated mostly by the subconscious mind or by thoughts; thus, individuals do not necessarily concentrate on or plan their intended actions (Czerniewicz and Brown 2014; Wood 2015). In this context, individuals' experiences are at the centre of the curriculum/research activities in order to drive all the actions (Le Grange 2017). In other words, actions take place before planning. However, if individuals establish habitual actions without professional reasons they constantly have to face a situation where the connection is problematic or where people forget about timing.

There is a tendency for students to deprioritise a Skype call and treat it as less important than other activities. They adopt a "call-you-back mentality," which is contrary to the way they would have responded if they occupied a physical platform/space. In most cases, family ideas that help students to establish habitual actions based on personal curriculum reasons are not planned because they come from different directions of students' subconscious minds or thoughts (see first shape in Figure 2) (Esau 2017). If students are led by their subconscious minds or thoughts for a long time, they revert to habits or habitual actions even when they are working with other students and reflecting on their experiences (reflection-on-action) (Czerniewicz and Brown 2014; Le Grange 2012; Schön 1983). The findings of this study confirm that these habitual actions are one of the reasons why the participants use Skype. Software resources drove most of the participants' activities and as a result they were influenced by community opinions about enjoying the entertainment actions offered by Skype resources (Singhal and Rogers 1999).

#### Theme 2: Entertainment (Societal) Actions

The findings also indicated the theme of entertainment actions: students followed other people's identifications of being their role models, as they were influenced by these people's opinions. Participant A indicated that:

I have two types of Skype friends; I have other students who are doing Master of Education Curriculum Development with me and friends for entertainment.

Participant B reported that:

I use Skype video calls when I communicate with my supervisors and other students ... where I start by defining research questions ... help to produce findings.

Participant E made the following remarks (and, based on their responses, participants C, D, G and I agreed):

It is entertaining to work with those who are not part of our theses (community members) because we even pretend to be other powerful people and get away with it by using Skype telephone only and no video calls or photo display. ... Although I have taken three years in my study instead of one year, I have been motivated by my friends to join all social network in order to be up to date with what is happening in the world and get friends to help me to evaluate my project and methodology, entertain me, comfort me if I face problems. ... my supervisors' role is to facilitate what I bring them.

According to Participant A:

Skype video is expensive because it uses more data bundles than my Facebook page but when I have the bundles I share my research activities with other people online.

The participants' accounts indicate issues such as opinions, friends, research questions, community, social network, years, friend evaluation (peer assessment), methodology as well as online and societal-driven activities as the important qualities of societal curriculum/research reasons/actions. These entertainment actions suggest a process of identification where students pretend to be other people (Singhal and Rogers 1999). Moyer-Guse (2008) states that when students are absorbed in entertainment actions, they usually identify specialists in their field of interest and accept all the opinions of the specialists without questioning any of these opinions. These opinions are shapeless because they come from different unplanned directions (Khoza 2016a) (see the upper shape in Figure 2). When students are influenced by entertainment actions, they become dependent on the opinions of others and expect them to support their activities (Singhal and Rogers 1999). They also enjoy helping people in the hope that other people will help them when they themselves need it (Cohen 2001). This suggests that entertainment actions are problematic if participants rely on other people's familiarity with Skype or their ability to purchase and maintain Skype resources. Entertainment actions may have influenced Participant A in perceiving Skype resources as expensive, which confirms the claim in the literature about social reasons that produce entertainment actions (Singhal and Rogers 1999).

Participants' accounts indicate the existence of reflection-in-action (Schön 1983) or practical reflection where the opinions of people (everyday knowledge) count more than facts gleaned from reading about the subject, discipline or profession (school knowledge) (Bernstein 1999; Khoza 2016b). Reflection-in-action is about "acting and/or practising before planning" in order to answer the HOW question of one's activity before answering the WHY question. Most of the participants' responses concerned hardware or software resources. This suggests that most of them did not have educational goals or ideological-ware resources. Because of this practice, six of the participating students took three years, and two of them took two years, instead of one

year to complete their Master of Education degree. Only two participants (participants E and J) completed their course in one year. Research projects demand professional or qualification actions in order for the students to complete their research on time (Pillay and Karlsson 2013). This suggests that Skype resources should only be used for research if they are the most relevant resources for students and their supervisors.

### Theme 3: Qualification (Professional) Actions

Only participants E and J displayed more elements of qualification actions (actions driven by professional reasons) than other actions.

Participant J stated as follows (and the response of Participant E indicated agreement):

I have been using Skype mostly to discuss my literature review with my supervisor, other MEd students, and other people who talk research language in order to finish my dissertation, and I use my tablet to search and download relevant resources for my studies. Instructions that I do not question are those that come from my supervisor. ... My tablet is used for information search, download information from the internet and Skype meetings or calls. ... I make sure that my participants understand the objectives of my research through content-driven activities but I do not [spend more than] one hour if I communicate with my participants because I do not want to bore [them].

Participant E remarked as follows (and the response of Participant J indicated agreement):

I bought my tablet in January for my studies. Some of the most important activities that I remember was to use my Skype to defend my proposal while I was at home and the panel on campus. ... Skype brings the world to me because [it] provides me with [a] face-to-face environment.

The above accounts indicate that only participants E and J reflected on the professional curriculum/research reasons (qualification actions). Qualities of these actions are to use Skype for issues relating to literature review, research language, instructions, tablet (hardware) use, content-driven activities, hours, defence of proposal (summative assessment), and face-to-face environment. This suggests that if Skype is used for qualification actions it becomes a useful resource that supports research studies in that it helps students to finish their studies on time. The findings indicate that Skype provides an environment with resources relevant to research, or ideological-ware resources with rich information that supports the use of Skype for curriculum or research reasons. Using Skype to defend studies, communicate with supervisors and other experts, interview participants without having to travel to them, and record all these activities may enhance the process of trustworthiness, which is a very important aspect of qualitative studies (Creswell 2014). The findings further suggest that qualification action action action involves planning before acting in order to answer a WHAT

question before a WHY question about an activity. A qualification action demands that students should have knowledge of research or learning signals (which are important concepts of research and curriculum) and technology in order to take advantage of the usefulness of the qualification action.

# **Concluding Remarks and Recommendations**

Based on the purpose and objective of the study, the conclusion reached from the findings is that the students' reflections were driven by the three curriculum/research reasons (personal, societal, and professional). It is evident from the findings that the students' reflections were informed by the research reflective signals (i.e. research goals, content, assessment, community, activity, environment, resources, time, and supervisor role) to reflect on the three curriculum reasons that promote the use of Skype in research. Research goals are targets set by researchers when conducting their studies. These goals are divided into the aim of the research (long-term goal), the objective of the research (short-term goal), and the questions that the research needs to answer. Content refers to the research knowledge relating to the literature, framework, and methodology. Assessment involves the evaluation of student performance, and this evaluation consists of formative, summative, and peer assessment. Community refers to the people that participate in a study, and they are divided into participants, respondents, and the population. Activity involves the research action, which can be a contentcentred, societal-centred, and/or individual-centred action. Environment is the research place—online, face-to-face, or blended. A research resource is any person or object that communicates about research, and this is divided into hardware, software, and ideological-ware resources (theories). Time is the period spent on research-hours, days or years. The supervisor role refers to the supervisor's position of being a researcher, facilitator, or instructor. These reflections, informed by the research reflective signals, produced habitual (personal), entertainment (societal), and qualification (professional) actions. Students' actions reflected habits, and the study identified the need for entertainment and qualification actions to be the reasons for using Skype in research.

Habitual actions are research actions that students undertake based on their personal experiences, which are mainly generated in the family environment, and these actions shape students' subconscious minds and thoughts (mind frames). Entertainment actions (acting and planning) are generated by other people's opinions, and these actions build frames for the subconscious mind or thoughts that the community environment requires. Qualification actions are plans based on the students' disciplines or professions (planning before acting) (see the lower shape in Figure 2). These actions suggest that Skype has managed to neutralise the dominance of societal and professional reasons for using this resource through the introduction of personal reasons. This study recommends that students be trained to know and understand the three curriculum/research reasons in order to use Skype for the appropriate, fit-for-purpose reasons so as to address their personal, societal, and professional needs.

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